

# **Environmental Review Record**

for the  
401 Santa Clara Avenue Project

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APPENDIX A

CALEEMOD AIR MODELING RESULTS

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# 401 Santa Clara Avenue Project Custom Report

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# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	401 Santa Clara Avenue Project
Construction Start Date	6/1/2026
Lead Agency	City of Oakland
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.90
Precipitation (days)	41.0
Location	37.8131555231057, -122.24907798845712
County	Alameda
City	Oakland
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1503
EDFZ	1
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.28

## 1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Mid Rise	108	Dwelling Unit	0.93	71,076	21,344	—	305	—

Enclosed Parking with Elevator	41.0	Space	0.00	10,800	0.00	—	—	—
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### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

## 2. Emissions Summary

### 2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.87	3.70	9.21	11.8	0.02	0.42	5.37	5.79	0.39	2.58	2.97	—	2,626	2,626	0.09	0.10	4.00	2,660
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.86	3.69	6.38	11.4	0.02	0.22	0.91	1.13	0.20	0.22	0.42	—	2,565	2,565	0.09	0.10	0.10	2,597
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.41	2.31	3.70	6.80	0.01	0.12	0.54	0.66	0.11	0.13	0.24	—	1,563	1,563	0.06	0.06	0.97	1,583
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.44	0.42	0.67	1.24	< 0.005	0.02	0.10	0.12	0.02	0.02	0.04	—	259	259	0.01	0.01	0.16	262

### 2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.87	3.70	9.21	11.8	0.02	0.42	5.37	5.79	0.39	2.58	2.97	—	2,626	2,626	0.09	0.10	4.00	2,660
2027	3.82	3.66	5.97	11.5	0.02	0.19	0.91	1.10	0.18	0.22	0.39	—	2,603	2,603	0.09	0.10	3.64	2,637
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.86	3.69	6.38	11.4	0.02	0.22	0.91	1.13	0.20	0.22	0.42	—	2,565	2,565	0.09	0.10	0.10	2,597
2027	3.82	3.65	6.06	11.2	0.02	0.19	0.91	1.10	0.18	0.22	0.39	—	2,544	2,544	0.09	0.10	0.09	2,575
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.40	1.33	2.60	4.49	0.01	0.09	0.40	0.49	0.08	0.11	0.19	—	1,009	1,009	0.04	0.04	0.65	1,022
2027	2.41	2.31	3.70	6.80	0.01	0.12	0.54	0.66	0.11	0.13	0.24	—	1,563	1,563	0.06	0.06	0.97	1,583
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.26	0.24	0.47	0.82	< 0.005	0.02	0.07	0.09	0.02	0.02	0.04	—	167	167	0.01	0.01	0.11	169
2027	0.44	0.42	0.67	1.24	< 0.005	0.02	0.10	0.12	0.02	0.02	0.04	—	259	259	0.01	0.01	0.16	262

### 3. Construction Emissions Details

#### 3.1. Site Preparation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.52	0.44	3.74	5.54	0.01	0.19	—	0.19	0.17	—	0.17	—	858	858	0.03	0.01	—	861

Dust From Material Movement	—	—	—	—	—	—	0.53	0.53	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.70	4.70	< 0.005	< 0.005	—	4.72
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.78	0.78	< 0.005	< 0.005	—	0.78
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.18	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	42.5	42.5	< 0.005	< 0.005	0.16	43.1

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.04	0.04	< 0.005	< 0.005	< 0.005	0.04
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.3. Grading (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.22	1.02	9.19	9.69	0.02	0.42	—	0.42	0.39	—	0.39	—	1,714	1,714	0.07	0.01	—	1,720
Dust From Material Movement	—	—	—	—	—	—	5.31	5.31	—	2.57	2.57	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.8	18.8	< 0.005	< 0.005	—	18.9
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.11	3.11	< 0.005	< 0.005	—	3.12
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.27	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.7	63.7	< 0.005	< 0.005	0.23	64.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.65	0.65	< 0.005	< 0.005	< 0.005	0.66
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.11	0.11	< 0.005	< 0.005	< 0.005	0.11
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.5. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	4.81	6.91	0.01	0.19	—	0.19	0.17	—	0.17	—	1,304	1,304	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	4.81	6.91	0.01	0.19	—	0.19	0.17	—	0.17	—	1,304	1,304	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.19	1.81	2.59	< 0.005	0.07	—	0.07	0.07	—	0.07	—	490	490	0.02	< 0.005	—	492
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.33	0.47	< 0.005	0.01	—	0.01	0.01	—	0.01	—	81.1	81.1	< 0.005	< 0.005	—	81.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27	0.25	0.18	2.98	0.00	0.00	0.68	0.68	0.00	0.16	0.16	—	699	699	0.01	0.03	2.57	710
Vendor	0.03	0.01	0.42	0.18	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	349	349	0.01	0.05	0.91	365
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27	0.24	0.23	2.62	0.00	0.00	0.68	0.68	0.00	0.16	0.16	—	649	649	0.02	0.03	0.07	658
Vendor	0.03	0.01	0.44	0.19	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	349	349	0.01	0.05	0.02	365
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	0.95	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	245	245	0.01	0.01	0.42	249
Vendor	0.01	< 0.005	0.16	0.07	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	131	131	0.01	0.02	0.15	137
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.02	0.02	0.01	0.17	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	40.6	40.6	< 0.005	< 0.005	0.07	41.2
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	21.7	21.7	< 0.005	< 0.005	0.02	22.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.7. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57	0.48	4.56	6.90	0.01	0.17	—	0.17	0.15	—	0.15	—	1,304	1,304	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57	0.48	4.56	6.90	0.01	0.17	—	0.17	0.15	—	0.15	—	1,304	1,304	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.29	2.78	4.21	0.01	0.10	—	0.10	0.09	—	0.09	—	796	796	0.03	0.01	—	799
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.51	0.77	< 0.005	0.02	—	0.02	0.02	—	0.02	—	132	132	0.01	< 0.005	—	132
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.26	0.24	0.15	2.78	0.00	0.00	0.68	0.68	0.00	0.16	0.16	—	686	686	0.01	0.03	2.33	697
Vendor	0.03	0.01	0.40	0.18	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	342	342	0.01	0.05	0.85	358
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.26	0.23	0.21	2.46	0.00	0.00	0.68	0.68	0.00	0.16	0.16	—	637	637	0.02	0.03	0.06	646
Vendor	0.03	0.01	0.42	0.18	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	342	342	0.01	0.05	0.02	358
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.11	1.46	0.00	0.00	0.40	0.40	0.00	0.09	0.09	—	391	391	0.01	0.02	0.61	397
Vendor	0.02	0.01	0.25	0.11	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	209	209	0.01	0.03	0.23	219
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.27	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	64.8	64.8	< 0.005	< 0.005	0.10	65.7
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	34.6	34.6	< 0.005	0.01	0.04	36.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.9. Paving (2026) - Unmitigated

## Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	4.24	5.30	0.01	0.18	—	0.18	0.16	—	0.16	—	823	823	0.03	0.01	—	826
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.12	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	22.5	22.5	< 0.005	< 0.005	—	22.6
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.73	3.73	< 0.005	< 0.005	—	3.75
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.63	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	149	149	< 0.005	0.01	0.55	151
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.80	3.80	< 0.005	< 0.005	0.01	3.86
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.63	0.63	< 0.005	< 0.005	< 0.005	0.64
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.11. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134

Architectural Coating	2.78	2.78	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	2.78	2.78	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.30	0.39	< 0.005	0.01	—	0.01	0.01	—	0.01	—	46.5	46.5	< 0.005	< 0.005	—	46.7
Architectural Coatings	0.97	0.97	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.70	7.70	< 0.005	< 0.005	—	7.73

Architectural Coatings	0.18	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.60	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	140	140	< 0.005	0.01	0.51	142
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.52	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	130	130	< 0.005	0.01	0.01	132
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.18	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	45.5	45.5	< 0.005	< 0.005	0.08	46.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.53	7.53	< 0.005	< 0.005	0.01	7.64
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.13. Architectural Coating (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	2.78	2.78	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	2.78	2.78	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.53	0.72	< 0.005	0.01	—	0.01	0.01	—	0.01	—	85.2	85.2	< 0.005	< 0.005	—	85.5
Architectural Coatings	1.77	1.77	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.10	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	—	14.1	14.1	< 0.005	< 0.005	—	14.2
Architectural Coatings	0.32	0.32	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.03	0.56	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	137	137	< 0.005	0.01	0.47	139	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.49	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	127	127	< 0.005	0.01	0.01	129	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.30	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	81.8	81.8	< 0.005	< 0.005	0.13	83.0	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	13.5	13.5	< 0.005	< 0.005	0.02	13.7	

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

## 5. Activity Data

### 5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	6/1/2026	6/2/2026	5.00	2.00	—
Grading	Grading	6/3/2026	6/8/2026	5.00	4.00	—
Building Construction	Building Construction	6/23/2026	11/8/2027	5.00	360	—
Paving	Paving	6/9/2026	6/22/2026	5.00	10.0	—
Architectural Coating	Architectural Coating	7/7/2026	11/22/2027	5.00	360	—

### 5.2. Off-Road Equipment

#### 5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Grading	Tractors/Loaders/Back hoes	Diesel	Average	1.00	7.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37

Paving	Tractors/Loaders/Back hoes	Diesel	Average	1.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

### 5.3. Construction Vehicles

#### 5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	7.50	11.7	LDA,LDT1,LDT2
Grading	Vendor	—	8.40	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	82.3	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	13.3	8.40	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	11.7	LDA,LDT1,LDT2

Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	16.5	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	143,929	47,976	0.00	0.00	—

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	1.00	0.00	—
Grading	—	—	3.00	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

### 5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

## 5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
Enclosed Parking with Elevator	0.00	100%

## 5.8. Construction Electricity Consumption and Emissions Factors

### kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	204	0.03	< 0.005
2027	0.00	204	0.03	< 0.005

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
--------------------------	----------------------	---------------	-------------

### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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### 5.18.2. Sequestration

#### 5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
-----------	--------	------------------------------	------------------------------

## 8. User Changes to Default Data

Screen	Justification
Land Use	Lot acreage adjusted to represent overall acreage of the project site. Building square feet adjusted to represent the provided building square footage of the project.
Construction: Construction Phases	Building construction timing based on project-specific information provided by the project applicant. Based on typical construction practices, architectural coating assumed to start two weeks after the start of building construction and last for the same number of days. Demolition not required for the proposed project.

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**APPENDIX B**

**HEALTH RISK ASSESSMENT MODELING RESULTS**

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# AERMOD Model Options

## Model Options

Pathway	Keyword	Description	Value
CO	TITLEONE	Project title 1	401 Santa Clara Ave
CO	TITLETWO	Project title 2	
CO	MODELOPT	Model options	DFAULT,CONC,NODRYDPLT,NOWETDPLT
CO	AVERTIME	Averaging times	1,ANNUAL
CO	URBANOPT	Urban options	
CO	POLLUTID	Pollutant ID	PM25 H1H
CO	HALFLIFE	Half life	
CO	DCAYCOEF	Decay coefficient	
CO	FLAGPOLE	Flagpole receptor heights	1.8
CO	RUNORNOT	Run or Not	RUN
CO	EVENTFIL	Event file	F
CO	SAVEFILE	Save file	F
CO	INITFILE	Initialization file	
CO	MULTYEAR	Multiple year option	N/A
CO	DEBUGOPT	Debug options	N/A
CO	ERRORFIL	Error file	F
SO	ELEVUNIT	Elevation units	METERS
SO	EMISUNIT	Emission units	N/A
RE	ELEVUNIT	Elevation units	METERS
ME	SURFFILE	Surface met file	I:\Projects\Reference Material\Air Quality Assessment\_HRA Guidance_2023\Meteorological Data for AERMOD\Oakland International Airport.SFC
ME	PROFFILE	Profile met file	I:\Projects\Reference Material\Air Quality Assessment\_HRA Guidance_2023\Meteorological Data for AERMOD\Oakland International Airport.PFL
ME	SURFDATA	Surf met data info.	23230 2017
ME	UAIRDATA	U-Air met data info.	23230 2017
ME	SITEDATA	On-site met data info.	
ME	PROFBASE	Elev. above MSL	3
ME	STARTEND	Start-end met dates	
ME	WDROTATE	Wind dir. rot. adjust.	
ME	WINDCATS	Wind speed cat. max.	
ME	SCIMBYHR	SCIM sample params	
EV	DAYTABLE	Print summary opt.	N/A
OU	EVENTOUT	Output info. level	N/A

OU | DAYTABLE | Print summary opt.

## Source Parameter Tables

### All Sources

Source ID / Pollutant ID	Source Type	Description	UTM		Elev. (m)	Emiss. Rate (g/s)	Emiss. Units	Release Height (m)
			East (m)	North (m)				
MP6ZI0KI	VOLUME		565712.8	4185963.9	0	0.000249371	(g/s)	3.57
MP6ZI0KJ	VOLUME		565773.5	4185892.4	0	0.000249371	(g/s)	3.57
MP6ZI0KK	VOLUME		565821.0	4185811.4	0	0.000249371	(g/s)	3.57
MP6ZI0KL	VOLUME		565856.7	4185724.7	0	0.000249371	(g/s)	3.57
MP6ZI0KM	VOLUME		565882.4	4185634.3	0	0.000249371	(g/s)	3.57
MP6ZI0KN	VOLUME		565909.2	4185544.4	0	0.000249371	(g/s)	3.57
MP6ZI0KO	VOLUME		565928.1	4185452.3	0	0.000249371	(g/s)	3.57
MP6ZI0KP	VOLUME		565947.7	4185360.4	0	0.000249371	(g/s)	3.57
MP6ZI0KQ	VOLUME		565968.4	4185268.7	0	0.000249371	(g/s)	3.57
MP6ZI0KR	VOLUME		565999.7	4185180.4	0	0.000249371	(g/s)	3.57
MP6ZI0KS	VOLUME		566053.4	4185103.9	0	0.000249371	(g/s)	3.57
MP6ZI0KT	VOLUME		566130.6	4185050.5	0	0.000249371	(g/s)	3.57

### Volume Sources

Source ID / Pollutant ID	Description	UTM		Elev. (m)	Emiss. Rate (g/s)	Release Height (m)	Init. Lat. Dim. (m)	Init. Vert. Dim. (m)
		East (m)	North (m)					
MP6ZI0KI		565712.8	4185963.9	0	0.000249371	3.57	43.72093	0.9302326
MP6ZI0KJ		565773.5	4185892.4	0	0.000249371	3.57	43.72093	0.9302326
MP6ZI0KK		565821.0	4185811.4	0	0.000249371	3.57	43.72093	0.9302326
MP6ZI0KL		565856.7	4185724.7	0	0.000249371	3.57	43.72093	0.9302326
MP6ZI0KM		565882.4	4185634.3	0	0.000249371	3.57	43.72093	0.9302326
MP6ZI0KN		565909.2	4185544.4	0	0.000249371	3.57	43.72093	0.9302326
MP6ZI0KO		565928.1	4185452.3	0	0.000249371	3.57	43.72093	0.9302326
MP6ZI0KP		565947.7	4185360.4	0	0.000249371	3.57	43.72093	0.9302326
MP6ZI0KQ		565968.4	4185268.7	0	0.000249371	3.57	43.72093	0.9302326
MP6ZI0KR		565999.7	4185180.4	0	0.000249371	3.57	43.72093	0.9302326
MP6ZI0KS		566053.4	4185103.9	0	0.000249371	3.57	43.72093	0.9302326
MP6ZI0KT		566130.6	4185050.5	0	0.000249371	3.57	43.72093	0.9302326

## BREEZE AERMOD Model Results

### Max. Annual ( 1 YEAR) Results of Pollutant: PM25 (ug/m\*\*3)

Group ID	High	Avg. Conc.	UTM		Elev. (m)	Hill Ht. (m)	Flag Ht. (m)	Rec. Type	Grid ID
			East (m)	North (m)					
ALL	1ST	0.08541	566058.90	4185318.40	0.00	0.00	1.80	DC	
	2ND	0.08450	566058.90	4185323.40	0.00	0.00	1.80	DC	
	3RD	0.08195	566063.90	4185318.40	0.00	0.00	1.80	DC	
	4TH	0.08109	566063.90	4185323.40	0.00	0.00	1.80	DC	
	5TH	0.08027	566063.90	4185328.40	0.00	0.00	1.80	DC	
	6TH	0.07958	566068.90	4185313.40	0.00	0.00	1.80	DC	
	7TH	0.07873	566068.90	4185318.40	0.00	0.00	1.80	DC	
	8TH	0.07792	566068.90	4185323.40	0.00	0.00	1.80	DC	
	9TH	0.07732	566073.90	4185308.40	0.00	0.00	1.80	DC	
	10TH	0.07715	566068.90	4185328.40	0.00	0.00	1.80	DC	

### Highest Results of Pollutant: PM25

Avg. Per.	Grp ID	High	Type	Val	Units	Date	UTM		Elev. (m)	Hill Ht. (m)	Flag Ht. (m)	Rec. Type	Grid ID
						YYMMDDHH	East (m)	North (m)					
1-HR	ALL	1ST	Avg. Conc.	0.93475	ug/m**3	17112201	566058.90	4185318.40	0.00	0.00	1.80	DC	

### Summary of Total Messages

#	Message Type
0	Fatal Error Message(s)
6	Warning Message(s)
280	Informational Message(s)
8784	Hours Were Processed
129	Calm Hours Identified
151	Missing Hours Identified ( 1.72 Percent)

### Error & Warning Messages

Msg. Type	Pathway	Ref. #	Description
WARNING	CO	<a href="#">W276</a>	Special proc for 1h-NO2/SO2 24hPM25 NAAQS disabled PM25 H1H

WARNING	CO	<a href="#">W363</a>	Multiyr 24h/Ann PM25 processing not applicable for PM25 H1H
WARNING	ME	<a href="#">W186</a>	THRESH_1MIN 1-min ASOS wind speed threshold used 0.50

[www.breeze-software.com](http://www.breeze-software.com)

\*HARP - HRACalc v22118 8/28/2024 11:24:33 AM - Cancer Risk - Input File: C:\Users\j\ahmey\Desktop\HARP Results\401 Santa Clara Ave\_HRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBR	CONC	RISK_SUM	SCENARIO	DETAILS	INH_RISK	SOIL_RISK	DERMAL_R	MMILK_RIS	WATER_RIS	FISH_RISK	CROP_RISK	BEEF_RISK	DAIRY_RIS	PIG_RISK	CHICKEN	EGG_RISK	1ST_DRIVE	2ND_DRIV	PASTURE_(	FISH_CON	WATER_CONC
1			9901	DieselExhF	0.08541	7.39E-05	30Y	Cance *	7.39E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00





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APPENDIX C

PHASE I ENVIRONMENTAL SITE ASSESSMENT

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# Phase I Environmental Site Assessment

## 401 Santa Clara Avenue

Oakland, California

### Oakland Housing Authority

119 Harrison Street | Oakland, CA 94612

May 30, 2024 | Project No. 404724001



Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness  
Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS

**Ninyo & Moore**

Geotechnical & Environmental Sciences Consultants

# Phase I Environmental Site Assessment

401 Santa Clara Avenue  
Oakland, California

Ms. Paige Peltzer  
Oakland Housing Authority  
1619 Harrison Street | Oakland, CA 94612

May 30, 2024 | Project No. 404724001



**Luke I. Swickard**  
Project Manager



**Brandon S. Wilken**  
Principal Environmental Geologist

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**Appendix G - Vapor Encroachment Screening Matrix**

# EXECUTIVE SUMMARY

## CONCLUSIONS

Ninyo & Moore has performed this Phase I ESA in conformance with the scope and limitations of ASTM E1527-21 of the property located at 401 Santa Clara Avenue in Oakland, Alameda County, California (the Site). Based on the information compiled during the preparation of this report, this assessment has revealed no evidence of Recognized Environmental Conditions (RECs), Controlled RECs (CRECs), or Historical RECs (HRECs) in connection with the Site, and no RECs were identified on the adjoining properties.

## FINDINGS AND OPINIONS

Ninyo & Moore performed a Phase I Environmental Site Assessment (ESA) on the Site located at 401 Santa Clara Avenue, in Oakland, Alameda County, California. A Summary of Findings is provided below. It should be recognized that all report details are not included in this Summary, and the report should be read in its entirety.

### Site Location and Use

The approximately 0.96-acre Site is located along Santa Clara Avenue. The Site consisted of a vacant multi-story retirement home.

### Historical Information

Review of historical resources, such as aerial photographs, topographic maps, fire insurance maps, and available City Directory listings, as well as through review of historical records, interviews, and research, revealed that the Site was developed with multiple residential houses from sometime prior to 1911, until the late 1960s, when the residential houses were removed, and the current two-winged Site building was constructed. No significant development has occurred on the Site since the mid 2010s, when a gathering area was constructed between the wings of the building.

Adjoining properties have primarily been residential from at least 1911 until the present. No RECs were identified in the historical review.

### Records Review

Review of an environmental database report obtained for this project indicated that the Site was not listed on any of the *Standard Federal, State, and Tribal Environmental Record sources*. The Site was listed on the *Additional Federal, State, Tribal and Local Environmental Record sources* regulatory databases researched by EDR, including the FINDS, ECHO, HWTS, HAZNET, and RCRA NonGen / NLR databases. Selected federal and state environmental regulatory databases as well as responses from state and local regulatory agencies were reviewed, as available. Based on the available EDR information and the nature

of these specific databases listing types, no RECs were identified at the Site in connection with these database listings.

Selected federal and state environmental regulatory databases as well as responses from state and local regulatory agencies were reviewed, as available. Several off-Site facilities were located within the EDR search radius from the Site. None of the listed facilities are considered to be a REC to the Site based on several factors, including distance from the Site, location relative to the regional groundwater flow direction (e.g. hydraulically downgradient or crossgradient to the Site), database listing type, and/or affected media (soil only).

Based on the completion of the Vapor Encroachment Condition (VEC) screening matrix, it is presumed unlikely that a VEC currently exists beneath the Site.

### **Site Reconnaissance**

On May 20, 2024, Mr. Luke Swickard with Ninyo & Moore conducted a Site reconnaissance of the property that included a visual inspection of the Site, and observations of adjoining properties. At the time of the reconnaissance, the Site was improved with a 6-story vacant retirement home known as Grand Lake Gardens. The building consisted of an east wing and a west wing. The east wing included a sub parking garage, a parking garage/lobby level, floors 2-5 of residential tenant spaces, and floor 6 of common space and a dining hall. The west wing included floors 2-5 of residential tenant spaces. Due to the slope of the Site terrain, the west wing does not have a first floor. The wings were connected through a multi-story hallway. A gathering space and garden area were also part of the Site. In October 2022, the 5th floor on the west wing was damaged by a fire, which caused the building fire sprinklers to activate and resulted in the majority of the Site building being flooded by 1-2 feet of water. The fire and resulting flooding caused the asbestos in the ceiling to become friable and for mold to grow on the drywall. Extensive remediation efforts were undertaken to remove the asbestos and mold on the interior of the building. The building has therefore been vacant and unoccupied since the fire in October 2022. All interior furnishings have been removed, and the walls on the 5th floor were removed.

### **Adjoining Properties**

The areas surrounding the Site consist of residential properties. The Site is bordered on the north by Grand Lake Towers (377 Santa Clara Ave); on the south by an apartment building (411 Santa Clara Ave), and vacant land; on the east by residential development (396 and 404 Santa Clara Ave), and St Maarten Apartments (400 Santa Clara Ave); and on the northwest by an apartment complex (460 Crescent St).

Based on observations made during the Site reconnaissance and review of agency file information, the adjoining properties were not identified as a REC.

**Recognized Environmental Conditions:**

This assessment has revealed no evidence of RECs in connection with the Site or adjoining properties.

**Controlled Recognized Environmental Conditions:**

This assessment has revealed no evidence of CRECs in connection with the Site.

**Historical Recognized Environmental Conditions:**

This assessment has revealed no evidence of HRECs in connection with the Site.

**Business Environmental Risks:**

The following Business Environmental Risks were identified:

- Due to the age of the Site building, it is likely that lead based paint (LBP) and asbestos containing materials (ACM) are present.

**RECOMMENDATIONS**

Based on the findings of this ESA, no further investigation is recommended at this time.

**Certification Statement**

This report has been prepared by the staff of Ninyo & Moore for Oakland Housing Authority under the professional supervision of the principal and/or senior staff whose signatures appear hereon. Neither Ninyo & Moore, nor any staff member assigned to this assessment, has any interest or contemplated interest, financial or otherwise, in the subject or surrounding properties, or in any entity which owns, leases, or occupies the subject or surrounding properties or which may be responsible for environmental issues observed during the course of this assessment, and has no personal bias with respect to the parties involved. The information contained in this report has received appropriate technical review and approval. The conclusions represent professional judgments founded upon the findings of the assessment summarized in the report and the interpretation of such data based on our experience and expertise according to the existing standard of care. No other warranty or limitation exists, either expressed or implied. Anyone seeking defenses to Comprehensive Environmental Response, Compensation and Liability Act liability must take independent action to protect their position.

# 1 INTRODUCTION

Ninyo & Moore has performed this Phase I Environmental Site Assessment (ESA) of the property located at 401 Santa Clara Avenue in Oakland, Alameda County, California (Site). This ESA was conducted for Oakland Housing Authority as part of their due diligence on the property. This Phase I ESA meets the criteria set forth in the ASTM International (ASTM) E1527-21 Standard, was conducted by an Environmental Professional as defined by §312.10 of 40 CFR 312 and satisfies all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312. The following sections identify the purpose, the involved parties, the scope of services, and the limitations and exceptions associated with this Phase I ESA.

## 1.1 Purpose

In accordance with the ASTM Standard Practice for ESAs on Commercial Real Estate E1527-21, the objective of the Phase I ESA is to identify recognized environmental conditions (RECs). The term recognized environmental conditions means: "(1) *the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.*"

Identification of RECs fall into three categories: an existing REC (as defined above), a Historical REC, or a Controlled REC, as defined below.

**Historical Recognized Environmental Condition (HREC)** An HREC is defined as "a previous release of *hazardous substances or petroleum products* affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, *activity and use limitations or other property use limitations*). A *historical recognized environmental condition* is not a *recognized environmental condition*."

**Controlled Recognized Environmental Condition (CREC)** A CREC is defined as a "*recognized environmental condition* affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with *hazardous substances or petroleum products* allowed to remain in place subject to implementation of required controls (for example, *activity and use limitations or other property use limitations*)."

**Business Environmental Risk (BER)** - A BER is defined as a "risk which can have a *material environmental or environmentally-driven impact* on the business associated with the current or

planned use of *commercial real estate*, not necessarily related to those *environmental issues* required to be investigated in this practice." BERs include risks to the subject property that are outside the scope of the ASTM standard. BERs are not considered RECs.

## 1.2 Involved Parties

Mr. Luke Swickard, Project Manager with Ninyo & Moore, conducted the Site visit and performed the project reporting and research. Mr. Brandon Wilken, Principal Geologist with Ninyo & Moore, was the environmental professional assigned to this project, and performed project oversight and quality review. Resumes of these individuals are included in Appendix A.

## 1.3 Scope of Services

Ninyo & Moore's scope of services for this Phase I ESA included the following:

- Performed a Site reconnaissance to visually and/or physically observe the interior and exterior of structures and other features on the Site, as well as observe visible exterior features of adjoining properties to observe areas of possibly contaminated surface soil or surface water, improperly stored hazardous materials, and possible risks of contamination from activities at the Site and adjoining properties.
- Reviewed reasonably ascertainable standard and additional environmental record sources including federal, state, local, and tribal regulatory agency databases for the Site and for properties located within a specified radius of the Site.
- Reviewed reasonably ascertainable standard physical setting sources including a current United States Geological Survey (USGS) topographic map, or historical 7.5-minute topographic map, and possibly including USGS and/or state groundwater and geologic maps, and soil maps. The purpose of this review was to note information about the geologic, hydrologic, or topographic characteristics of the Site and Site vicinity.
- Reviewed reasonably ascertainable standard historical resources, including aerial photographs, historical fire insurance rate maps, and city directories, as available. The purpose of this review was to review obvious uses of the Site from the present, back to the Site's first developed use, or back to 1940, whichever is earlier. The term "developed use" includes agricultural uses and placement of fill dirt, and other uses that may not involve structures.
- Conducted interviews with present owners, operators, and/or occupants, or a designated representative, of the Site, as well as other knowledgeable parties as appropriate. The purpose of these interviews was to obtain information regarding potential RECs in connection with the Site.
- Performed a preliminary vapor encroachment screening assessment on the Site and adjoining properties.
- Prepared this ESA report documenting the methodology, significant data gaps, and findings and opinions regarding identified RECs, HRECs, and CRECs.

## 1.4 Tasks Not Undertaken

Non-scope considerations, as noted in ASTM E 1527-21, are discussed in Section 7 as appropriate. Ninyo & Moore did not address interpretations of zoning regulations, building code requirements, or property title issues.

## 1.5 Limitations and Exceptions

The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard of care exercised by environmental consultants performing similar work in the project area. No other warranty, expressed or implied, is made regarding the professional opinions presented in this report.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires any additional information or has questions regarding the content, interpretations presented, or completeness of this document.

Our conclusions, recommendations, and opinions are based on an analysis of the observed Site conditions and the referenced literature. It should be understood that the conditions of a Site could change with time as a result of natural processes or the activities of man at the subject property or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

Per Section 4.6 of the ASTM E1527-21 Standard, "an environmental Site assessment meeting or exceeding this practice is presumed to be viable when it is completed within 180 days prior to the date of acquisition of the subject property (or for transactions not involving an acquisition such as a lease or refinance, the date of the intended transaction). The dates of the components (*interviews, review of government records, visual Site inspections, and declaration by the environmental professional*, shall be identified in the report."

All of the following components must be conducted or updated within 180 days prior to the date of acquisition or prior to the date of the transaction:

- (i) interviews with owners, operators, and occupants;
- (ii) searches for recorded environmental cleanup liens;
- (iii) reviews of federal, tribal, state, and local government records;
- (iv) visual inspections of the subject property and of adjoining properties; and
- (v) the declaration by the environmental professional responsible for the assessment or update.

## 1.6 Special Terms and Conditions

Ninyo & Moore was not made aware of any special terms and conditions associated with the Site.

## 1.7 Reliance

This report may be relied upon by, and is intended exclusively for, the *Users* of this report, including Oakland Housing Authority, and any of its affiliates. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the aforementioned *Users* is undertaken at said parties' sole risk.

## 2 PROPERTY OVERVIEW

The following sections describe the location and the current uses of the Site and adjoining properties. The Site Location is presented on Figure 1 and the Site Vicinity with additional information concerning the Site and surrounding properties is presented on Figure 2. At the time of the Site reconnaissance, the Site was developed with a multi-story vacant retirement home. The Site is generally located in Oakland, Alameda County, California. The 0.96-acre parcel is designated by Alameda County Assessor's Parcel Number 10-823-15-5.

### 2.1 Property Location and Land Use(s)

#### 2.1.1 Property Location

The Site is located at 401 Santa Clara Avenue in Oakland, Alameda County, California.

#### 2.1.2 Adjacent Property Location and Land Uses

Table 1 lists the properties adjoining the Site and associated land use. Based on the nature of the current uses of the adjoining properties and observations made during the Site reconnaissance, it is unlikely that the current uses of these properties have impacted the environmental integrity of the Site.

Location	Description
North	Grand Lake Towers (377 Santa Clara Ave)
South	Apartment building (411 Santa Clara Ave), and vacant land
East	Santa Clara Avenue, residential development (396 and 404 Santa Clara Ave), and St Maarten Apartments (400 Santa Clara Ave)
Northwest	Apartment complex (460 Crescent St)

#### 2.1.3 Utilities

##### 2.1.3.1 Potable Water

The East Bay Municipal Utilities District (EBMUD) provides potable water to the Site and vicinity.

### **2.1.3.2 Sewage Disposal System**

The EBMUD provides municipal sewer service to the Site and surrounding areas.

### **2.1.3.3 Source of Fuel for Heating and Cooling**

The fuel source for the on-Site heating and cooling systems was provided by PG&E.

### **2.1.4 Description of Structures, Roads, and Other Improvements**

As shown on Figure 2, the Site is accessible from Santa Clara Avenue. At the time of the Site reconnaissance, the Site was improved with a 6-story vacant retirement home known as Grand Lake Gardens. The building consisted of an east wing and a west wing. The east wing included a subterranean parking garage, a parking garage/lobby level, floors 2-5 of residential tenant spaces, and floor 6 of common space and a dining hall. The west wing included floors 2-5 of residential tenant spaces. Due to the slope of the Site terrain, the west wing does not have a first floor. The wings were connected through a multi-story hallway. A gathering space and garden area were also part of the Site. In October 2022, the 5th floor on the west wing was damaged by a fire, which caused the building fire sprinklers to activate and resulted in the majority of the Site building being flooded by 1-2 feet of water. The fire and resulting flooding caused the asbestos in the ceiling to become friable and for mold to grow on the drywall. Extensive remediation efforts were undertaken to remove the asbestos and mold on the interior of the building. The building has therefore been vacant and unoccupied since the fire in October 2022. All interior furnishings have been removed, and the walls on the 5th floor were removed.

## **2.2 Physical Setting**

The following sections include discussions of topographic, geologic, and hydrologic conditions.

### **2.2.1 Topography**

Based on a review of the United States Geological Survey (USGS) 7.5-Minute Topographic Quadrangle Map Series of the Oakland East, California 2021 Quadrangle, the Site is situated at an elevation of approximately 48 feet above mean sea level. The general topographic gradient (EDR 2024a) is in a southerly direction.

### **2.2.2 Geology/Hydrogeology**

The Site is located in the Coast Range geomorphic province of California. The Coast Ranges are northwest-trending mountain ranges (2,000 to 4,000, occasionally 6,000 feet elevation above sea level), and valleys. The ranges and valleys trend northwest, subparallel to the San Andreas Fault. Strata dip beneath alluvium of the Great Valley. To the west is the Pacific Ocean. The coastline is uplifted, terraced and wave-cut. The Coast Ranges are composed of thick Mesozoic and Cenozoic sedimentary strata. The northern and southern ranges are separated by a depression containing the San Francisco Bay. The northern Coast Ranges are dominated by irregular, knobby, landslide-topography of the Franciscan Complex. The eastern border is characterized by strike-ridges and valleys

in Upper Mesozoic strata. In several areas, Franciscan rocks are overlain by volcanic cones and flows of the Quien Sabe, Sonoma and Clear Lake volcanic fields. The Coast Ranges are subparallel to the active San Andreas Fault. The San Andreas is more than 600 miles long, extending from Pt. Arena to the Gulf of California. West of the San Andreas is the Salinian Block, a granitic core extending from the southern extremity of the Coast Ranges to the north of the Farallon Islands (CGS, 2002). The 1977 California Division of Mines and Geology, *Geologic Map of California*: (Jennings C.W.) shows the Site to be underlain by Quaternary Older Alluvium Deposits (Qoa). Based on our review of the EDR Radius Map report, the primary soil type beneath the Site is mapped as Tierra loam (EDR, 2024a).

### **2.2.3 Surface Water Bodies**

Natural surface water bodies, including streams or other bodies of water, are not present on or adjoining to the Site. The nearest body of water is the Lake Merritt, located approximately 1,600-feet south of the Site.

### **2.2.4 Groundwater**

Groundwater information for the Site was not available. Ninyo & Moore reviewed the State Water Resources Control Board's GeoTracker website (GeoTracker) for groundwater information in the Site vicinity. According to GeoTracker, groundwater information reported in a July 2023 Groundwater Monitoring Report for the former Chevron service station 90121 located at 3026 Lakeshore Avenue (approximately 1,500 feet southeast of the Site), the groundwater flow direction in the Site vicinity was reported to be in a southeasterly direction and the depth to groundwater was reported to be approximately 4 to 8 feet below ground surface. Groundwater depths and flow directions can vary due to seasonal variations, groundwater withdrawal or injection, and other factors.

### **2.2.6 Flood Maps**

According to the FEMA flood maps, the Site lies in the flood zone classified as Zone X. Zone X designates an area that has been determined to be outside of the 0.2% annual chance floodplain.

## **3 PROPERTY BACKGROUND**

### **3.1 Interviews**

Interviews were conducted by Ninyo & Moore with the objective of obtaining information regarding potential RECs in connection with the Site. Interviews with the present owners, operators, and/or occupants of the Site, as available, as well as other knowledgeable parties as appropriate, is mandated by ASTM E1527-21.

### 3.1.1 Current Owner/Site Manager or Occupant

Mr. Keith Manson, with CBRE and the seller's real estate agent, was interviewed during the Site reconnaissance on May 20, 2024. Mr. Manson provided access during the Site visit. Mr. Manson was not aware of any hazardous materials incidents, spills, leaks or violations related to the Site.

### 3.1.2 Past Owner/Site Manager or Occupant

Past ownership entities were not made available to Ninyo & Moore during the preparation of this ESA. Therefore, interviews with past Site owners were not conducted.

### 3.1.3 State and/or Local Agencies

State and/or local agencies were contacted regarding available records for the Site. These interviews and the records reviewed are summarized in Section 4.3.

## 3.2 Review of Aerial Photographs

Ninyo & Moore reviewed the EDR Aerial Photo Decade Package report (EDR, 2024a) dated May 22, 2024. The report included aerial photographs that begin in 1939. A listing of the photographs reviewed is presented in Table 2. Copies of the historical aerial photographs are provided in Appendix D.

Based on the review of the aerial photographs listed below, the Site was developed with multiple residential houses from sometime prior to 1939, until the late 1960s, when the residential houses were removed, and the current Site building was constructed. The Site vicinity appeared to be developed since at least the 1930s. No RECs were identified for the Site or adjoining properties based on historical aerial photograph review.

Date	Sources	Site	Adjoining Properties
1939	EDR	The Site was noted to be developed with residential houses.	The areas surrounding the Site were noted to be developed with residential houses. A street was noted to the east of the Site.
1946-1958	EDR	No significant changes noted.	No significant changes noted.
1963	EDR	No significant changes noted.	Some of the residential houses to the north of the Site were replaced with an apartment building, and the residential houses to the west and south of the Site were removed and replaced with a freeway.
1968	EDR	The residential houses on the Site were removed and were replaced with the current Site building, which consisted of two connected wings.	No significant changes noted.

Date	Sources	Site	Adjoining Properties
1974	EDR	No significant changes noted.	Some of the residential houses to the north of the Site were replaced with an apartment building.
1982-2012	EDR	No significant changes noted.	No significant changes noted.
2016	EDR	A concrete gathering area was noted in between the two wings of the Site building.	No significant changes noted.
2020	EDR	No significant changes noted.	No significant changes noted.

### 3.3 Review of Topographic Maps

Ninyo & Moore reviewed the EDR Historical Topo Map Report, dated May 22, 2024 (EDR, 2024b). A listing of the maps reviewed is presented in Table 3 below. Copies of the historical topographic maps are provided in Appendix D.

The review of topographic maps listed below indicates the Site was undeveloped from sometime prior to 1895 to sometime prior to 1915, when residential houses were constructed on the Site. Structures were depicted adjacent to the north, south, east and west of the Site since at least 1915. No RECs were identified for the Site or adjoining properties based on a review of the historical topographic maps.

Date	Quadrangle	Uses
1895	San Francisco, Concord	The Site and Site vicinity were mapped as vacant land.
1899	San Francisco	The Site was unmapped.
1915	Concord, San Francisco	The Site and Site vicinity were mapped with several residential houses.
1947-1996	Oakland East	The Site and Site vicinity were mapped as urban land.
2012-2021	Oakland East, Oakland West	No buildings were mapped on the 2012 through 2021 topographic maps.

### 3.4 Review of Fire Insurance Maps

Ninyo & Moore reviewed the EDR Certified Sanborn Map Report, dated May 22, 2024 (EDR, 2024c) for historical fire insurance rate maps (Sanborn Maps) of the Site. A summary of the Sanborn Map coverage is discussed in Table 4 below. A copy of the EDR Sanborn Map Report is included in Appendix D.

Year(s)	Site Comments	Adjoining Area Comments
1903	The Site was unmapped.	Residential houses were depicted to the north of the Site.
1911	Two residential houses were depicted on the Site.	Residential houses were depicted to the north, south, and west of the Site.

Year(s)	Site Comments	Adjoining Area Comments
1912-1929	The Site was unmapped.	The Site vicinity was unmapped.
1950	A total of five residential houses and a garage were depicted on the Site.	Residential houses were depicted to the east of the Site.
1952	No significant changes depicted.	No significant changes depicted.
1954	An additional residential house was depicted on the Site.	No significant changes depicted.
1957	The Site was unmapped.	The Site vicinity was unmapped.
1959	No significant changes depicted.	No significant changes depicted.
1960	The Site was unmapped.	The Site vicinity was unmapped.
1962	One of the residential houses was removed from the Site.	Several residential houses to the west and south of the Site were removed and were replaced with the MacArthur Freeway.
1967	The residential houses and garage on the Site were removed and were replaced with a two-winged building, consistent with the current Site building, labeled Grand Lake Garden Apartments, Baptist Retirement Center.	Some of the residential houses to the north of the Site were replaced with an apartment building, and a multi-story residential building was depicted to the south of the Site.
1968-1969	The Site was unmapped.	The Site vicinity was unmapped.
1970	No significant changes depicted.	Some of the residential houses to the north of the Site were replaced with an apartment building.

### 3.5 Review of Reverse City Directories

Ninyo & Moore reviewed the EDR City Directory Image Report, dated May 23, 2024 (EDR, 2024d), for the Site and adjoining properties, to evaluate facilities of potential concern, which may have been historically located on or adjoining to the Site. A summary of historical City Directory listings for the Site and adjoining properties, as warranted, are discussed in Table 5 below. City directories for the Site and adjoining properties were researched from 1925 through 2020. A copy of the EDR City Directory Image report is included in Appendix D. Review of the City Directory listings did not identify any RECs associated with the Site or adjoining properties.

Site Address	Source Years	Site Uses
401 Santa Clara Avenue	1925-2020	All directory listings were residential
Adjoining Properties: 377 Santa Clara Ave 396 Santa Clara Ave 400 Santa Clara Ave 404 Santa Clara Ave	1925-2020	All directory listings were residential

Site Address	Source Years	Site Uses
411 Santa Clara Ave 460 Crescent St		

### 3.6 Title Records

A Preliminary Title Report was not provided to Ninyo & Moore. According to the Alameda County Assessor’s website, the Site is currently owned by Human Good.

### 3.7 Recorded Environmental Covenants and AULs

The EDR database report included a review of both Federal and State Engineering Control (EC) and Institutional Control (IC) databases, such as the *Engineering Controls Sites List* (US ENG CONTROLS), and *Institutional Controls Sites List* (US INST CONTROLS). Based on a review of the database report, the Site was not listed on the EC or IC databases, and ECs and ICs were not identified through review of the Department of Toxics Substances Control *Land Use Restriction Sites database*, or through review of the State Water Resources, *Sites with Deed Restrictions* database. In addition to these federal and state listings, AULs can be recorded at the county and municipal level that may not be listed in the regulatory database report. Environmental lien and AUL records recorded against the Site were not provided by the client. Performance of a review of these records was not included as part of the Phase I ESA scope of services, and unless notified otherwise, Ninyo & Moore assumes that the client is evaluating this information outside the scope of this report. An environmental lien search report was not requested by the client for review by Ninyo & Moore during the completion of this ESA.

### 3.8 Previous Investigations

Ninyo & Moore was not provided copies of prior environmental reports completed for the Site.

### 3.9 User-Provided Information

The following sections summarize information provided by the user to assist the Environmental Professional in identifying the possibility of RECs in connection with the Site and to fulfill the user’s responsibilities in accordance with ASTM E1527-21. The User Questionnaire was completed by Mr. Andrew McDonald, the Site owner. A copy of the User Questionnaire is included in Appendix B.

#### 3.9.1 Environmental Lien and Activity and Use Limitations Search Results

Ninyo & Moore was not informed of the existence of environmental liens or AULs associated with the Site.

#### 3.9.2 Specialized Knowledge

Ninyo & Moore was not informed of the existence of specialized knowledge pertaining to the Site that is material to the identification of RECs in connection with the Site.

### 3.9.3 Relationship of Purchase Price to Fair Market Value

The purchase price being paid for the property reasonably reflects the fair market value of the property.

### 3.9.4 Commonly Known or Reasonable Ascertainable Information

Ninyo & Moore was not informed of the existence of commonly known or reasonably ascertainable information pertaining to the Site that is material to the identification of RECs in connection with the Site.

### 3.9.5 Owner, Property Manager, and Occupant Information

According to the Alameda County Assessor’s website, the Site is currently owned by Human Good.

## 4 REGULATORY DATABASE SEARCH AND SIGNIFICANT FINDINGS

### REGULATORY DATABASE SEARCH AND FINDINGS

Environmental Data Resources, Inc. (EDR) performed a computerized environmental information database search for the Site and Site vicinity on May 22, 2024 (EDR, 2024e) that included searches of federal, state, tribal, and local databases. The purpose of the database search was to determine if the Site or adjoining properties were listed on one or more of the standard government environmental records resources, and if so, review agency records to determine if a REC, HREC, CREC, or de minimis condition exists at the Site. A summary of the listed properties of potential environmental concern to the Site are presented in Table 6 below. A list of the environmental databases searched, and their corresponding search distance is included in the EDR Radius Map Report provided in Appendix C.

Table 6 - Summary of Environmental Records Sources Database Search								
Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
RCRA - Small Quantity Generators		0.25	2	2	NR	NR	NR	4
Facility Index System/Facility Registry System	1	TP	NR	NR	NR	NR	NR	1
UST Finder Releases Database		0.5	1	1	16	NR	NR	18
RCRA - Non Generators / No Longer Regulated	3	0.25	26	67	NR	NR	NR	96
UST Finder Database		0.25	0	1	NR	NR	NR	1
Enforcement & Compliance History Information	2	TP	NR	NR	NR	NR	NR	2

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR Exclusive Historical Cleaners		0.125	14	NR	NR	NR	NR	14
Mineral Resources Data System		0.25	0	1	NR	NR	NR	1
Leaking Underground Fuel Tank Report (GEOTRACKER)		0.5	1	7	23	NR	NR	31
Active UST Facilities		0.25	0	3	NR	NR	NR	3
Hazardous Substance Storage Container Database		0.25	1	5	NR	NR	NR	6
Cleaner Facilities		0.25	3	1	NR	NR	NR	4
Facility Inventory Database		0.25	0	2	NR	NR	NR	2
Statewide SLIC Cases (GEOTRACKER)		0.5	0	1	5	NR	NR	6
Hazardous Waste Tracking System	3	TP	NR	NR	NR	NR	NR	3
EnviroStor Database		1	0	0	0	4	NR	4
California Environmental Reporting System Hazardous Waste		0.25	0	1	NR	NR	NR	1
"Cortese" Hazardous Waste & Substances Sites List		0.5	1	2	18	NR	NR	21
Contaminated Sites		0.5	0	4	17	NR	NR	21
Hazardous Waste & Substance Site List		0.5	2	3	18	NR	NR	23
SWEEPS UST Listing		0.25	1	4	NR	NR	NR	5
Facility and Manifest Data	3	TP	NR	NR	NR	NR	NR	3
California Environmental Reporting System (CERS) Tanks		0.25	0	1	NR	NR	NR	1

## 4.1 Subject Property

The following Table 7 summarizes the database listings associated with the Site.

Table 7 - On-Site Database Listings	
Site Name	GRAND LAKE GARDEN, HUMANGOOD NORCAL
Site Address	401 SANTA CLARA AVE
Database	FINDS, ECHO, HWTS, HAZNET, RCRA NonGen / NLR

<b>Comments</b>	The Site is listed on the RCRA NonGen / NLR, FINDS, and ECHO databases for handling but not generating hazardous waste in 2016, 2022, and 2023; on the HWTS database for having tracked hazardous waste on the Site in 2008, 2014, and 2016; on the HAZNET database for storing, transferring, and disposing of several tons of pharmaceutical waste, and asbestos containing waste from 2008 to 2020. These database listings are not considered RECs.
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## 4.2 Surrounding Properties

Off-Site properties/facilities listed in the Summary of Environmental Records Sources table above were evaluated for their potential to impact soil, soil vapor, and/or groundwater at the Site. Table 8 below presents the off-Site properties/facilities that were interpreted to represent a potential environmental concern to the Site, based on their proximity to the Site, the nature of the database(s) on which they are listed, and/or the location of the off-Site property in relation to the Site with respect to topography or expected groundwater flow direction (southeasterly).

Table 8 - Facilities of Potential Concern	
<b>Facility Name</b>	TRENT DEHART
<b>Address</b>	370 SANTA CLARA AVENUE
<b>Direction from Site</b>	Northwest and upgradient
<b>Distance from Site</b>	55 feet
<b>Database</b>	RCRA NonGen / NLR
<b>Notes/Comments</b>	This property is listed on the RCRA NonGen / NLR database for handling but not generating hazardous waste in 2022. This database listing is not considered a REC.
<b>Facility Name</b>	CHARLIE KALB
<b>Address</b>	370 SANTA CLARA AVENUE #3
<b>Direction from Site</b>	Northwest and upgradient
<b>Distance from Site</b>	55 feet
<b>Database</b>	RCRA NonGen / NLR
<b>Notes/Comments</b>	This property is listed on the RCRA NonGen / NLR database for handling but not generating hazardous waste in 2022. This database listing is not considered a REC.
<b>Facility Name</b>	VAUGHN MANAGEMENT GROUP
<b>Address</b>	377 SANTA CLARA AVE
<b>Direction from Site</b>	Northeast and upgradient
<b>Distance from Site</b>	78 feet
<b>Database</b>	RCRA NonGen / NLR
<b>Notes/Comments</b>	This property is listed on the RCRA NonGen / NLR database for handling but not generating hazardous waste in 2019. This database listing is not considered a REC.

<b>Facility Name</b>	CHONG WONG
<b>Address</b>	414 SANTA CLARA AVE
<b>Direction from Site</b>	Southeast and downgradient
<b>Distance from Site</b>	170 feet
<b>Database</b>	EDR Hist Cleaner
<b>Notes/Comments</b>	This property is listed on the EDR Hist Cleaner database for registered as a laundry service in 1943. This database listing is not considered a REC.

<b>Facility Name</b>	COMMERCIAL PROPERTY
<b>Address</b>	3315 GRAND AVE
<b>Direction from Site</b>	East and downgradient
<b>Distance from Site</b>	257 feet
<b>Database</b>	SWEEPS UST
<b>Notes/Comments</b>	This property is listed on the SWEEPS UST database for having a 500-gallon gasoline UST on the property. This database listing is not considered a REC.

<b>Facility Name</b>	SHERMAN JULIUS
<b>Address</b>	3217 GRAND AVE
<b>Direction from Site</b>	Southeast and downgradient
<b>Distance from Site</b>	263 feet
<b>Database</b>	EDR Hist Cleaner
<b>Notes/Comments</b>	This property is listed on the EDR Hist Cleaner database for registered as a laundry service in 1933. This database listing is not considered a REC.

<b>Facility Name</b>	ALBRIGHT G E
<b>Address</b>	468 SANTA CLARA AVE
<b>Direction from Site</b>	South-Southeast and downgradient
<b>Distance from Site</b>	289 feet
<b>Database</b>	EDR Hist Cleaner
<b>Notes/Comments</b>	This property is listed on the EDR Hist Cleaner database for registered as a laundry service in 1933. This database listing is not considered a REC.

<b>Facility Name</b>	GLEN VIEW LAUNDRY
<b>Address</b>	474 SANTA CLARA AVE
<b>Direction from Site</b>	Southeast and downgradient
<b>Distance from Site</b>	322 feet
<b>Database</b>	EDR Hist Cleaner
<b>Notes/Comments</b>	This property is listed on the EDR Hist Cleaner database for registered as a laundry service in 1933. This database listing is not considered a REC.

<b>Facility Name</b>	RICHARD MAHER
<b>Address</b>	455 CRESCENT STREET #102
<b>Direction from Site</b>	Northwest and upgradient
<b>Distance from Site</b>	334 feet
<b>Database</b>	RCRA NonGen / NLR
<b>Notes/Comments</b>	This property is listed on the RCRA NonGen / NLR database for handling but not generating hazardous waste in 2023. This database listing is not considered a REC.

<b>Facility Name</b>	COLLINS MGMNT.- 455 CRESCENT
<b>Address</b>	455 CRESCENT STREET UNIT 309
<b>Direction from Site</b>	Northwest and upgradient
<b>Distance from Site</b>	334 feet
<b>Database</b>	RCRA NonGen / NLR
<b>Notes/Comments</b>	This property is listed on the RCRA NonGen / NLR database for handling but not generating hazardous waste in 2022. This database listing is not considered a REC.

<b>Facility Name</b>	KILEY RUSSELL
<b>Address</b>	455 CRESCENT STREET APT 105
<b>Direction from Site</b>	Northwest and upgradient
<b>Distance from Site</b>	334 feet
<b>Database</b>	RCRA NonGen / NLR
<b>Notes/Comments</b>	This property is listed on the RCRA NonGen / NLR database for handling but not generating hazardous waste in 2019. This database listing is not considered a REC.

<b>Facility Name</b>	COLLINS MANAGEMENT COMPANY
<b>Address</b>	455 CRESCENT STREET #402
<b>Direction from Site</b>	Northwest and upgradient
<b>Distance from Site</b>	334 feet
<b>Database</b>	RCRA NonGen / NLR
<b>Notes/Comments</b>	This property is listed on the RCRA NonGen / NLR database for handling but not generating hazardous waste in 2020. This database listing is not considered a REC.

<b>Facility Name</b>	CHRISSY BARLOW
<b>Address</b>	455 CRESCENT STREET #313
<b>Direction from Site</b>	Northwest and upgradient
<b>Distance from Site</b>	334 feet
<b>Database</b>	RCRA NonGen / NLR
<b>Notes/Comments</b>	This property is listed on the RCRA NonGen / NLR database for handling but not generating hazardous waste in 2019. This database listing is not considered a REC.

<b>Facility Name</b>	YIHEIS GEDLE
<b>Address</b>	455 CRESENT STREET #306
<b>Direction from Site</b>	Northwest and upgradient
<b>Distance from Site</b>	334 feet
<b>Database</b>	RCRA NonGen / NLR
<b>Notes/Comments</b>	This property is listed on the RCRA NonGen / NLR database for handling but not generating hazardous waste in 2022. This database listing is not considered a REC.

<b>Facility Name</b>	COLLINS MANAGEMENT
<b>Address</b>	455 CRESCENT STREET #318
<b>Direction from Site</b>	Northwest and upgradient
<b>Distance from Site</b>	334 feet
<b>Database</b>	RCRA NonGen / NLR
<b>Notes/Comments</b>	This property is listed on the RCRA NonGen / NLR database for handling but not generating hazardous waste in 2021. This database listing is not considered a REC.

<b>Facility Name</b>	COLLINS MANAGEMENT
<b>Address</b>	455 CRESCENT STREET
<b>Direction from Site</b>	Northwest and upgradient
<b>Distance from Site</b>	334 feet
<b>Database</b>	RCRA NonGen / NLR
<b>Notes/Comments</b>	This property is listed on the RCRA NonGen / NLR database for handling but not generating hazardous waste in 2021. This database listing is not considered a REC.

<b>Facility Name</b>	PETER PROWS/KAREN NELSON-MUNSON
<b>Address</b>	483 CRESCENT STREET
<b>Direction from Site</b>	North-Northwest and upgradient
<b>Distance from Site</b>	337 feet
<b>Database</b>	RCRA NonGen / NLR
<b>Notes/Comments</b>	This property is listed on the RCRA NonGen / NLR database for handling but not generating hazardous waste in 2021. This database listing is not considered a REC.

<b>Facility Name</b>	ESQUIRE CLEANERS COMPANY
<b>Address</b>	3223 GRAND AVE
<b>Direction from Site</b>	East-Southeast and downgradient
<b>Distance from Site</b>	368 feet
<b>Database</b>	EDR Hist Cleaner
<b>Notes/Comments</b>	This property is listed on the EDR Hist Cleaner database for registered as a laundry service from 1967 to 1993. This database listing is not considered a REC.

<b>Facility Name</b>	ESQUIRE CLEANERS COMPANY
<b>Address</b>	3235 GRAND AVE
<b>Direction from Site</b>	East-Southeast and downgradient
<b>Distance from Site</b>	368 feet
<b>Database</b>	EDR Hist Cleaner
<b>Notes/Comments</b>	This property is listed on the EDR Hist Cleaner database for registered as a laundry service from 1994 to 2005. This database listing is not considered a REC.

<b>Facility Name</b>	LANDOWITZ JOS
<b>Address</b>	3249 GRAND AVE
<b>Direction from Site</b>	East-Southeast and downgradient
<b>Distance from Site</b>	370 feet
<b>Database</b>	EDR Hist Cleaner
<b>Notes/Comments</b>	This property is listed on the EDR Hist Cleaner database for registered as a laundry service in 1933. This database listing is not considered a REC.

### 4.3 Additional Environmental Record Sources

Local and state departments were contacted regarding available records for the Site. Results of the contacts and file reviews, as available, are discussed below. Copies of requests and responses, including public records, are included as Appendix E.

#### 4.3.1 State/County Environmental Record Sources

Ninyo & Moore reviewed the Department of Toxic Substances Control (DTSC) EnviroStor and the Regional Water Quality Control Board (RWQCB) GeoTracker websites for hazardous substances or hazardous materials files for the Site address on May 22, 2024. No records were available for the Site through review of these agency databases.

The Alameda County Environmental Health (ACEH) was contacted regarding hazardous materials or hazardous wastes records associated with the Site address on May 22, 2024. Files or records were not available for the Site address. A copy of the file review request response is included in Appendix E.

#### 4.3.2 Local Environmental Record Sources

A Public Records Request was submitted to the City of Oakland (City) regarding hazardous materials, hazardous wastes and/or underground storage tank records for the Site May 22, 2024. The City of Oakland has not responded by the publishing of this report. If the City does respond, and if their response indicates a REC, or alters the conclusions or recommendations of this report, an addendum to the report will be issued.

### 4.3.3 Federal Environmental Record Sources

Ninyo & Moore conducted an online search of the USEPA’s MyPropertyInfo database for the Site and the vicinity. The Site address was not listed in the database.

### 4.3.4 Gas & Oil Maps

According to the CalGEM Online Mapping System, the Site does not lie within the administrative boundaries of an oil field and no oil or gas wells are located on the Site.

## 5 SITE RECONNAISSANCE

### SITE RECONNAISSANCE

The following sections provide a general description of the Site and adjoining properties. The Site reconnaissance was conducted on May 20, 2024 by Mr. Luke Swickard with Ninyo & Moore. Mr. Swickard was accompanied by Mr. Keith Manson, with CBRE and real estate agent for the seller. Table 9 below summarizes key on-Site observations. Conditions of significant concern are discussed following the table. Photographs taken during the Site reconnaissance are provided in Appendix F.

Table 9 - On-Site Observations			
Conditions	Not Observed or Noted	Observed or Noted	Significant Concerns?
Hazardous Substances		X	No
Petroleum Products	X		
Underground Storage Tanks (USTs)	X		
Aboveground Storage Tanks (ASTs)		X	No
Chemical/Petroleum Odors or Staining	X		
Standing Water/Pools/Sumps	X		
Drums and Totes	X		
Unidentified Hazardous Substance Containers	X		
Transformers/Potentially PCB-Containing Materials		X	No
Stains or Corrosion on Floors, Walls, or Ceilings	X		
Drains and Sumps		X	No
Pits, Ponds, Lagoons	X		
Solid Waste	X		
Stained Soil or Pavement	X		
Stressed Vegetation	X		
Elevators		X	No
Waste or Storm Water Discharges	X		
Septic Systems	X		
Wells	X		
Other	X		

## Aboveground Storage Tanks (ASTs)

A 50-gallon used cooking oil tank was located in the building parking garage.

### ASSOCIATED PHOTOGRAPHS

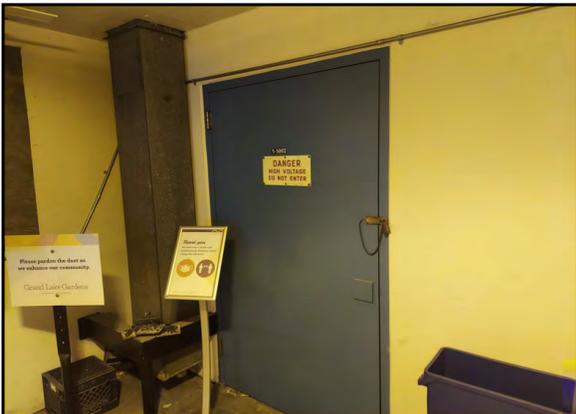


View of the 50-gallon used cooking oil tank.

## Transformers/Potentially PCB-Containing Materials

A transformer was located in the sub level parking garage but was not accessible through a locked door.

### ASSOCIATED PHOTOGRAPHS



View of the transformer room (inaccessible).

## Drains and Sumps

A sump pump was located in the maintenance storage area in the subterranean level parking garage.

## ASSOCIATED PHOTOGRAPHS



View of the sump pump in the maintenance area.

## Elevators

Two electric powered cable elevators were located in the Site building.

## ASSOCIATED PHOTOGRAPHS



View of the elevators.



View of the electric-powered elevator motors.

## 5.1 Adjoining Properties

The areas surrounding the Site consist of residential properties. The Site is bordered on the north by Grand Lake Towers (377 Santa Clara Ave); on the south by an apartment building (411 Santa Clara Ave), and vacant land; on the east by residential development (396 and 404 Santa Clara Ave), and St Maarten Apartments (400 Santa Clara Ave); and on the northwest by an apartment complex (460 Crescent St).

## 6 VAPOR ENCROACHMENT

Ninyo & Moore conducted a preliminary vapor encroachment screen (pVES) for potential chemicals of concern (COCs) that may migrate as vapors onto the Site as a result of contaminated soil and/or groundwater near the Site. The purpose of the pVES is to identify a vapor encroachment condition (VEC), which is the presence or likely presence of COC vapors in subsurface soils at the Site caused by the release of vapors from contaminated soil or groundwater either on or near the Site. The potential for VEC beneath the Site was evaluated using a Vapor Encroachment Screening Matrix (VESM). The VESM included performing a

Search Distance Test to identify if there are any known or suspect contaminated properties surrounding or upgradient of the Site within specific search radii, a COC Test (for those known or suspect contaminated properties identified within the Search Distance Test) to evaluate whether or not COCs are likely to be present, and a Critical Distance Test to evaluate whether or not COCs in a contaminated plume may be within the critical distance of the Site (100 feet for non-petroleum contaminants, and 30 feet for petroleum hydrocarbon contaminants).

Based on the results of the VESM, it is unlikely a VEC currently exists beneath the Site. A copy of the VESM is included in Appendix G.

## **7 NON-SCOPE CONSIDERATIONS**

In accordance with ASTM E1527-21, the following, which is not intended to be all inclusive, represent non-scope considerations and, therefore, were not addressed in this Phase I ESA: asbestos, radon, lead-based paint, lead in drinking water, emerging contaminants, regulatory compliance, cultural and historical risk, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, and high voltage power lines. In addition, Ninyo & Moore did not address interpretations of zoning regulations, building code requirements, or property title issues.

## **8 FINDINGS AND OPINIONS**

### **FINDINGS AND OPINIONS**

Ninyo & Moore performed a Phase I Environmental Site Assessment (ESA) on the Site located at 401 Santa Clara Avenue, in Oakland, Alameda County, California. A Summary of Findings is provided below. It should be recognized that all report details are not included in this Summary, and the report should be read in its entirety.

#### **Site Location and Use**

The approximately 0.96-acre Site is located along Santa Clara Avenue. The Site consisted of a vacant multi-story retirement home.

#### **Historical Information**

Review of historical resources, such as aerial photographs, topographic maps, fire insurance maps, and available City Directory listings, as well as through review of historical records, interviews, and research, revealed that the Site was developed with multiple residential houses from sometime prior to 1911, until the late 1960s, when the residential houses were removed, and the current two-winged Site building was constructed. No significant development has occurred on the Site since the mid 2010s, when a gathering area was constructed between the wings of the building.

Adjoining properties have primarily been residential from at least 1911 until the present. No RECs were identified in the historical review.

## **Records Review**

Review of an environmental database report obtained for this project indicated that the Site was not listed on any of the *Standard Federal, State, and Tribal Environmental Record sources*. The Site was listed on the *Additional Federal, State, Tribal and Local Environmental Record sources* regulatory databases researched by EDR, including the FINDS, ECHO, HWTS, HAZNET, and RCRA NonGen / NLR databases. Selected federal and state environmental regulatory databases as well as responses from state and local regulatory agencies were reviewed, as available. Based on the available EDR information and the nature of these specific databases listing types, no RECs were identified at the Site in connection with these database listings.

Selected federal and state environmental regulatory databases as well as responses from state and local regulatory agencies were reviewed, as available. Several off-Site facilities were located within the EDR search radius from the Site. None of the listed facilities are considered to be a REC to the Site based on several factors, including distance from the Site, location relative to the regional groundwater flow direction (e.g. hydraulically downgradient or crossgradient to the Site), database listing type, and/or affected media (soil only).

Based on the completion of the Vapor Encroachment Condition (VEC) screening matrix, it is presumed unlikely that a VEC currently exists beneath the Site.

## **Site Reconnaissance**

On May 20, 2024, Mr. Luke Swickard with Ninyo & Moore conducted a Site reconnaissance of the property that included a visual inspection of the Site, and observations of adjoining properties. At the time of the reconnaissance, the Site was improved with a 6-story vacant retirement home known as Grand Lake Gardens. The building consisted of an east wing and a west wing. The east wing included a subterranean parking garage, a parking garage/lobby level, floors 2-5 of residential tenant spaces, and floor 6 of common space and a dining hall. The west wing included floors 2-5 of residential tenant spaces. Due to the slope of the Site terrain, the west wing does not have a first floor. The wings were connected through a multi-story hallway. A gathering space and garden area were also part of the Site. In October 2022, the 5th floor on the west wing was damaged by a fire, which caused the building fire sprinklers to activate and resulted in the majority of the Site building being flooded by 1-2 feet of water. The fire and resulting flooding caused the asbestos in the ceiling to become friable and for mold to grow on the drywall. Extensive remediation efforts were undertaken to remove the asbestos and mold on the interior of the building. The building has therefore been vacant and unoccupied since the fire in October 2022. All interior furnishings have been removed, and the walls on the 5th floor were removed.

## **Adjoining Properties**

The areas surrounding the Site consist of residential properties. The Site is bordered on the north by Grand Lake Towers (377 Santa Clara Ave); on the south by an apartment building (411 Santa Clara Ave), and vacant land; on the east by residential development (396 and 404 Santa Clara Ave), and St Maarten Apartments (400 Santa Clara Ave); and on the northwest by an apartment complex (460 Crescent St).

Based on observations made during the Site reconnaissance and review of agency file information, the adjoining properties were not identified as a REC.

## **8.1 Recognized Environmental Conditions**

### **Recognized Environmental Conditions:**

This assessment has revealed no evidence of RECs in connection with the Site or adjoining properties.

## **8.2 Controlled Recognized Environmental Conditions**

### **Controlled Recognized Environmental Conditions:**

This assessment has revealed no evidence of CRECs in connection with the Site.

## **8.3 Historical Recognized Environmental Conditions**

### **Historical Recognized Environmental Conditions:**

This assessment has revealed no evidence of HRECs in connection with the Site.

## **8.4 Business Environmental Risks**

### **Business Environmental Risks:**

The following Business Environmental Risks were identified:

- Due to the age of the Site building, it is likely that lead based paint (LBP) and asbestos containing materials (ACM) are present.

## **9 DATA GAPS**

No data gaps were encountered during this Phase I ESA.

## **10 CONCLUSIONS**

### **CONCLUSIONS**

Ninyo & Moore has performed this Phase I ESA in conformance with the scope and limitations of ASTM E1527-21 of the property located at 401 Santa Clara Avenue in Oakland, Alameda County, California (the Site). Based on the information compiled during the preparation of this report, this assessment has revealed no evidence of Recognized Environmental Conditions (RECs), Controlled RECs (CRECs), or Historical RECs (HRECs) in connection with the Site, and no RECs were identified on the adjoining properties.

## **11 RECOMMENDATIONS**

### **RECOMMENDATIONS**

Based on the findings of this ESA, no further investigation is recommended at this time.

## **12 LIMITING CONDITIONS/DEVIATIONS**

This report was prepared in accordance with ASTM E1527-21. No deviations from the standard occurred in this ESA. Based on the information gathered by Ninyo & Moore for the purposes of this ESA, it is Ninyo & Moore's opinion the data obtained from the Site reconnaissance, records reviewed, and interviews conducted, is adequate to make a conclusion on the environmental condition of the Site with respect to the existence or lack of RECs.

## 13 REFERENCES

ASTM International, 2021, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, Designation E1527-21.

California Department of Conservation, California Geological Survey (CGS), 2010. California Geomorphic Provinces, Note 36.

Environmental Data Resources (EDR 2023a), The Environmental Data Resources Radius Map Report with GeoCheck, dated May 22.

Environmental Data Resources (EDR, 2023b), The Environmental Data Resources Sanborn Map Report, dated May 22.

Environmental Data Resources (EDR 2023c), The Environmental Data Resources Aerial Photo Decade Package, dated May 22.

Environmental Data Resources (EDR, 2023d), The Environmental Data Resources City Directory Report, dated May 23.

Environmental Data Resources (EDR, 2023e), The Environmental Data Resources Historical Topographic Map Report, dated May 22.

US Environmental Protection Agency (EPA). All Appropriate Inquiry (AAI), Title 40 of Code of Federal Regulations (CFR) Section 312.10.

## 14 ENVIRONMENTAL PROFESSIONAL STATEMENT

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined by 312.10 of 40 CFR 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquires in conformance with the standards and practices set forth in 40 CFR Part 312.



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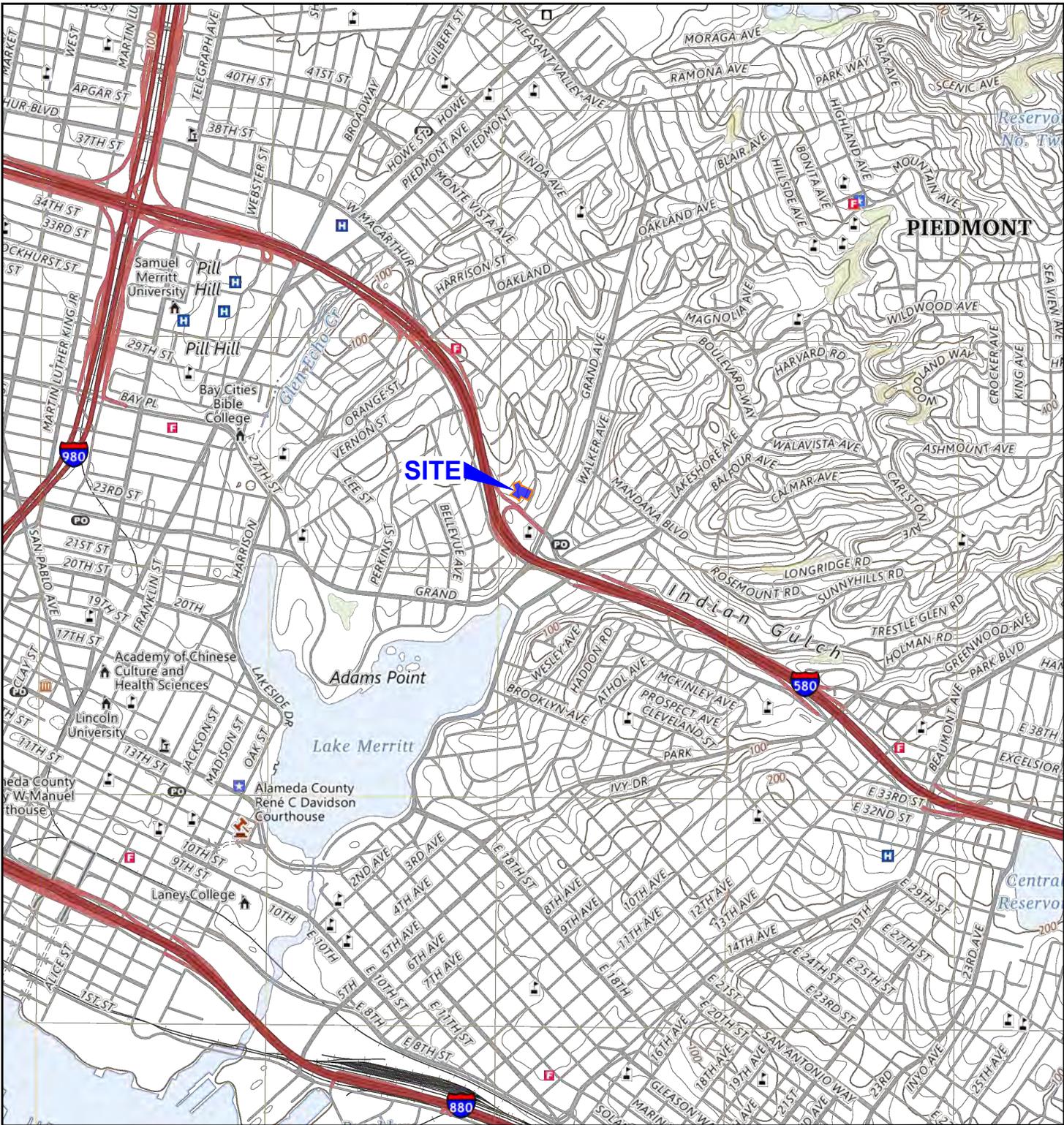
Brandon S. Wilken  
Principal Environmental Geologist

May 30, 2024

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Date

# Figures



404724001.dwg 05/30/2024 AEK

NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE | REFERENCE: USGS, 2024

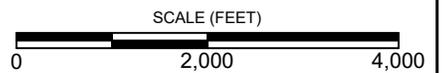
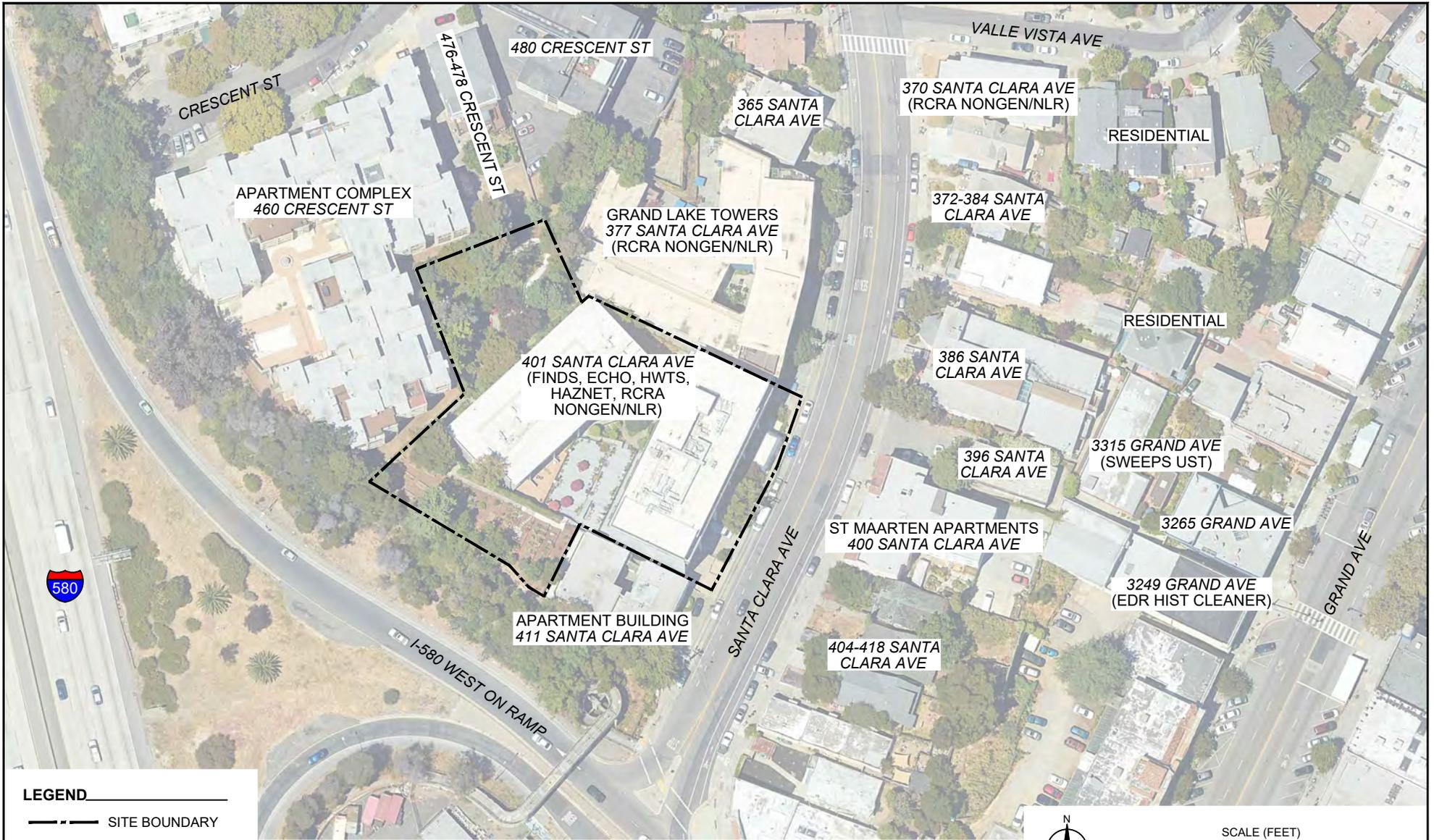


FIGURE 1



404724001.dwg 05/30/2024 AEK

**Appendix A -  
Resumes**

# Luke I. Swickard

## Project Manager



### EDUCATION

B.S., Environmental Science and Management, 2017, University of California, Davis, California

### REGISTRATIONS/CERTIFICATIONS

AHERA Accredited Asbestos Inspector, #45593

40-Hour HAZWOPER with Annual Updates

As a Project Manager for Ninyo & Moore, Mr. Swickard has 6 years of experience in various environmental field work, including Phase I and Phase II ESAs, corridor studies, oversight of soil boring drilling, well installation and UST removal activities, as well as water, soil and soil vapor sampling. He has also conducted Spill Prevention, Control, and Countermeasure (SPCC) audits, prepared Storm Water Pollution Prevention Plan (SWPPP), and designed stormwater Best Management Practices (BMP).

### EXPERIENCE

**FCS New Solano County Hall of Justice Phase I Environmental Site Assessment (ESA), Fairfield, California:** Provided project management for the completion of a Phase I ESA on the approximately 15-acre Solano County Justice Campus that includes the Solano County Courthouse, Law Library, Office of Emergency Operations, Solano County Coroner, and the Solano County Jail. The Phase I ESA was conducted to evaluate the potential for Recognized Environmental Conditions (RECs) on and adjacent to the site for ongoing use of the property. Phase I ESA activities included reviewing historical and regulatory environmental data, conducting a site reconnaissance and preparing the Phase I ESA Report.

**US Agriculture Phase I ESA, Yakima, Washington:** Provided project management for the completion of four Phase I ESAs on approximately 350-acres of agricultural property that are utilized as fruit orchards. The Phase I ESAs were conducted to evaluate the potential for RECs on and adjacent to the sites for ongoing use of the properties. Phase I ESA activities included reviewing historical and regulatory environmental data, conducting a site reconnaissance and preparing the Phase I ESA Reports.

**SWCA, Transmission Line Corridor Assessments, California:** Provided project management for the completion of three corridor assessments on over 1,000 parcels along over 100-mile long transmission line routes in San Jose and the California Valley. Activities included the created of parcel information databases, reviewing historical and regulatory environmental data, conducting site reconnaissance and preparing the corridor assessments and figures.

**Mikesell Avenue Properties Reports Manteca, California:** Provided project management and oversight for the completion of six Phase I ESAs, Pipeline Risk Analyses, Railroad Safety Studies, Geotechnical Hazard Surveys, and California Department of Education Checklists, for the Manteca Unified School District. The reports were conducted to evaluate the potential for environmental hazards and RECs. Activities included reviewing historical and regulatory environmental data, conducting a site reconnaissance and preparing the Phase I ESA Report.

**City of West Sacramento Sacramento River West North Levee Corridor Assessment, West Sacramento, California:** Provided project management and implementation for the completion of a corridor assessment on over 200 parcels along a 5.8-mile long area, as part of the Sacramento River levee expansion project. Activities included reviewing historical and regulatory environmental data, conducting site reconnaissance and preparing the corridor assessment. The project was conducted in accordance with EPA Brownfields Grant guidelines and requirements.

# Luke I. Swickard

## Project Manager

**MIG Anthony Chabot Sewer Line Project San Leandro, California:** Provided project management for the completion of a Phase I ESA for the new sewer line installation in the Anthony Chabot Regional Park. Ninyo & Moore conducted the Phase I ESA to evaluate the potential for Recognized Environmental Conditions (RECs) along the 8-mile long project route, through the regional park and adjacent golf course. Activities included reviewing historical and regulatory environmental data, conducting a site reconnaissance and preparing the Phase I ESA Report.

**Floating Photovoltaic (PV) Solar Array, Windsor, California:** Provided project support for the completion of a Phase I Environmental Site Assessment (ESA) of a proposed floating PV solar array on an existing water treatment facility. Ninyo & Moore conducted the Phase I ESA to evaluate the potential for Recognized Environmental Conditions (RECs) adjacent to the site so that electrical infrastructure could be installed from the floating PV solar array to a collection system. Phase I ESA activities included reviewing historical and regulatory environmental data, conducting a site reconnaissance and preparing the Phase I ESA Report.

**Duncan Enterprises Phase I Environmental Site Assessment (ESA), Fresno, California:** Provided project management for the completion of a Phase I ESA on an approximate 14-acre industrial property that is utilized for paint, ceramics, and craft goods manufacturing and distribution. The Phase I ESA was conducted to evaluate the potential for Recognized Environmental Conditions (RECs) on and adjacent to the site for ongoing use of the property. Phase I ESA activities included reviewing historical and regulatory environmental data, conducting a site reconnaissance and preparing the Phase I ESA Report.

**Lemoine Ranch Property Phase I ESA, Alturas, California:** Provided project management for the completion of a Phase I ESA on an approximate 2,026-acre agricultural property that is utilized for cattle grazing. The Phase I ESA was conducted to evaluate the potential for RECs on and adjacent to the site for ongoing use of the property. Phase I ESA activities included reviewing historical and regulatory environmental data, conducting a site reconnaissance and preparing the Phase I ESA Report.

**Former Richmond Hospital, Richmond, California:** Provided project support for the completion of a Phase I Environmental Site Assessment (ESA) of the former Richmond Hospital for potential redevelopment. Ninyo & Moore conducted the Phase I ESA to evaluate the potential for Recognized Environmental Conditions (RECs) on or adjacent to the site. Phase I ESA Activities included reviewing historical and regulatory environmental data, conducting a site reconnaissance and preparing the Phase I ESA Report.

**City of Sacramento, 3739 Marysville Boulevard Phase II ESA, Sacramento, California:** Staff Environmental Scientist a Community Wide Assessment under an existing US EPA Brownfields grant. Review of historical information indicated the site was formerly a gasoline station and convenience store and a former dry cleaner was also identified on the adjacent parcel. Soil samples collected from beneath seven former USTs and the associated piping and dispensers indicated that an unauthorized release of petroleum hydrocarbons had occurred from the former fuel dispensing system. In 2018, Ninyo & Moore conducted a Phase I ESA on the site and the adjoining dry cleaner property. Results of the Phase I ESA, along with the results of the prior sampling and remediation were used to prepare a Sampling and Analysis Plan (SAP) for review by the RWQCB to conduct a Phase II ESA, which included installing and sampling 33 temporary soil gas samples, collecting soil samples from five soil borings, and collecting grab groundwater samples from three on-site borings.

# Brandon S. Wilken, PG

## Principal Geologist



### EDUCATION

B.S., Geology, 1996, University of Nebraska-Lincoln

### REGISTRATIONS/ CERTIFICATIONS

PG 7564 (California)

OSHA 8 hour Refresher

### PROFESSIONAL AFFILIATIONS

California Groundwater Resource Association (GRA)

Geologic Society of America (GSA) – Hydrogeology Division

As a Principal Geologist for Ninyo & Moore, Mr. Wilken has 25 years of experience in the Environmental industry and started his career working in the field all over North America for a hard rock mineral exploration company. His experience in field geophysics led him to the contaminant assessment and remediation industry, providing professional geologic services including environmental hydrogeology, site investigation, remedial planning and implementation, health risk screening, due diligence, regulatory negotiations, and litigation support. Mr. Wilken has lead investigation and remediation projects driving risk-based solutions to successfully close environmental projects and reduce client's costs. He works closely with regulators, stakeholders, and clients to negotiate effective solutions utilizing sound science, strong technical expertise, and clear communication skills. Mr. Wilken has completed projects for a wide range of clients, including major oil companies, municipalities, manufacturing groups, and individual small business owners.

### EXPERIENCE

**Aerospace Manufacturing, Confidential Manufacturing Business, Torrance, City, California:** Principal Geologist for the PFAS assessment at an operating Aerospace manufacturing facility. Assessed PFAS in soil, wastewater effluent, storm water, and groundwater by advancing five soil borings, installing three monitoring wells, collecting wastewater effluent, municipal water, and storm water samples. The data was compared, and recommendations were provided to the RWQCB.

**Major Oil Company Refinery, Martinez, California:** Principal Geologist for the environmental services at a 640-acre refining complex. The team is developing a PFAS assessment strategy for the facility to comply with a RWQCB request for assessment. Furthermore, the project team was planning to demolish an old wastewater treatment pond and developing a replacement treatment facility. Lastly the team operated, maintained, and optimized 27 groundwater extraction systems for contaminant plume control, to limit impacts to adjacent wetlands and surface water bodies.

**S Street Redevelopment Project, Sacramento, California:** Principal Geologist for the soil, soil vapor, and groundwater assessment and in situ ELSTM and zero valent iron injections to remediate site CVOC's. Assessment included advancement of soil borings, installation of groundwater monitoring and soil vapor wells, and routine sampling. Remedial activities included closing an UST in-place and injecting approximately 6,900 pounds of ELSTM and 58,000 pounds of zero valent iron into targeted areas. Interfaced with multiple stakeholders and agencies including property owner/client (Capitol Area Development Authority), City of Sacramento, RWQCB, and SCEMD.

**Former Orchard Supply Facility, Sacramento, California:** Principal Geologist for in situ EHC® injections to remediate site VOC's. Approximately 24,525 gallons of 30% EHC® slurry was injected into the subsurface; approximately 1,272 gallons of EHC® slurry was injected into the shallow zone aquifer; and approximately 23,253 gallons of EHC® slurry was injected into the deep zone aquifer. Interfaced with multiple stakeholders and agencies including property owner, client (Capitol Area Development Authority), DTSC, City of Sacramento, RWQCB, and SCEMD.

**Stewart's Automotive, Sacramento, California:** Principal Geologist for soil, soil vapor, and groundwater assessments, SVE system operation, and in situ

# Brandon S. Wilken

## Principal Geologist

EDS-ERTM and zero valent iron injections to remediate site CVOC's. Assessment included vertical delineation of groundwater, the installation of soil vapor wells, and routine sampling. Remedial activities included upgrading and operating an SVE system and the injection of approximately 31,900 pounds of EDS-ERTM; 19,900 pounds of mZVI; and 82 liters of KB-1 into targeted areas. Interfaced with multiple stakeholders and agencies including property owner/client, site tenant, City of Sacramento, Caltrans, RWQCB, and SCEMD.

**Manufacturing Facilities, San Carlos, California:** Principal Geologist and previous Senior Project Manager for assessment and remediation of PCBs and CVOCs at two adjacent manufacturing facilities. Project required managing corrective action account between two clients that at times had competing interests. Also, over saw the sale of one of the properties and the development of a plan to meet redevelopment goals which included a cap for PCBs, stormwater infrastructure decontamination, and other redevelopment activities.

**Ecodyne Pond Site, Windsor, California:** Principal Geologist for the assessment and remediation of a former wood treatment facility that utilized creosote and pentachlorophenol to treat lumber. The facility also had a lead dip-treatment tank for coating metal hardware. Brandon's team designed a remedial excavation to remove residual dioxin, lead, and poly aromatic hydrocarbons from soil at the site. The excavation extended offsite, which involved removing soil beneath a concrete-lined drainage ditch that conveyed stormwater from the site to a nearby creek. In addition, a natural gas transmission line was located approximately 2 to 4 feet below the grade of the drainage ditch. To minimize potential damage, Brandon's team worked closely with the owner of the natural gas line and excavated soil by hand digging around the natural gas line. The work was completed safely without incident. A total of 15,587 tons of non-hazardous and 6,411 tons of hazardous soil were excavated, and 4,718,739 gallons of water were extracted, and properly handled and disposed of offsite. The team also provided technical assistance to the client's legal team prior to and during remedial activities for several lawsuits related to the site. All lawsuits were resolved in our client's favor.

**Ranch Headquarters, Woodland, California:** Principal Geologist and previous Senior Project Manager for fixed fee remediation of a several acre light non aqueous phase liquid plume near a network of irrigation canals at an operating ranch/farm headquarters. He managed a cost cap and a pollution liability limit insurance policy to provide long term liability protection for the client. This project also utilized a land discharge permit obtained from the RWQCB to discharge treated groundwater from the multi-phase extraction treatment system. Successfully negotiated with the RWQCB to shut down and remove the remediation system after no reoccurrences of LNAPL were observed and approximately 1 month after the treatment system's mass removal rate went asymptotic. Post-remediation groundwater monitoring has ceased. He was working with the stakeholders to get a land covenant in place to facilitate case low threat case closure.

**Former Paint Manufacturing Facility, San Leandro, California:** Senior Project Manager for a former paint manufacturing facility contaminated with various chlorinated and non-chlorinated volatile organic compounds (VOCs). The project consisted of environmental investigations, agency liaison, and the operation and maintenance of a multi-phase extraction treatment system. The team successfully implemented a carbohydrate injection program, after active mechanical remediation reached asymptotic recovery, to increase the rate of reductive dechlorination to accelerate the timeframe to regulatory case closure.

**Service Station Site, Fremont, California:** Senior Project Manager for a service station that has petroleum hydrocarbons impacts in the first water-bearing zone, in an aquitard, and the Newark Aquifer. He was given this site to manage, and he completely reevaluated the conceptual site model during the production of a remedial action plan proposing the installation of multiple groundwater extraction recirculation wells screened in the Newark Aquifer. He convinced the client to not invest in the \$1,800,000 remediation project and to challenge the regulatory agency. He was successful in negotiating with the regulatory agency that remediation in the drinking water aquifer was not necessary. Allowing the client to pursue a more cost feasible remedial solution.

**Former Bulk Terminal, Rio Vista, California:** Senior Project Manager for a former bulk terminal with LNAPL detections directly adjacent to the Sacramento River. The site had been utilized by many businesses in its history and the first known crude oil above ground storage tank (AST) was onsite as early as 1896. Defined the extent of hydrocarbons in soil and groundwater, including LNAPL plume. Planned and submitted a remedial excavation along the Sacramento River to the Army Corps of Engineers and received approval without further review. During negotiations with the RWQCB, successfully negotiated a soil cleanup goal of 1,000 milligrams per kilogram (mg/kg) total petroleum hydrocarbons (TPH), which saved the client hundreds of thousands of dollars in cleanup costs.

## **Appendix B -**

# **Assessor's Information and Questionnaires**

**PHASE I ESA/AAI REQUIREMENTS**

According to the All Appropriate Inquiry (AAI, 40 CFR 312) requirements and ASTM (E 1527-05) guidance on conducting Phase I Environmental Site Assessments, the "user" of the assessment must provide the following information, if available, to the environmental professional in order to qualify for Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001. Please check yes or no and provide any additional information you may have regarding the site. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

**(1) Environmental cleanup liens that are filed or recorded against the site (40 CFR 132.25).**

Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state, or local law?

Yes  No

If yes, please explain:

**(2) Activity and land use limitations that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26).**

Are you aware of any activity use limitations (AULs), such as engineering controls, land use restrictions, or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

Yes  No

If yes, please explain:

**(3) Specialized knowledge or experience of the person/department requesting the Phase I ESA and seeking to qualify for the landowner liability protections (40 CFR 312.28).**

As the user of this ESA, do you have any specialized knowledge or experience related to the property or adjoining properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

Yes  No

If yes, please explain:

**(4) Relationship of the purchase price to the fair market value of the property, if it were not contaminated (40 CFR 312.29).**

Does the purchase price offered for this property reasonably reflect the fair market value of the property? If there is a difference between the purchase price and the fair market value, have you considered whether the lower purchase price is because contamination is known or believed to be at the property?

Please discuss: We believe the purchase price appropriately reflects the fair market value of the property.

**(5) Commonly known or reasonably ascertainable information about the property (40 CFR 312.30).**

Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user,

- (a) Do you know the past uses of the property? Residential Care Facility for the Elderly
- (b) Do you know of specific chemicals that are present or once were present at the property? friable asbestos
- (c) Do you know of spills or other chemical releases that have taken place at the property? n/a
- (d) Do you know of any environmental cleanups that have taken place or are ongoing at the property?

Yes  No

If yes, please explain: The building has always been used for senior housing. A fire on the 5th floor caused existing asbestos in the building to become friable and through water used to put the fire out, transfer to other floors. Extensive remediation efforts were undertaken to remove the friable asbestos and related mold damage.

**(6) The degree of obviousness of the presence or likely presence of contamination at the property and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).**

As the user of this ESA, based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property?

Yes  No

If yes, please explain: As mentioned in #5, friable asbestos was released by the fire and water damage led to mold but both impacts were remediated in collaboration with a fire and flood damage professional, third party vendors and our property insurance provider, AFM.

Andrew McDonald *Andrew McDonald* 5/28/2024  
Print Name Signature Date

\*\* The forgoing information is provided to Andrew McDonald's current actual knowledge without any investigation or inquiry. \*\*

Site Name: Grand Lake Gardens  
 Site Address: 401 Santa Clara ave. Oakland, CA 94604

Type of Business: Residential Care Facility for the Elderly  
 Current Owner: HumanGood  
 Dates of Ownership: \_\_\_\_\_ to \_\_\_\_\_  
 Previous Owner: N/A  
 Dates of Ownership: \_\_\_\_\_ to \_\_\_\_\_  
 Type(s) of Business: \_\_\_\_\_  
 Date of Original Construction of Site Building(s): \_\_\_\_\_

**BACKGROUND & USE**

What is the current use of the property?

<input type="checkbox"/>	Hotel/Motel	<input type="checkbox"/>	Industrial/Storage/Warehouse: Type:
<input type="checkbox"/>	Warehouse (type):	<input type="checkbox"/>	Vacant Land/Farming/Agricultural/Cattle Grazing
<input type="checkbox"/>	Office	<input type="checkbox"/>	Multi-Family Residential
<input type="checkbox"/>	Retail	<input checked="" type="checkbox"/>	Other: <u>vacant building</u>

What is the intended future use of the property? \_\_\_\_\_

**Site Tenant History**

Year(s)	Tenant / Type of Business

Please fill in the following information regarding the site utilities, as appropriate and indicate the date service was originally initiated/installed:

Water Provider: EBMUD  
 Sewer Provider: EBMUD  
 Electrical Provider: PG&E  
 Natural Gas Provider: PG&E

Is the property currently used, or previously been used, for an industrial or manufacturing operation, as a gasoline station, a motor repair facility, a commercial printing facility, a dry cleaners, a photo developing laboratory, a junkyard or a landfill, or as a waste treatment, storage, disposal, processing or recycling facility?

Yes  
 No  
 Unknown  
 Type: \_\_\_\_\_

Has the facility or the property ever generated, treated, stored, transported or disposed of hazardous waste or hazardous substances other than on an incidental basis? Are waste manifest forms available?

Yes  
 No  
 Unknown

Description: \_\_\_\_\_

Have any demolition debris, hazardous substances, petroleum products, unidentified waste materials, automotive or industrial batteries, tires, trash or refuse been dumped, buried and/or burned on the property?

Yes  
 No  
 Unknown

Description: \_\_\_\_\_

**TANKS (fuel tanks, oil tanks, etc)**

Are there currently, or have there been previously, any underground storage tanks on the property such as gasoline/diesel fuel tanks, waste oil tanks?

Yes  No  Unknown

If YES, please provide number, size, age of tanks

# Tanks	_____	Size	_____	Contents	_____	Age	_____
# Tanks	_____	Size	_____	Contents	_____	Age	_____
# Tanks	_____	Size	_____	Contents	_____	Age	_____
# Tanks	_____	Size	_____	Contents	_____	Age	_____

Has there ever been a reported or unreported release or spill (including failed leak tests) from the tank? (If YES, provide details).

Yes  No  Unknown

Are there currently, or have there been previously, any above ground storage tanks on the property?

Yes  No  Unknown

If YES, please provide number, size, age of tanks

# Tanks	_____	Size	_____	Contents	_____	Age	_____
# Tanks	_____	Size	_____	Contents	_____	Age	_____
# Tanks	_____	Size	_____	Contents	_____	Age	_____
# Tanks	_____	Size	_____	Contents	_____	Age	_____

Has there ever been a reported or unreported release or spill (including failed leak tests) from the tank? (If YES, provide details).

Yes  No  Unknown

Has there ever been a reported or unreported release or spill from the tank? (If YES, provide details).

Yes  No  Unknown

Details: \_\_\_\_\_  
\_\_\_\_\_

**UTILITIES/DISCHARGES**

Is the property served, or has the property been served, by a private water well?

Yes  No  Unknown

If yes, is groundwater under the property used as a source of drinking water?

Yes  No  Unknown

Has the water from the well ever been tested? (If YES, please provide test results)

Yes  No  Unknown

Has the well water been identified as contaminated by any governmental agency?

Yes  No  Unknown

Are there any groundwater monitoring wells or irrigation wells on the property?

Yes  No  Unknown

If Yes, how many \_\_\_\_\_ and when were they installed? \_\_\_\_\_

Does the property discharge waste water, or storm water into a municipal sanitary sewer system? If Yes, does the facility discharge under an NPDES Permit or Waste Discharge Permit?

Yes  No  Unknown Permit Number/Agency: \_\_\_\_\_

Are there any current or previous sumps used for waste-water collection/treatment on the property?

Yes  No  Unknown

Are there any septic systems, dry wells or leach fields on the property?

Yes  No  Unknown If Yes, Where?: \_\_\_\_\_

**ENVIRONMENTAL COMPLIANCE**

Is there knowledge of environmental liens or governmental notification or involvement relating to past or current use or disposal of hazardous substances?

Yes  No  Unknown

Is there any environmental litigation, administrative action or cleanup action involving the property related to a release or threatened release of any hazardous substance or petroleum product?

Yes  No  Unknown

Has the property or related facilities or operations ever been the subject of enforcement actions by governmental authorities resulting in penalties of any kind?

Yes  No  Unknown

**ENVIRONMENTAL CONDITIONS**

Has groundwater or soils on the property ever been tested?

Yes  No  Unknown

If Yes, provide details:

---

Have any contaminants been identified which exceed standards or guidelines levels?

Yes  No  Unknown

If Yes, provide details:

---

**BUILDING CONDITIONS**

What is/are the age of the structure(s)? 50+

Have any major renovations been completed and if so, describe type and when completed:

New roof (2015 eastwing) (2020 westwing), new generator 2022, new boilers 2022

---

Has an asbestos and/or lead-based paint survey been performed on the site structure(s)?

Yes  No  Unknown

If Yes, was asbestos containing materials identified?

Yes  No

If Yes, was lead-based paint present identified?

Yes  No

**THIS QUESTIONNAIRE WAS COMPLETED BY**

Name (Print) Andrew McDonald

Signature [Handwritten Signature]

Title CFO

Address 1900 Huntington Drive, Duarte, CA 91010

Phone Number 925 924 7196

Date 5/28/2024

Please return the completed questionnaire by email to Ninyo & Moore at the following address:

Luke Swickard, Senior Staff Environmental Scientist  
Ninyo & Moore  
1401 Halyard Drive, Suite 110  
West Sacramento, California 95691  
916-373-9858 EX 15403 (office)  
530-219-3575 (cell)  
[lswickard@ninyoandmoore.com](mailto:lswickard@ninyoandmoore.com)

**Appendix C -  
Environmental Data Resources (EDR)  
Radius Report**

**401 Santa Clara Ave**

401 Santa Clara Avenue

Oakland, CA 94610

Inquiry Number: 7660283.2s

May 22, 2024

# The EDR Radius Map™ Report with GeoCheck®



6 Armstrong Road, 4th floor  
Shelton, CT 06484  
Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

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***Thank you for your business.***  
 Please contact EDR at 1-800-352-0050  
 with any questions or comments.

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## EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E2247 - 16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E1528 - 22) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

### TARGET PROPERTY INFORMATION

#### ADDRESS

401 SANTA CLARA AVENUE  
OAKLAND, CA 94610

#### COORDINATES

Latitude (North): 37.8129970 - 37° 48' 46.78"  
Longitude (West): 122.2491130 - 122° 14' 56.80"  
Universal Transverse Mercator: Zone 10  
UTM X (Meters): 566095.1  
UTM Y (Meters): 4185127.2  
Elevation: 48 ft. above sea level

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 50005377 OAKLAND EAST, CA  
Version Date: 2021  
  
West Map: 50005378 OAKLAND WEST, CA  
Version Date: 2021

### AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20200524  
Source: USDA

MAPPED SITES SUMMARY

Target Property Address:  
401 SANTA CLARA AVENUE  
OAKLAND, CA 94610

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
<a href="#">A1</a>	GRAND LAKE GARDEN	401 SANTA CLARA AVE	FINDS, ECHO		TP
<a href="#">A2</a>	GRAND LAKE GARDEN	401 SANTA CLARA AVE	HWTS, HAZNET		TP
<a href="#">A3</a>	GRAND LAKE GARDENS	401 SANTA CLARA AVE	HWTS, HAZNET		TP
<a href="#">A4</a>	GRAND LAKE GARDEN	401 SANTA CLARA AVE	RCRA NonGen / NLR		TP
<a href="#">A5</a>	HUMANGOOD NORCAL	401 SANTA CLARA AVE.	RCRA NonGen / NLR		TP
<a href="#">A6</a>	HUMANGOOD NORCAL	401 SANTA CLARA AVE.	ECHO		TP
<a href="#">A7</a>	HUMANGOOD NORCAL	401 SANTA CLARA AVE.	HWTS, HAZNET		TP
<a href="#">A8</a>	GRAND LAKE GARDENS	401 SANTA CLARA AVEN	RCRA NonGen / NLR		TP
<a href="#">A9</a>	TRENT DEHART	370 SANTA CLARA AVEN	RCRA NonGen / NLR	Higher	55, 0.010, NW
<a href="#">A10</a>	CHARLIE KALB	370 SANTA CLARA AVEN	RCRA NonGen / NLR	Higher	55, 0.010, NW
<a href="#">A11</a>	VAUGHN MANAGEMENT GR	377 SANTA CLARA AVE	RCRA NonGen / NLR	Lower	78, 0.015, NE
<a href="#">B12</a>	CHONG WONG	414 SANTA CLARA AV	EDR Hist Cleaner	Lower	170, 0.032, SE
<a href="#">13</a>	COMMERCIAL PROPERTY	3315 GRAND AVE	SWEEPS UST	Lower	257, 0.049, East
<a href="#">B14</a>	SHERMAN JULIUS	3217 GRAND AVE	EDR Hist Cleaner	Lower	263, 0.050, SE
<a href="#">B15</a>	ALBRIGHT G E	468 SANTA CLARA AV	EDR Hist Cleaner	Lower	289, 0.055, SSE
<a href="#">B16</a>	GLEN VIEW LAUNDRY	474 SANTA CLARA AV	EDR Hist Cleaner	Lower	322, 0.061, SE
<a href="#">C17</a>	RICHARD MAHER	455 CRESCENT STREET	RCRA NonGen / NLR	Higher	334, 0.063, NW
<a href="#">C18</a>	COLLINS MGMNT.- 455	455 CRESCENT STREET	RCRA NonGen / NLR	Higher	334, 0.063, NW
<a href="#">C19</a>	KILEY RUSSELL	455 CRESCENT STREET	RCRA NonGen / NLR	Higher	334, 0.063, NW
<a href="#">C20</a>	COLLINS MANAGEMENT C	455 CRESCENT STREET	RCRA NonGen / NLR	Higher	334, 0.063, NW
<a href="#">C21</a>	CHRISSY BARLOW	455 CRESCENT STREET	RCRA NonGen / NLR	Higher	334, 0.063, NW
<a href="#">C22</a>	YIHEIS GEDLE	455 CRESENT STREET #	RCRA NonGen / NLR	Higher	334, 0.063, NW
<a href="#">C23</a>	COLLINS MANAGEMENT	455 CRESCENT STREET	RCRA NonGen / NLR	Higher	334, 0.063, NW
<a href="#">C24</a>	COLLINS MANAGEMENT	455 CRESCENT STREET	RCRA NonGen / NLR	Higher	334, 0.063, NW
<a href="#">C25</a>	PETER PROWS/KAREN NE	483 CRESCENT STREET	RCRA NonGen / NLR	Higher	337, 0.064, NNW
<a href="#">B26</a>	ESQUIRE CLEANERS COM	3223 GRAND AVE	EDR Hist Cleaner	Lower	368, 0.070, ESE
<a href="#">B27</a>	ESQUIRE CLEANERS COM	3235 GRAND AVE	EDR Hist Cleaner	Lower	368, 0.070, ESE
<a href="#">B28</a>	LANDOWITZ JOS	3249 GRAND AVE	EDR Hist Cleaner	Lower	370, 0.070, ESE
<a href="#">D29</a>	491 CRESCENT, LP	491 CRESCENT STREET	RCRA NonGen / NLR	Higher	421, 0.080, North
<a href="#">30</a>	ARVAND SEBETIN	369 MACARTHUR BLVD	RCRA NonGen / NLR	Higher	453, 0.086, WSW
<a href="#">E31</a>	PG & E	3234 GRAND	HIST CORTESE	Lower	467, 0.088, SE
<a href="#">E32</a>	CARSONS MARTINIZING	3250 GRAND AVE	RCRA-SQG, DRYCLEANERS	Lower	483, 0.091, ESE
<a href="#">E33</a>	BOB & GIGI INC DBA O	3250 GRAND AVE	RCRA NonGen / NLR	Lower	483, 0.091, ESE
<a href="#">E34</a>	Y S ONE-HOUR MARTINI	3250 GRAND AVE	EDR Hist Cleaner	Lower	483, 0.091, ESE
<a href="#">E35</a>	ONE HOUR MARTINIZING	3250 GRAND AVE	DRYCLEANERS, HWTS, HAZNET	Lower	483, 0.091, ESE
<a href="#">F36</a>	UNION OIL SS 3443	3347 GRAND AVE	HIST UST	Lower	501, 0.095, ENE
<a href="#">G37</a>	VERITAS	345 MACARTHUR BLVD #	RCRA NonGen / NLR	Higher	505, 0.096, West
<a href="#">G38</a>	VPI GROWTH VENTURE 1	345 MACARTHUR BLVD.,	RCRA NonGen / NLR	Higher	505, 0.096, West
<a href="#">G39</a>	345 MACARTHUR, G1, L	345 MACARTHUR BOULEV	RCRA NonGen / NLR	Higher	505, 0.096, West

MAPPED SITES SUMMARY

Target Property Address:  
401 SANTA CLARA AVENUE  
OAKLAND, CA 94610

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
<a href="#">G40</a>	345 MACARTHUR G1, LP	345 MACARTHUR BLVD.	RCRA NonGen / NLR	Higher	505, 0.096, West
<a href="#">G41</a>	345 MACARTHUR G1, LP	345 MACARTHUR BLVD.	RCRA NonGen / NLR	Higher	505, 0.096, West
<a href="#">G42</a>	345 MACARTHUR, G1, L	345 MACARTHUR BLVD	RCRA NonGen / NLR	Higher	505, 0.096, West
<a href="#">F43</a>	BRITE CLEANERS INC	3349 GRAND AVE	EDR Hist Cleaner	Lower	509, 0.096, ENE
<a href="#">F44</a>	GLENVIEW LAUNDRY	3351 GRAND AVE	EDR Hist Cleaner	Lower	516, 0.098, ENE
<a href="#">F45</a>	SIMPSON D R	3322 GRAND AVE	EDR Hist Cleaner	Lower	532, 0.101, East
<a href="#">H46</a>	FYNE BUILDING	774 GRAND	HIST CORTESE	Lower	543, 0.103, SSE
<a href="#">H47</a>	FYNE BUILDING	774 GRAND AVE W	UST FINDER RELEASE	Lower	543, 0.103, SSE
<a href="#">H48</a>	FYNE BUILDING	774 GRAND AVE W	LUST, Cortese, CERS	Lower	543, 0.103, SSE
<a href="#">I49</a>	HAVA LIBERMAN	433 ELWOOD AVENUE	RCRA NonGen / NLR	Higher	575, 0.109, NE
<a href="#">I50</a>	HAVA LIBERMAN	433 ELWOOD AVENUE	RCRA NonGen / NLR	Higher	575, 0.109, NE
<a href="#">D51</a>	HOLLAND BROOKS BUILD	472 JEAN ST #6	RCRA NonGen / NLR	Higher	577, 0.109, NNW
<a href="#">D52</a>	472 JEAN A2, LP	472 JEAN STREET #4	RCRA NonGen / NLR	Higher	577, 0.109, NNW
<a href="#">H53</a>	LIBERTY CLEANERS	755 GRAND AVE	EDR Hist Cleaner	Lower	588, 0.111, SSE
<a href="#">F54</a>	PRIDE CLEANERS	3401 GRAND AVE	RCRA-SQG, FINDS, ECHO, DRYCLEANERS, EMI, HWTS,...	Lower	641, 0.121, ENE
<a href="#">F55</a>	PRIDE CLEANERS	3401 GRAND AVE	EDR Hist Cleaner	Lower	641, 0.121, ENE
<a href="#">F56</a>	PRIDE CLEANERS	3401 GRAND AVENUE	RCRA NonGen / NLR	Lower	641, 0.121, ENE
<a href="#">F57</a>	WEINTROB ABR	3405 GRAND AVE	EDR Hist Cleaner	Lower	655, 0.124, ENE
<a href="#">J58</a>	RAJ TEDDY	520 VAN BUREN AVENUE	RCRA NonGen / NLR	Higher	685, 0.130, SW
<a href="#">I59</a>	FAITH DARLING	509 VALLE VISTA AVEN	RCRA NonGen / NLR	Higher	711, 0.135, NE
<a href="#">J60</a>	UNOCAL	411 MACARTHUR BLVD W	LUST, Alameda County CS, HIST CORTESE	Lower	727, 0.138, SSW
<a href="#">J61</a>	TIM HAGGERTY	525 VAN BUREN AVE	RCRA NonGen / NLR	Higher	728, 0.138, SSW
<a href="#">F62</a>	GRAND MOBIL	3374 GRAND AVE	UST	Lower	745, 0.141, ENE
<a href="#">F63</a>	GRAND MOBIL	3374 GRAND AVE	UST FINDER	Lower	745, 0.141, ENE
<a href="#">F64</a>	GRAND MOBIL	3374 GRAND AVE	UST	Lower	745, 0.141, ENE
<a href="#">F65</a>	UNION OIL SS #3443	3374 GRAND AVE	CERS HAZ WASTE, SWEEPS UST, HIST UST, CERS TANKS,...	Lower	745, 0.141, ENE
<a href="#">F66</a>	TOSCO CORPORATION #3	3374 GRAND AVE	UST	Lower	745, 0.141, ENE
<a href="#">F67</a>	UNION OIL SS# 3443	3374 GRAND AVE	HIST UST	Lower	745, 0.141, ENE
<a href="#">F68</a>	UNION OIL SS #3443	3374 GRAND AVE	HIST UST	Lower	745, 0.141, ENE
<a href="#">F69</a>	GRAND MANDANA GAS ST	3374 GRAND AVE	RCRA NonGen / NLR	Lower	745, 0.141, ENE
<a href="#">I70</a>	COLBY KATZ	515 VALLE VISTA AVEN	RCRA NonGen / NLR	Higher	758, 0.144, NE
<a href="#">J71</a>	TONY CELAYA	394 EUCLID AVENUE	RCRA NonGen / NLR	Higher	778, 0.147, SW
<a href="#">J72</a>	RUTH CASSER	436 LAGUNITAS AVENUE	RCRA NonGen / NLR	Lower	788, 0.149, SSW
<a href="#">H73</a>	SHELL	UNK GRAND AVE & LAKE	Alameda County CS	Lower	801, 0.152, SSE
<a href="#">K74</a>	JILL BROADHURST	485 WICKSON AVENUE #	RCRA NonGen / NLR	Lower	839, 0.159, ESE
<a href="#">L75</a>	CUSHMAN AND WAKEFIEL	496 LAKE PARK AVENUE	RCRA NonGen / NLR	Lower	841, 0.159, SSE
<a href="#">M76</a>	SANFORD MA	353 EUCLID AVENUE #1	RCRA NonGen / NLR	Higher	842, 0.159, West
<a href="#">77</a>	KIRSTEN HOWE	481 JEAN STREET	RCRA NonGen / NLR	Higher	853, 0.162, NNW
<a href="#">N78</a>	TAYMUREE FOREIGN AUT	3509 GRAND	UST FINDER RELEASE	Lower	864, 0.164, NE

MAPPED SITES SUMMARY

Target Property Address:  
401 SANTA CLARA AVENUE  
OAKLAND, CA 94610

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MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
<a href="#">N79</a>	TAYMUREE FOREIGN AUT	3509 GRAND	LUST, Alameda County CS, Cortese, HIST CORTESE,...	Lower	864, 0.164, NE
<a href="#">N80</a>	YOUNG'S AUTOMOTIVE	3509 GRAND AVE	RCRA NonGen / NLR	Lower	864, 0.164, NE
<a href="#">N81</a>	TAYMUREE FOREIGN AUT	3509 GRAND AVE	LUST, SWEEPS UST, HWTS	Lower	864, 0.164, NE
<a href="#">N82</a>	YOUNG'S AUTOMOTIVE	3509 GRAND AVE	RCRA-SQG, FINDS, ECHO, Notify 65	Lower	864, 0.164, NE
<a href="#">83</a>	J AND R ASSOCIATES	281 MACARTHUR BLVD	RCRA NonGen / NLR	Higher	871, 0.165, NW
<a href="#">M84</a>	ARNOLD BLUSTEIN	397 PALM AVENUE	RCRA NonGen / NLR	Higher	898, 0.170, West
<a href="#">O85</a>	MYND PROPERTY MANAGE	449 LAGUNITAS AVE	RCRA NonGen / NLR	Lower	904, 0.171, SSW
<a href="#">86</a>	BERGER ENTERPRISES	743 WARFIELD AVENUE	RCRA NonGen / NLR	Higher	907, 0.172, East
<a href="#">K87</a>	SUZI GOLDMACHER	737 WARFIELD AVENUE	RCRA NonGen / NLR	Higher	910, 0.172, ESE
<a href="#">L88</a>	500 LAKE PARK APARTM	500 LAKE PARK AVENUE	CPS-SLIC	Lower	921, 0.174, SE
<a href="#">L89</a>	MAXGEN ENERGY SERVIC	500 LAKE PARK AVE	RCRA NonGen / NLR	Lower	921, 0.174, SE
<a href="#">M90</a>	MAXWELL & KATE ERNST	388 PALM AVE.	RCRA NonGen / NLR	Higher	944, 0.179, West
<a href="#">O91</a>	HAN, AGNES	626 GRAND AVENUE	RCRA NonGen / NLR	Lower	954, 0.181, South
<a href="#">O92</a>	HAN, AGNES	626 GRAND AVENUE	RCRA NonGen / NLR	Lower	954, 0.181, South
<a href="#">K93</a>	MAUREEN LAWLOR	507 WICKSON AVENUE #	RCRA NonGen / NLR	Higher	1008, 0.191, ESE
<a href="#">K94</a>	JAMES ROSS	507 WICKSON AVENUE #	RCRA NonGen / NLR	Higher	1008, 0.191, ESE
<a href="#">K95</a>	CATHARINE SCHULTZ &	507 WICKSON AVENUE #	RCRA NonGen / NLR	Higher	1008, 0.191, ESE
<a href="#">P96</a>	LINDA HOLLAND	408 EUCLID AVE	RCRA NonGen / NLR	Lower	1016, 0.192, SSW
<a href="#">Q97</a>	DAVID JOHNSON	558 VALLE VISTA AVEN	RCRA NonGen / NLR	Lower	1048, 0.198, NE
<a href="#">O98</a>	RYAN YU	427 LAGUNITAS AVE, #	RCRA NonGen / NLR	Lower	1055, 0.200, SSW
<a href="#">R99</a>	PRIVATE RESIDENCE	PRIVATE RESIDENCE	LUST	Higher	1070, 0.203, WNW
<a href="#">R100</a>	PRIVATE RESIDENCE	PRIVATE RESIDENCE	LUST	Higher	1070, 0.203, WNW
<a href="#">R101</a>	RESIDENCE	299 EUCLID AVE	LUST, Alameda County CS, SWEEPS UST, HIST CORTESE	Higher	1072, 0.203, WNW
<a href="#">O102</a>	YOUNG'S ONE HOUR DRY	600 GRAND AVE	CHMIRS, DRYCLEANERS	Lower	1078, 0.204, South
<a href="#">O103</a>	YOUNG'S ONE HOUR MAR	600 GRAND AVE #100	RCRA-SQG, FINDS, ECHO	Lower	1078, 0.204, South
<a href="#">S104</a>	MONTEREY BAY COLORS	810 WALKER AVE APT 1	RCRA NonGen / NLR	Higher	1087, 0.206, ENE
<a href="#">R105</a>	DANIEL PIVNICK	293 EUCLID AVENUE #5	RCRA NonGen / NLR	Higher	1099, 0.208, WNW
<a href="#">R106</a>	DANIEL PIVNICK	293 EUCLID AVENUE #6	RCRA NonGen / NLR	Higher	1099, 0.208, WNW
<a href="#">T107</a>	BELLEVUE APARTMENTS	369 BELLEVUE AVE	RCRA NonGen / NLR	Higher	1114, 0.211, WSW
<a href="#">T108</a>	SHANNON MCCABE	359 BELLEVUE AVENUE	RCRA NonGen / NLR	Higher	1122, 0.213, WSW
<a href="#">Q109</a>	STEPHANE DELEGER	564 VALLE VISTA AVEN	RCRA NonGen / NLR	Lower	1127, 0.213, NE
<a href="#">P110</a>	MANKUEN (JENNIE) CHA	411 EUCLID AVENUE #9	RCRA NonGen / NLR	Lower	1127, 0.213, SW
<a href="#">P111</a>	BLUE SAPPHIRE HOMES	411 EUCLID AVENUE #1	RCRA NonGen / NLR	Lower	1127, 0.213, SW
<a href="#">P112</a>	MANKUEN (JENNIE) CHA	411 EUCLID AVENUE #1	RCRA NonGen / NLR	Lower	1127, 0.213, SW
<a href="#">P113</a>	BLUE SAPPHIRE HOMES	411 EUCLID AVENUE #1	RCRA NonGen / NLR	Lower	1127, 0.213, SW
<a href="#">P114</a>	BLUE SAPPHIRE HOMES	411 EUCLID AVENUE #2	RCRA NonGen / NLR	Lower	1127, 0.213, SW
<a href="#">P115</a>	MANKUEN (JENNIE) CHA	411 EUCLID AVENUE #8	RCRA NonGen / NLR	Lower	1127, 0.213, SW
<a href="#">P116</a>	BLUE SAPPHIRE HOMES	411 EUCLID AVENUE #6	RCRA NonGen / NLR	Lower	1127, 0.213, SW
<a href="#">P117</a>	BLUE SAPPHIRE HOMES	411 EUCLID AVENUE #3	RCRA NonGen / NLR	Lower	1127, 0.213, SW

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MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
T118	TRUST MATTERS	353 BELLEVUE AVE	RCRA NonGen / NLR	Higher	1128, 0.214, West
U119	KYLE PARKER	377 PALM AVE #107	RCRA NonGen / NLR	Higher	1149, 0.218, West
U120	COLLINS MANAGEMENT	377 PALM AVENUE	RCRA NonGen / NLR	Higher	1149, 0.218, West
U121	COLLINS MANAGEMENT P	377 PALM AVENUE	RCRA NonGen / NLR	Higher	1149, 0.218, West
V122	CHRIS CORNFORD	325 ALTA VISTA AVE.	RCRA NonGen / NLR	Higher	1153, 0.218, North
V123	CHRIS CORNFORD	325 ALTA VISTA AVENU	RCRA NonGen / NLR	Higher	1153, 0.218, North
R124	MERIDIAN MANAGEMENT	365 WARWICK AVE #305	RCRA NonGen / NLR	Higher	1156, 0.219, WNW
R125	UNIVERSITY PRESIDENT	365 WARWICK AVE.	RCRA NonGen / NLR	Higher	1156, 0.219, WNW
S126	SCOTT BAILEY	824 VERMONT ST.	RCRA NonGen / NLR	Higher	1185, 0.224, ENE
W127	JACK DOUGLAS	724 RAND AVENUE	RCRA NonGen / NLR	Lower	1185, 0.224, ESE
W128	JACK DOUGLAS	722 RAND AVENUE	RCRA NonGen / NLR	Lower	1196, 0.227, ESE
W129	JENNIFER WU	722 RAND AVE	RCRA NonGen / NLR	Lower	1196, 0.227, ESE
W130	WU PROPERTY	722 RAND AVENUE	LUST, Cortese	Lower	1196, 0.227, ESE
W131	JENNIFER WU	722 RAND AVENUE	RCRA NonGen / NLR	Lower	1196, 0.227, ESE
R132	TOM CHEW	396 JAYNE AVENUE	RCRA NonGen / NLR	Higher	1212, 0.230, WNW
X133	BILL MCLECHIE	410 BELLEVUE AVENUE	RCRA NonGen / NLR	Lower	1232, 0.233, SW
V134	OMAR SHAH	301 ALTA VISTA AVENU	RCRA NonGen / NLR	Higher	1234, 0.234, North
135	KAISER INDUSTRIES CO		MINES MRDS	Lower	1241, 0.235, South
Y136	TOM PARATORE	484 CHETWOOD ST	RCRA NonGen / NLR	Higher	1242, 0.235, NNW
Z137	KLAUS WIRSING	525 GLENVIEW AVE. #1	RCRA NonGen / NLR	Higher	1251, 0.237, ESE
AA138	LEXIA LITTLEJOHN	525 MANDANA BLVD #21	RCRA NonGen / NLR	Higher	1277, 0.242, East
AA139	INDEPENDENT PLANNING	525 MANDANA BLVD #30	RCRA NonGen / NLR	Higher	1277, 0.242, East
AA140	SHANNON CARSON	525 MANDANA BOULEVAR	RCRA NonGen / NLR	Higher	1277, 0.242, East
AB141	THIAT "JOE" LIANG (D	3201 LAKESHORE AVE	HIST UST	Lower	1280, 0.242, SE
AB142	THIAT "JOE" LIANG (D	3201 LAKESHORE AVE	SWEEPS UST, HIST UST, CA FID UST	Lower	1280, 0.242, SE
AC143	FRANKLIN CHAN	420 BURK STREET	RCRA NonGen / NLR	Lower	1285, 0.243, SSW
Z144	SAMMY GO	546 GLENVIEW AVE	RCRA NonGen / NLR	Higher	1303, 0.247, ESE
Y145	CINDY BUFFING	492 CHETWOOD ST	RCRA NonGen / NLR	Higher	1311, 0.248, NNW
X146	BLACK OAK PROPERTIES	405 BELLEVUE AVE.	RCRA NonGen / NLR	Lower	1313, 0.249, SW
X147	BLACK OAK PROPERTIES	405 BELLEVUE AVENUE	RCRA NonGen / NLR	Lower	1313, 0.249, SW
AB148	UNOCAL #5325	3220 LAKESHORE AVE.	UST FINDER RELEASE	Lower	1381, 0.262, SE
AB149	UNOCAL #5325	3220 LAKESHORE AVE.	LUST, Alameda County CS, SWEEPS UST, HIST UST, CA...	Lower	1381, 0.262, SE
AD150	CHEVRON #9-0121	3026 LAKESHORE AVENU	UST FINDER RELEASE	Lower	1412, 0.267, SSE
AD151	FORMER CHEVRON SERVI	3026 LAKESHORE AVENU	CPS-SLIC, HWTS, HAZNET, CERS	Lower	1412, 0.267, SSE
AD152	CHEVRON SERV STA #01	LAKESHORE & MCARTHUR	LUST, Alameda County CS, SWEEPS UST, HIST UST, CA...	Lower	1412, 0.267, SSE
AA153	YORK STREET APARTMEN	800 YORK	UST FINDER RELEASE	Higher	1464, 0.277, East
AA154	YORK STREET APARTMEN	800 YORK	LUST, Alameda County CS, Cortese, HIST CORTESE,...	Higher	1464, 0.277, East
AE155	BERG RESIDENCE	3329 LAKESHORE	EMI, HIST CORTESE	Lower	1522, 0.288, ESE
AC156	EXXON	500 GRAND AVE	LUST, CPS-SLIC, Alameda County CS, SWEEPS UST, CA...	Lower	1549, 0.293, SSW

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MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
<a href="#">AC157</a>	SERVICE STATION	500 GRAND AVENUE	Notify 65	Lower	1549, 0.293, SSW
<a href="#">AC158</a>	CHEVRON #21-1173 / E	500 GRAND AVE	UST FINDER RELEASE	Lower	1549, 0.293, SSW
<a href="#">AC159</a>	500 GRAND REDEVELOPM	500 GRAND AVE	Alameda County CS	Lower	1549, 0.293, SSW
<a href="#">AE160</a>	SHERMAN CLEANERS (FO	3321/3329 LAKESHORE	CPS-SLIC, CERS	Lower	1549, 0.293, ESE
<a href="#">AF161</a>	WILMOT PROPERTY	433 BELLEVUE AVE	LUST, Cortese, HWTS	Lower	1578, 0.299, SW
<a href="#">AD162</a>	OAKLAND CITY OF	637 BEACON ST	LUST, Alameda County CS, Cortese, HIST CORTESE,...	Lower	1670, 0.316, SSE
<a href="#">AD163</a>	CITY OF OAKLAND	637 BEACON	UST FINDER RELEASE	Lower	1670, 0.316, SSE
<a href="#">AF164</a>	CHEVRON #9-0006 / GU	460 GRAND	LUST, CPS-SLIC, Alameda County CS, Cortese, HIST...	Lower	1753, 0.332, SW
<a href="#">AF165</a>	CHEVRON #9-0006 / GU	460 GRAND	UST FINDER RELEASE	Lower	1753, 0.332, SW
<a href="#">AG166</a>	POY-WING PROPERTY	240 MACARTHUR BLVD W	LUST, Cortese, HIST CORTESE, CERS	Higher	1836, 0.348, NNW
<a href="#">AG167</a>	FORMERLY DODSON LTD	240 MACARTHUR	UST FINDER RELEASE	Higher	1836, 0.348, NNW
<a href="#">AG168</a>	SHELL #13-5676	230 MACARTHUR	UST FINDER RELEASE	Higher	1840, 0.348, NNW
<a href="#">AG169</a>	SHELL	230 MACARTHUR BLVD W	LUST	Higher	1840, 0.348, NNW
<a href="#">AG170</a>	SHELL #13-5676	230 MACARTHUR	LUST, Cortese, HIST CORTESE, CERS	Higher	1840, 0.348, NNW
<a href="#">AH171</a>	378-382 GRAND AVE	378, 380, 382 GRAND	Alameda County CS	Lower	2032, 0.385, SW
<a href="#">AH172</a>	GRAND AVENUE LLC	378 GRAND AVENUE	UST FINDER RELEASE	Lower	2032, 0.385, SW
<a href="#">AH173</a>	378 GRAND AVE., LLC	378 GRAND AVE	LUST, Cortese, HWTS, HAZNET, CERS	Lower	2032, 0.385, SW
<a href="#">AI174</a>	EAST BAY AGENCY FOR	303 VAN BUREN AVENUE	LUST, Cortese, HWTS	Higher	2047, 0.388, WSW
<a href="#">AJ175</a>	LAKESIDE PARK	468 BELLEVUE AVE	LUST, Alameda County CS, Cortese, HIST CORTESE,...	Lower	2077, 0.393, SSW
<a href="#">AJ176</a>	LAKESIDE PARK	468 BELLEVUE AVE	UST FINDER RELEASE	Lower	2077, 0.393, SSW
<a href="#">AK177</a>	CITY OF OAKLAND FIRE	172 SANTA CLARA	UST FINDER RELEASE	Higher	2092, 0.396, NNW
<a href="#">AK178</a>	CITY OF OAKLAND ENVI	172 SANTA CLARA	LUST, Alameda County CS, Cortese, EMI, HIST...	Higher	2092, 0.396, NNW
<a href="#">AL179</a>	ULIBARRI PROPERTY	387 ORANGE ST	Alameda County CS	Higher	2150, 0.407, NW
<a href="#">AL180</a>	PRIVATE RESIDENCE	PRIVATE RESIDENCE	LUST	Higher	2168, 0.411, NW
<a href="#">AM181</a>	SHELL #13-5698 / DEV	350 GRAND	LUST, Alameda County CS, SWEEPS UST, Cortese, HIST...	Lower	2224, 0.421, SW
<a href="#">AM182</a>	SHELL #13-5698 / DEV	350 GRAND	UST FINDER RELEASE	Lower	2224, 0.421, SW
<a href="#">AH183</a>	QUICK STOP #46	363 GRAND	UST FINDER RELEASE	Lower	2226, 0.422, SW
<a href="#">AH184</a>	QUICK STOP #46	363 GRAND	LUST, Alameda County CS, SWEEPS UST, CA FID UST,...	Lower	2226, 0.422, SW
<a href="#">AI185</a>	SUSAN MENDELSON	431 LEE ST.	HWTS, HAZNET, Notify 65	Lower	2291, 0.434, WSW
<a href="#">AN186</a>	CHAMPLIN FAMILY TRUS	485 ELLITA	LUST, Alameda County CS, Cortese, HIST CORTESE,...	Lower	2441, 0.462, SW
<a href="#">AN187</a>	CHAMPLIN FAMILY TRUS	485 ELLITA	UST FINDER RELEASE	Lower	2441, 0.462, SW
<a href="#">AO188</a>	BP	100 MACARTHUR BLVD	LUST, Alameda County CS, SWEEPS UST, CA FID UST,...	Higher	2513, 0.476, NNW
<a href="#">AO189</a>	BP #11102	100 MACARTHUR	UST FINDER RELEASE	Higher	2513, 0.476, NNW
<a href="#">AP190</a>	SHELL OIL CO	29 WILDWOOD	RCRA-SQG, LUST, HIST CORTESE	Lower	2565, 0.486, NNE
<a href="#">AP191</a>	SHELL #13-5765	29 WILDWOOD	UST FINDER RELEASE	Lower	2565, 0.486, NNE
<a href="#">AP192</a>	PIEDMONT SHELL SERV.	29 WILDWOOD AVE	CPS-SLIC, HIST UST, CA FID UST, EMI, HWTS, HAZNET,...	Lower	2565, 0.486, NNE
<a href="#">AP193</a>	SHELL OIL CO	29 WILDWOOD	LUST, Alameda County CS, FINDS, ECHO, Cortese,...	Lower	2565, 0.486, NNE
<a href="#">AO194</a>	UNOCAL	96 MACARTHUR BLVD	LUST, Alameda County CS, SWEEPS UST, HIST UST, CA...	Higher	2618, 0.496, NNW
<a href="#">195</a>	ARCO	731 MACARTHUR	LUST, HIST CORTESE	Higher	2638, 0.500, SE

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<a href="#">196</a>	CROWLEY MARITIME COR	PAC. DRY DOCK YARDS	Notify 65	Lower	4078, 0.772, West
<a href="#">197</a>	EUROPEAN MOTORS	2915 BROADWAY	RCRA-LQG, LUST, Alameda County CS, SWEEPS UST,...	Lower	4194, 0.794, WNW
<a href="#">198</a>	THE ECHO MIXED USE H	3300 BROADWAY	ENVIROSTOR, VCP	Higher	4212, 0.798, NW
<a href="#">199</a>	BROADWAY VOLKSWAGON	2749 BROADWAY	Notify 65	Lower	4283, 0.811, WNW
<a href="#">200</a>	CONNELL OLDS	3093 BROADWAY	RCRA-SQG, LUST, Alameda County CS, SWEEPS UST,...	Higher	4457, 0.844, NW
<a href="#">201</a>	YUEN'S EXXON SERVICE	1901 PARK BOULEVARD	Notify 65	Lower	4597, 0.871, South
<a href="#">202</a>	NEGHERBON	2345, 2333 BROADWAY	ENVIROSTOR, VCP, DEED	Lower	4840, 0.917, West
<a href="#">203</a>	CARDIO PULMANARY BUI	365 HAWTHRONE STREET	Notify 65	Higher	4923, 0.932, NW
<a href="#">204</a>	4212-4220 PIEDMONT A	4212-4220 PIEDMONT A	ENVIROSTOR, Alameda County CS, VCP	Higher	5214, 0.988, North
<a href="#">205</a>	ZUEDELAC APARTMENTS	1600 3RD AVE	ENVIROSTOR, VCP, HWTS, HAZNET	Lower	5253, 0.995, SSW

## EXECUTIVE SUMMARY

### TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 9 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
GRAND LAKE GARDEN 401 SANTA CLARA AVE OAKLAND, CA 94610	<p>FINDS Registry ID:: 110071431746 Registry ID:: 110070422407</p> <p>ECHO Registry ID: 110070422407</p>	N/A
GRAND LAKE GARDEN 401 SANTA CLARA AVE OAKLAND, CA 94610	<p>HWTS HAZNET GEPaid: CAL000417627</p>	N/A
GRAND LAKE GARDENS 401 SANTA CLARA AVE OAKLAND, CA 94610	<p>HWTS HAZNET GEPaid: CAC002782085</p>	N/A
GRAND LAKE GARDEN 401 SANTA CLARA AVE OAKLAND, CA 94610	<p>RCRA NonGen / NLR EPA ID:: CAL000417627</p>	CAL000417627
HUMANGOOD NORCAL 401 SANTA CLARA AVE. OAKLAND, CA 94610	<p>RCRA NonGen / NLR EPA ID:: CAC003232567</p>	CAC003232567
HUMANGOOD NORCAL 401 SANTA CLARA AVE. OAKLAND, CA 94610	<p>ECHO Registry ID: 110071431746</p>	N/A
HUMANGOOD NORCAL 401 SANTA CLARA AVE. OAKLAND, CA 94610	<p>HWTS HAZNET GEPaid: CAC002629013</p>	N/A
GRAND LAKE GARDENS 401 SANTA CLARA AVEN OAKLAND, CA 94610	<p>RCRA NonGen / NLR EPA ID:: CAC003200833</p>	CAC003200833

## EXECUTIVE SUMMARY

### DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

### STANDARD ENVIRONMENTAL RECORDS

#### ***Lists of Federal NPL (Superfund) sites***

NPL..... National Priority List  
Proposed NPL..... Proposed National Priority List Sites  
NPL LIENS..... Federal Superfund Liens

#### ***Lists of Federal Delisted NPL sites***

Delisted NPL..... National Priority List Deletions

#### ***Lists of Federal sites subject to CERCLA removals and CERCLA orders***

FEDERAL FACILITY..... Federal Facility Site Information listing  
SEMS..... Superfund Enterprise Management System

#### ***Lists of Federal CERCLA sites with NFRAP***

SEMS-ARCHIVE..... Superfund Enterprise Management System Archive

#### ***Lists of Federal RCRA facilities undergoing Corrective Action***

CORRACTS..... Corrective Action Report

#### ***Lists of Federal RCRA TSD facilities***

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

#### ***Lists of Federal RCRA generators***

RCRA-LQG..... RCRA - Large Quantity Generators  
RCRA-VSQG..... RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

#### ***Federal institutional controls / engineering controls registries***

LUCIS..... Land Use Control Information System  
US ENG CONTROLS..... Engineering Controls Sites List  
US INST CONTROLS..... Institutional Controls Sites List

#### ***Federal ERNS list***

ERNS..... Emergency Response Notification System

#### ***Lists of state- and tribal (Superfund) equivalent sites***

RESPONSE..... State Response Sites

## EXECUTIVE SUMMARY

### ***Lists of state and tribal landfills and solid waste disposal facilities***

SWF/LF..... Solid Waste Information System

### ***Lists of state and tribal leaking storage tanks***

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

### ***Lists of state and tribal registered storage tanks***

FEMA UST..... Underground Storage Tank Listing  
AST..... Aboveground Petroleum Storage Tank Facilities  
INDIAN UST..... Underground Storage Tanks on Indian Land

### ***Lists of state and tribal voluntary cleanup sites***

INDIAN VCP..... Voluntary Cleanup Priority Listing  
VCP..... Voluntary Cleanup Program Properties

### ***Lists of state and tribal brownfield sites***

BROWNFIELDS..... Considered Brownfields Sites Listing

### **ADDITIONAL ENVIRONMENTAL RECORDS**

#### ***Local Brownfield lists***

US BROWNFIELDS..... A Listing of Brownfields Sites

#### ***Local Lists of Landfill / Solid Waste Disposal Sites***

WMUDS/SWAT..... Waste Management Unit Database  
SWRCY..... Recycler Database  
HAULERS..... Registered Waste Tire Haulers Listing  
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands  
ODI..... Open Dump Inventory  
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations  
IHS OPEN DUMPS..... Open Dumps on Indian Land

#### ***Local Lists of Hazardous waste / Contaminated Sites***

US HIST CDL..... Delisted National Clandestine Laboratory Register  
HIST Cal-Sites..... Historical Calsites Database  
SCH..... School Property Evaluation Program  
CDL..... Clandestine Drug Labs  
Toxic Pits..... Toxic Pits Cleanup Act Sites  
US CDL..... National Clandestine Laboratory Register

#### ***Local Land Records***

LIENS..... Environmental Liens Listing  
LIENS 2..... CERCLA Lien Information  
DEED..... Deed Restriction Listing

## EXECUTIVE SUMMARY

### **Records of Emergency Release Reports**

HMIRS.....	Hazardous Materials Information Reporting System
CHMIRS.....	California Hazardous Material Incident Report System
LDS.....	Land Disposal Sites Listing
MCS.....	Military Cleanup Sites Listing
SPILLS 90.....	SPILLS 90 data from FirstSearch

### **Other Ascertainable Records**

FUDS.....	Formerly Used Defense Sites
DOD.....	Department of Defense Sites
SCRD DRYCLEANERS.....	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR.....	Financial Assurance Information
EPA WATCH LIST.....	EPA WATCH LIST
2020 COR ACTION.....	2020 Corrective Action Program List
TSCA.....	Toxic Substances Control Act
TRIS.....	Toxic Chemical Release Inventory System
SSTS.....	Section 7 Tracking Systems
ROD.....	Records Of Decision
RMP.....	Risk Management Plans
RAATS.....	RCRA Administrative Action Tracking System
PRP.....	Potentially Responsible Parties
PADS.....	PCB Activity Database System
ICIS.....	Integrated Compliance Information System
FTTS.....	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS.....	Material Licensing Tracking System
COAL ASH DOE.....	Steam-Electric Plant Operation Data
COAL ASH EPA.....	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER.....	PCB Transformer Registration Database
RADINFO.....	Radiation Information Database
HIST FTTS.....	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS.....	Incident and Accident Data
CONSENT.....	Superfund (CERCLA) Consent Decrees
INDIAN RESERV.....	Indian Reservations
FUSRAP.....	Formerly Utilized Sites Remedial Action Program
UMTRA.....	Uranium Mill Tailings Sites
LEAD SMELTERS.....	Lead Smelter Sites
US AIRS.....	Aerometric Information Retrieval System Facility Subsystem
US MINES.....	Mines Master Index File
ABANDONED MINES.....	Abandoned Mines
UXO.....	Unexploded Ordnance Sites
DOCKET HWC.....	Hazardous Waste Compliance Docket Listing
FUELS PROGRAM.....	EPA Fuels Program Registered Listing
PFAS NPL.....	Superfund Sites with PFAS Detections Information
PFAS FEDERAL SITES.....	Federal Sites PFAS Information
PFAS TSCA.....	PFAS Manufacture and Imports Information
PFAS TRIS.....	List of PFAS Added to the TRI
PFAS RCRA MANIFEST.....	PFAS Transfers Identified In the RCRA Database Listing
PFAS ATSDR.....	PFAS Contamination Site Location Listing
PFAS WQP.....	Ambient Environmental Sampling for PFAS
PFAS NPDES.....	Clean Water Act Discharge Monitoring Information
PFAS ECHO.....	Facilities in Industries that May Be Handling PFAS Listing

## EXECUTIVE SUMMARY

PFAS ECHO FIRE TRAINING	Facilities in Industries that May Be Handling PFAS Listing
PFAS PART 139 AIRPORT	All Certified Part 139 Airports PFAS Information Listing
AQUEOUS FOAM NRC	Aqueous Foam Related Incidents Listing
BIOSOLIDS	ICIS-NPDES Biosolids Facility Data
PFAS	PFAS Investigation Site Location Listing
AQUEOUS FOAM	Former Fire Training Facility Assessments Listing
CA BOND EXP. PLAN	Bond Expenditure Plan
CHROME PLATING	Chrome Plating Facilities Listing
CUPA Listings	CUPA Resources List
EML	Emissions Inventory Data
ENF	Enforcement Action Listing
Financial Assurance	Financial Assurance Information Listing
ICE	Inspection, Compliance and Enforcement
HWP	EnviroStor Permitted Facilities Listing
HWT	Registered Hazardous Waste Transporter Database
MINES	Mines Site Location Listing
MWMP	Medical Waste Management Program Listing
NPDES	NPDES Permits Listing
PEST LIC	Pesticide Regulation Licenses Listing
PROC	Certified Processors Database
HAZMAT	Hazardous Material Facilities
UIC	UIC Listing
UIC GEO	UIC GEO (GEOTRACKER)
WASTEWATER PITS	Oil Wastewater Pits Listing
WDS	Waste Discharge System
WIP	Well Investigation Program Case List
MILITARY PRIV SITES	MILITARY PRIV SITES (GEOTRACKER)
PROJECT	PROJECT (GEOTRACKER)
WDR	Waste Discharge Requirements Listing
CIWQS	California Integrated Water Quality System
CERS	CERS
NON-CASE INFO	NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS	OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS	PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT	SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ	Well Stimulation Project (GEOTRACKER)

### EDR HIGH RISK HISTORICAL RECORDS

#### ***EDR Exclusive Records***

EDR MGP	EDR Proprietary Manufactured Gas Plants
EDR Hist Auto	EDR Exclusive Historical Auto Stations

### EDR RECOVERED GOVERNMENT ARCHIVES

#### ***Exclusive Recovered Govt. Archives***

RGA LF	Recovered Government Archive Solid Waste Facilities List
RGA LUST	Recovered Government Archive Leaking Underground Storage Tank

### SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

## EXECUTIVE SUMMARY

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

### **STANDARD ENVIRONMENTAL RECORDS**

#### ***Lists of Federal RCRA generators***

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 12/04/2023 has revealed that there are 4 RCRA-SQG sites within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b><i>CARSONS MARTINIZING</i></b> EPA ID:: CAD981396104	<b><i>3250 GRAND AVE</i></b>	<b><i>ESE 0 - 1/8 (0.091 mi.)</i></b>	<b><i>E32</i></b>	<b><i>60</i></b>
<b><i>PRIDE CLEANERS</i></b> EPA ID:: CAD981669666	<b><i>3401 GRAND AVE</i></b>	<b><i>ENE 0 - 1/8 (0.121 mi.)</i></b>	<b><i>F54</i></b>	<b><i>97</i></b>
<b><i>YOUNG'S AUTOMOTIVE</i></b> EPA ID:: CAD982356974	<b><i>3509 GRAND AVE</i></b>	<b><i>NE 1/8 - 1/4 (0.164 mi.)</i></b>	<b><i>N82</i></b>	<b><i>188</i></b>
<b><i>YOUNG'S ONE HOUR MAR</i></b> EPA ID:: CAD981375330	<b><i>600 GRAND AVE #100</i></b>	<b><i>S 1/8 - 1/4 (0.204 mi.)</i></b>	<b><i>O103</i></b>	<b><i>242</i></b>

#### ***Lists of state- and tribal hazardous waste facilities***

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 01/22/2024 has revealed that there are 4 ENVIROSTOR sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b><i>THE ECHO MIXED USE H</i></b>	<b><i>3300 BROADWAY</i></b>	<b><i>NW 1/2 - 1 (0.798 mi.)</i></b>	<b><i>198</i></b>	<b><i>532</i></b>

## EXECUTIVE SUMMARY

Facility Id: 60003563  
Status: Active

<b>4212-4220 PIEDMONT A</b> Facility Id: 60001212 Status: Refer: RWQCB	<b>4212-4220 PIEDMONT A</b>	<b>N 1/2 - 1 (0.988 mi.)</b>	<b>204</b>	<b>623</b>
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<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>NEGHERBON</b> Facility Id: 60001834 Status: Certified / Operation & Maintenance	<b>2345, 2333 BROADWAY</b>	<b>W 1/2 - 1 (0.917 mi.)</b>	<b>202</b>	<b>598</b>
<b>ZUEDELAC APARTMENTS</b> Facility Id: 01990014 Status: Certified	<b>1600 3RD AVE</b>	<b>SSW 1/2 - 1 (0.995 mi.)</b>	<b>205</b>	<b>629</b>

### ***Lists of state and tribal leaking storage tanks***

LUST: Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the LUST list, as provided by EDR, has revealed that there are 31 LUST sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
PRIVATE RESIDENCE Database: LUST, Date of Government Version: 12/04/2023 Status: Completed - Case Closed Global Id: T10000005350 Global Id: T0600114301 Global Id: T10000006106	PRIVATE RESIDENCE	WNW 1/8 - 1/4 (0.203 mi.)	R99	227
PRIVATE RESIDENCE Database: LUST, Date of Government Version: 12/04/2023 Status: Completed - Case Closed Global Id: T0600101769	PRIVATE RESIDENCE	WNW 1/8 - 1/4 (0.203 mi.)	R100	237
<b>RESIDENCE</b> Database: LUST REG 2, Date of Government Version: 09/30/2004 Facility Id: 01-1908 Facility Status: Case Closed date9: 5/6/1994	<b>299 EUCLID AVE</b>	<b>WNW 1/8 - 1/4 (0.203 mi.)</b>	<b>R101</b>	<b>238</b>
<b>YORK STREET APARTMEN</b> Database: LUST, Date of Government Version: 12/04/2023 Database: LUST REG 2, Date of Government Version: 09/30/2004 Status: Completed - Case Closed Facility Id: 01-1689 Facility Status: Case Closed Global Id: T0600101560 date9: 12/3/1993	<b>800 YORK</b>	<b>E 1/4 - 1/2 (0.277 mi.)</b>	<b>AA154</b>	<b>389</b>
<b>POY-WING PROPERTY</b> Database: LUST, Date of Government Version: 12/04/2023 Database: LUST REG 2, Date of Government Version: 09/30/2004	<b>240 MACARTHUR BLVD W</b>	<b>NNW 1/4 - 1/2 (0.348 mi.)</b>	<b>AG166</b>	<b>419</b>

## EXECUTIVE SUMMARY

Status: Open - Verification Monitoring  
 Facility Id: 01-2434  
 Facility Status: Leak being confirmed  
 Global Id: T0600102243

**SHELL** 230 MACARTHUR BLVD W NNW 1/4 - 1/2 (0.348 mi.) AG169 432  
 Database: LUST REG 2, Date of Government Version: 09/30/2004  
 Facility Id: 01-1345  
 Facility Status: Preliminary site assessment underway

**SHELL #13-5676** 230 MACARTHUR NNW 1/4 - 1/2 (0.348 mi.) AG170 432  
 Database: LUST, Date of Government Version: 12/04/2023  
 Status: Completed - Case Closed  
 Global Id: T0600101240

**EAST BAY AGENCY FOR** 303 VAN BUREN AVENUE WSW 1/4 - 1/2 (0.388 mi.) AI174 445  
 Database: LUST, Date of Government Version: 12/04/2023  
 Status: Completed - Case Closed  
 Global Id: T10000013048

**CITY OF OAKLAND ENVI** 172 SANTA CLARA NNW 1/4 - 1/2 (0.396 mi.) AK178 456  
 Database: LUST, Date of Government Version: 12/04/2023  
 Database: LUST REG 2, Date of Government Version: 09/30/2004  
 Status: Completed - Case Closed  
 Facility Id: 01-0625  
 Facility Status: Case Closed  
 Global Id: T0600100575  
 date9: 9/30/1992

**PRIVATE RESIDENCE** PRIVATE RESIDENCE NW 1/4 - 1/2 (0.411 mi.) AL180 466  
 Database: LUST, Date of Government Version: 12/04/2023  
 Status: Completed - Case Closed  
 Global Id: T06019730058  
 Global Id: T0600100621

**BP** 100 MACARTHUR BLVD NNW 1/4 - 1/2 (0.476 mi.) AO188 489  
 Database: LUST, Date of Government Version: 12/04/2023  
 Database: LUST REG 2, Date of Government Version: 09/30/2004  
 Status: Completed - Case Closed  
 Facility Id: 01-0985  
 Facility Status: Preliminary site assessment underway  
 Global Id: T0600100908

**UNOCAL** 96 MACARTHUR BLVD NNW 1/4 - 1/2 (0.496 mi.) AO194 518  
 Database: LUST REG 2, Date of Government Version: 09/30/2004  
 Facility Id: 01-1618  
 Facility Status: Preliminary site assessment underway

**ARCO** 731 MACARTHUR SE 1/4 - 1/2 (0.500 mi.) 195 522  
 Database: LUST REG 2, Date of Government Version: 09/30/2004  
 Facility Id: 01-0118  
 Facility Status: Remedial action (cleanup) Underway

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>FYNE BUILDING</b>	774 GRAND AVE W	SSE 0 - 1/8 (0.103 mi.)	H48	86
Database: LUST, Date of Government Version: 12/04/2023 Status: Completed - Case Closed Global Id: T0600100620				
<b>UNOCAL</b>	411 MACARTHUR BLVD W	SSW 1/8 - 1/4 (0.138 mi.)	J60	133
Database: LUST REG 2, Date of Government Version: 09/30/2004				

## EXECUTIVE SUMMARY

Facility Id: 01-1597				
Facility Status: Preliminary site assessment underway				
<b>TAYMUREE FOREIGN AUT</b>	<b>3509 GRAND</b>	<b>NE 1/8 - 1/4 (0.164 mi.)</b>	<b>N79</b>	<b>181</b>
Database: LUST, Date of Government Version: 12/04/2023				
Status: Completed - Case Closed				
Global Id: T0600101339				
<b>TAYMUREE FOREIGN AUT</b>	<b>3509 GRAND AVE</b>	<b>NE 1/8 - 1/4 (0.164 mi.)</b>	<b>N81</b>	<b>186</b>
Database: LUST REG 2, Date of Government Version: 09/30/2004				
Facility Id: 01-1450				
Facility Status: Case Closed				
date9: 8/29/1994				
<b>WU PROPERTY</b>	<b>722 RAND AVENUE</b>	<b>ESE 1/8 - 1/4 (0.227 mi.)</b>	<b>W130</b>	<b>303</b>
Database: LUST, Date of Government Version: 12/04/2023				
Status: Completed - Case Closed				
Global Id: T10000014217				
<b>UNOCAL #5325</b>	<b>3220 LAKESHORE AVE.</b>	<b>SE 1/4 - 1/2 (0.262 mi.)</b>	<b>AB149</b>	<b>344</b>
Database: LUST, Date of Government Version: 12/04/2023				
Database: LUST REG 2, Date of Government Version: 09/30/2004				
Status: Completed - Case Closed				
Facility Id: 01-1588				
Facility Status: Preliminary site assessment underway				
Global Id: T0600101463				
<b>CHEVRON SERV STA #01</b>	<b>LAKESHORE &amp; MCARTHUR</b>	<b>SSE 1/4 - 1/2 (0.267 mi.)</b>	<b>AD152</b>	<b>369</b>
Database: LUST, Date of Government Version: 12/04/2023				
Database: LUST REG 2, Date of Government Version: 09/30/2004				
Status: Open - Site Assessment				
Facility Id: 01-0356				
Facility Status: Preliminary site assessment underway				
Global Id: T0600100328				
<b>EXXON</b>	<b>500 GRAND AVE</b>	<b>SSW 1/4 - 1/2 (0.293 mi.)</b>	<b>AC156</b>	<b>393</b>
Database: LUST, Date of Government Version: 12/04/2023				
Database: LUST REG 2, Date of Government Version: 09/30/2004				
Status: Completed - Case Closed				
Facility Id: 01-1467				
Facility Status: Pollution Characterization				
Global Id: T0600101355				
<b>WILMOT PROPERTY</b>	<b>433 BELLEVUE AVE</b>	<b>SW 1/4 - 1/2 (0.299 mi.)</b>	<b>AF161</b>	<b>404</b>
Database: LUST, Date of Government Version: 12/04/2023				
Status: Completed - Case Closed				
Global Id: T10000018664				
<b>OAKLAND CITY OF</b>	<b>637 BEACON ST</b>	<b>SSE 1/4 - 1/2 (0.316 mi.)</b>	<b>AD162</b>	<b>409</b>
Database: LUST, Date of Government Version: 12/04/2023				
Database: LUST REG 2, Date of Government Version: 09/30/2004				
Status: Completed - Case Closed				
Facility Id: 01-0866				
Facility Status: Case Closed				
Global Id: T0600100800				
date9: 12/17/1999				
<b>CHEVRON #9-0006 / GU</b>	<b>460 GRAND</b>	<b>SW 1/4 - 1/2 (0.332 mi.)</b>	<b>AF164</b>	<b>413</b>
Database: LUST, Date of Government Version: 12/04/2023				
Database: LUST REG 2, Date of Government Version: 09/30/2004				
Status: Completed - Case Closed				



## EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
500 LAKE PARK APARTM Database: CPS-SLIC, Date of Government Version: 12/04/2023 Facility Status: Open - Site Assessment Global Id: T10000013846	500 LAKE PARK AVENUE	SE 1/8 - 1/4 (0.174 mi.)	L88	202
<b>FORMER CHEVRON SERVI</b> Database: CPS-SLIC, Date of Government Version: 12/04/2023 Facility Status: Open - Site Assessment Global Id: T10000021260	<b>3026 LAKESHORE AVENU</b>	<b>SSE 1/4 - 1/2 (0.267 mi.)</b>	<b>AD151</b>	<b>354</b>
<b>EXXON</b> Database: CPS-SLIC, Date of Government Version: 12/04/2023 Facility Status: Completed - Case Closed Global Id: T10000007707	<b>500 GRAND AVE</b>	<b>SSW 1/4 - 1/2 (0.293 mi.)</b>	<b>AC156</b>	<b>393</b>
<b>SHERMAN CLEANERS (FO</b> Database: SLIC REG 2, Date of Government Version: 09/30/2004 Database: CPS-SLIC, Date of Government Version: 12/04/2023 Facility Status: Completed - Case Closed Facility Id: 01S0518 Global Id: SL18331751	<b>3321/3329 LAKESHORE</b>	<b>ESE 1/4 - 1/2 (0.293 mi.)</b>	<b>AE160</b>	<b>403</b>
<b>CHEVRON #9-0006 / GU</b> Database: CPS-SLIC, Date of Government Version: 12/04/2023 Facility Status: Completed - Case Closed Global Id: T06019779893	<b>460 GRAND</b>	<b>SW 1/4 - 1/2 (0.332 mi.)</b>	<b>AF164</b>	<b>413</b>
<b>PIEDMONT SHELL SERV.</b> Database: CPS-SLIC, Date of Government Version: 12/04/2023 Facility Status: Completed - Case Closed Global Id: T10000007222	<b>29 WILDWOOD AVE</b>	<b>NNE 1/4 - 1/2 (0.486 mi.)</b>	<b>AP192</b>	<b>508</b>

Alameda County CS: A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

A review of the Alameda County CS list, as provided by EDR, and dated 01/09/2019 has revealed that there are 21 Alameda County CS sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>RESIDENCE</b> Record Id: RO0000688 Status: Case Closed	<b>299 EUCLID AVE</b>	<b>WNW 1/8 - 1/4 (0.203 mi.)</b>	<b>R101</b>	<b>238</b>
<b>YORK STREET APARTMEN</b> Record Id: RO0000586 Status: Case Closed	<b>800 YORK</b>	<b>E 1/4 - 1/2 (0.277 mi.)</b>	<b>AA154</b>	<b>389</b>
<b>CITY OF OAKLAND ENVI</b> Record Id: RO0001115 Status: Case Closed	<b>172 SANTA CLARA</b>	<b>NNW 1/4 - 1/2 (0.396 mi.)</b>	<b>AK178</b>	<b>456</b>
<b>ULIBARRI PROPERTY</b> Record Id: RO0002921 Status: Leak Confirmation Status: Preliminary Site Assessment Underway	<b>387 ORANGE ST</b>	<b>NW 1/4 - 1/2 (0.407 mi.)</b>	<b>AL179</b>	<b>465</b>

## EXECUTIVE SUMMARY

Status: Pollution Characterization  
 Status: Remediation Plan  
 Status: Remedial Action Underway

*\*Additional key fields are available in the Map Findings section*

<b>BP</b> Record Id: RO0000456 Status: Leak Confirmation Status: Pollution Characterization Status: Case Closed	<b>100 MACARTHUR BLVD</b>	<b>NNW 1/4 - 1/2 (0.476 mi.)</b>	<b>AO188</b>	<b>489</b>
<b>UNOCAL</b> Record Id: RO0000455 Status: Leak Confirmation Status: Preliminary Site Assessment Workplan Submitted Status: Preliminary Site Assessment Underway Status: Pollution Characterization	<b>96 MACARTHUR BLVD</b>	<b>NNW 1/4 - 1/2 (0.496 mi.)</b>	<b>AO194</b>	<b>518</b>
<b>Lower Elevation</b>	<b>Address</b>	<b>Direction / Distance</b>	<b>Map ID</b>	<b>Page</b>
<b>UNOCAL</b> Record Id: RO0003192 Status: Pollution Characterization	<b>411 MACARTHUR BLVD W</b>	<b>SSW 1/8 - 1/4 (0.138 mi.)</b>	<b>J60</b>	<b>133</b>
<b>SHELL</b> Record Id: RO0003056 Status: Leak Confirmation Status: Pollution Characterization	<b>UNK GRAND AVE &amp; LAKE</b>	<b>SSE 1/8 - 1/4 (0.152 mi.)</b>	<b>H73</b>	<b>171</b>
<b>TAYMUREE FOREIGN AUT</b> Record Id: RO0000810 Status: Case Closed	<b>3509 GRAND</b>	<b>NE 1/8 - 1/4 (0.164 mi.)</b>	<b>N79</b>	<b>181</b>
<b>UNOCAL #5325</b> Record Id: RO0000229 Status: Leak Confirmation Status: Pollution Characterization	<b>3220 LAKESHORE AVE.</b>	<b>SE 1/4 - 1/2 (0.262 mi.)</b>	<b>AB149</b>	<b>344</b>
<b>CHEVRON SERV STA #01</b> Record Id: RO0000284 Status: Pollution Characterization	<b>LAKESHORE &amp; MCARTHUR</b>	<b>SSE 1/4 - 1/2 (0.267 mi.)</b>	<b>AD152</b>	<b>369</b>
<b>EXXON</b> Record Id: RO0000391 Status: Leak Confirmation Status: Pollution Characterization Status: Case Closed	<b>500 GRAND AVE</b>	<b>SSW 1/4 - 1/2 (0.293 mi.)</b>	<b>AC156</b>	<b>393</b>
<b>500 GRAND REDEVELOPM</b> Record Id: RO0003175 Status: Pollution Characterization	<b>500 GRAND AVE</b>	<b>SSW 1/4 - 1/2 (0.293 mi.)</b>	<b>AC159</b>	<b>402</b>
<b>OAKLAND CITY OF</b> Record Id: RO0000777 Status: Case Closed	<b>637 BEACON ST</b>	<b>SSE 1/4 - 1/2 (0.316 mi.)</b>	<b>AD162</b>	<b>409</b>
<b>CHEVRON #9-0006 / GU</b> Record Id: RO0000839 Record Id: RO0002467 Record Id: RO0003222 Status: Leak Confirmation	<b>460 GRAND</b>	<b>SW 1/4 - 1/2 (0.332 mi.)</b>	<b>AF164</b>	<b>413</b>

## EXECUTIVE SUMMARY

Status: Case Closed				
378-382 GRAND AVE	378, 380, 382 GRAND	SW 1/4 - 1/2 (0.385 mi.)	AH171	438
Record Id: RO0003218				
Status: Leak Confirmation				
Status: Case Closed				
<b>LAKESIDE PARK</b>	<b>468 BELLEVUE AVE</b>	<b>SSW 1/4 - 1/2 (0.393 mi.)</b>	<b>AJ175</b>	<b>451</b>
Record Id: RO0003062				
Status: Leak Confirmation				
<b>SHELL #13-5698 / DEV</b>	<b>350 GRAND</b>	<b>SW 1/4 - 1/2 (0.421 mi.)</b>	<b>AM181</b>	<b>471</b>
Record Id: RO0000428				
Status: Leak Confirmation				
Status: Preliminary Site Assessment Workplan Submitted				
Status: Preliminary Site Assessment Underway				
Status: Pollution Characterization				
Status: Remedial Action Underway				
*Additional key fields are available in the Map Findings section				
<b>QUICK STOP #46</b>	<b>363 GRAND</b>	<b>SW 1/4 - 1/2 (0.422 mi.)</b>	<b>AH184</b>	<b>479</b>
Record Id: RO0000806				
Status: Case Closed				
<b>CHAMPLIN FAMILY TRUS</b>	<b>485 ELLITA</b>	<b>SW 1/4 - 1/2 (0.462 mi.)</b>	<b>AN186</b>	<b>486</b>
Record Id: RO0000816				
Status: Case Closed				
<b>SHELL OIL CO</b>	<b>29 WILDWOOD</b>	<b>NNE 1/4 - 1/2 (0.486 mi.)</b>	<b>AP193</b>	<b>513</b>
Record Id: RO0000495				
Record Id: RO0003154				
Status: Leak Confirmation				
Status: Pollution Characterization				
Status: Case Closed				

### **Lists of state and tribal registered storage tanks**

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, has revealed that there are 3 UST sites within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
GRAND MOBIL	3374 GRAND AVE	ENE 1/8 - 1/4 (0.141 mi.)	F62	136
Database: UST, Date of Government Version: 12/04/2023				
Facility Id: 10601803				
GRAND MOBIL	3374 GRAND AVE	ENE 1/8 - 1/4 (0.141 mi.)	F64	139
Database: ALAMEDA CO. UST, Date of Government Version: 12/26/2023				
Facility Id: FA0321490				
Facility Status: 01				
TOSCO CORPORATION #3	3374 GRAND AVE	ENE 1/8 - 1/4 (0.141 mi.)	F66	160
Database: UST, Date of Government Version: 12/04/2023				
Facility Id: 210				

## EXECUTIVE SUMMARY

### ADDITIONAL ENVIRONMENTAL RECORDS

#### **Local Lists of Hazardous waste / Contaminated Sites**

CERS HAZ WASTE: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

A review of the CERS HAZ WASTE list, as provided by EDR, and dated 01/16/2024 has revealed that there is 1 CERS HAZ WASTE site within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>UNION OIL SS #3443</b>	<b>3374 GRAND AVE</b>	<b>ENE 1/8 - 1/4 (0.141 mi.)</b>	<b>F65</b>	<b>139</b>

#### **Local Lists of Registered Storage Tanks**

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 5 SWEEPS UST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>RESIDENCE</b> Comp Number: 9245	<b>299 EUCLID AVE</b>	<b>WNW 1/8 - 1/4 (0.203 mi.)</b>	<b>R101</b>	<b>238</b>
<b>Lower Elevation</b>	<b>Address</b>	<b>Direction / Distance</b>	<b>Map ID</b>	<b>Page</b>
COMMERCIAL PROPERTY Status: A Comp Number: 1397	3315 GRAND AVE	E 0 - 1/8 (0.049 mi.)	13	32
<b>UNION OIL SS #3443</b> Status: A Tank Status: A Comp Number: 31708	<b>3374 GRAND AVE</b>	<b>ENE 1/8 - 1/4 (0.141 mi.)</b>	<b>F65</b>	<b>139</b>
<b>TAYMUREE FOREIGN AUT</b> Comp Number: 4590	<b>3509 GRAND AVE</b>	<b>NE 1/8 - 1/4 (0.164 mi.)</b>	<b>N81</b>	<b>186</b>
<b>THIAT "JOE" LIANG (D)</b> Comp Number: 5900	<b>3201 LAKESHORE AVE</b>	<b>SE 1/8 - 1/4 (0.242 mi.)</b>	<b>AB142</b>	<b>330</b>

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 6 HIST UST sites within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
UNION OIL SS 3443	3347 GRAND AVE	ENE 0 - 1/8 (0.095 mi.)	F36	70

## EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>UNION OIL SS #3443</b> UNION OIL SS# 3443 Facility Id: 00000060705	<b>3374 GRAND AVE</b> 3374 GRAND AVE	<b>ENE 1/8 - 1/4 (0.141 mi.)</b> ENE 1/8 - 1/4 (0.141 mi.)	<b>F65</b> F67	<b>139</b> 161
UNION OIL SS #3443 Facility Id: 00000031708	3374 GRAND AVE	ENE 1/8 - 1/4 (0.141 mi.)	F68	161
THIAT "JOE" LIANG (D) Facility Id: 00000005900	3201 LAKESHORE AVE	SE 1/8 - 1/4 (0.242 mi.)	AB141	329
<b>THIAT "JOE" LIANG (D)</b>	<b>3201 LAKESHORE AVE</b>	<b>SE 1/8 - 1/4 (0.242 mi.)</b>	<b>AB142</b>	<b>330</b>

CERS TANKS: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

A review of the CERS TANKS list, as provided by EDR, and dated 01/16/2024 has revealed that there is 1 CERS TANKS site within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>UNION OIL SS #3443</b>	<b>3374 GRAND AVE</b>	<b>ENE 1/8 - 1/4 (0.141 mi.)</b>	<b>F65</b>	<b>139</b>

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are 2 CA FID UST sites within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>UNION OIL SS #3443</b> Facility Id: 01002665 Status: A	<b>3374 GRAND AVE</b>	<b>ENE 1/8 - 1/4 (0.141 mi.)</b>	<b>F65</b>	<b>139</b>
<b>THIAT "JOE" LIANG (D)</b> Facility Id: 01002092 Status: I	<b>3201 LAKESHORE AVE</b>	<b>SE 1/8 - 1/4 (0.242 mi.)</b>	<b>AB142</b>	<b>330</b>

### **Other Ascertainable Records**

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 12/04/2023 has revealed that there are 93 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
TRENT DEHART	370 SANTA CLARA AVEN	NW 0 - 1/8 (0.010 mi.)	A9	25

## EXECUTIVE SUMMARY

EPA ID:: CAC003184117				
CHARLIE KALB	370 SANTA CLARA AVEN	NW 0 - 1/8 (0.010 mi.)	A10	28
EPA ID:: CAC003198698				
RICHARD MAHER	455 CRESCENT STREET	NW 0 - 1/8 (0.063 mi.)	C17	34
EPA ID:: CAC003259948				
COLLINS MGMNT.- 455	455 CRESCENT STREET	NW 0 - 1/8 (0.063 mi.)	C18	36
EPA ID:: CAC003176086				
KILEY RUSSELL	455 CRESCENT STREET	NW 0 - 1/8 (0.063 mi.)	C19	38
EPA ID:: CAC003019333				
COLLINS MANAGEMENT C	455 CRESCENT STREET	NW 0 - 1/8 (0.063 mi.)	C20	41
EPA ID:: CAC003091985				
CHRISSEY BARLOW	455 CRESCENT STREET	NW 0 - 1/8 (0.063 mi.)	C21	43
EPA ID:: CAC003040175				
YIHEIS GEDLE	455 CRESENT STREET #	NW 0 - 1/8 (0.063 mi.)	C22	45
EPA ID:: CAC003168362				
COLLINS MANAGEMENT	455 CRESCENT STREET	NW 0 - 1/8 (0.063 mi.)	C23	47
EPA ID:: CAC003113003				
COLLINS MANAGEMENT	455 CRESCENT STREET	NW 0 - 1/8 (0.063 mi.)	C24	50
EPA ID:: CAC003105247				
PETER PROWS/KAREN NE	483 CRESCENT STREET	NNW 0 - 1/8 (0.064 mi.)	C25	52
EPA ID:: CAC003121638				
491 CRESCENT, LP	491 CRESCENT STREET	N 0 - 1/8 (0.080 mi.)	D29	55
EPA ID:: CAC003197776				
ARVAND SEBETIN	369 MACARTHUR BLVD	WSW 0 - 1/8 (0.086 mi.)	30	57
EPA ID:: CAC003158347				
VERITAS	345 MACARTHUR BLVD #	W 0 - 1/8 (0.096 mi.)	G37	71
EPA ID:: CAC003222030				
VPI GROWTH VENTURE 1	345 MACARTHUR BLVD.,	W 0 - 1/8 (0.096 mi.)	G38	73
EPA ID:: CAC003207482				
345 MACARTHUR, G1, L	345 MACARTHUR BOULEV	W 0 - 1/8 (0.096 mi.)	G39	75
EPA ID:: CAC003233950				
345 MACARTHUR G1, LP	345 MACARTHUR BLVD.	W 0 - 1/8 (0.096 mi.)	G40	77
EPA ID:: CAC003076209				
345 MACARTHUR G1, LP	345 MACARTHUR BLVD.	W 0 - 1/8 (0.096 mi.)	G41	80
EPA ID:: CAC003076291				
345 MACARTHUR, G1, L	345 MACARTHUR BLVD	W 0 - 1/8 (0.096 mi.)	G42	82
EPA ID:: CAC003244049				
HAVA LIBERMAN	433 ELWOOD AVENUE	NE 0 - 1/8 (0.109 mi.)	I49	88
EPA ID:: CAC003109633				
HAVA LIBERMAN	433 ELWOOD AVENUE	NE 0 - 1/8 (0.109 mi.)	I50	90
EPA ID:: CAC003103802				
HOLLAND BROOKS BUILD	472 JEAN ST #6	NNW 0 - 1/8 (0.109 mi.)	D51	93
EPA ID:: CAC003028577				
472 JEAN A2, LP	472 JEAN STREET #4	NNW 0 - 1/8 (0.109 mi.)	D52	95
EPA ID:: CAC003112025				
RAJ TEDDY	520 VAN BUREN AVENUE	SW 1/8 - 1/4 (0.130 mi.)	J58	129

## EXECUTIVE SUMMARY

EPA ID:: CAC003009572					
FAITH DARLING	509 VALLE VISTA AVEN	NE 1/8 - 1/4 (0.135 mi.)	I59	131	
EPA ID:: CAC003254507					
TIM HAGGERTY	525 VAN BUREN AVE	SSW 1/8 - 1/4 (0.138 mi.)	J61	134	
EPA ID:: CAC003031675					
COLBY KATZ	515 VALLE VISTA AVEN	NE 1/8 - 1/4 (0.144 mi.)	I70	164	
EPA ID:: CAC003177103					
TONY CELAYA	394 EUCLID AVENUE	SW 1/8 - 1/4 (0.147 mi.)	J71	167	
EPA ID:: CAC003247020					
SANFORD MA	353 EUCLID AVENUE #1	W 1/8 - 1/4 (0.159 mi.)	M76	176	
EPA ID:: CAC003258128					
KIRSTEN HOWE	481 JEAN STREET	NNW 1/8 - 1/4 (0.162 mi.)	77	178	
EPA ID:: CAC003227277					
J AND R ASSOCIATES	281 MACARTHUR BLVD	NW 1/8 - 1/4 (0.165 mi.)	83	191	
EPA ID:: CAC003036120					
ARNOLD BLUSTEIN	397 PALM AVENUE	W 1/8 - 1/4 (0.170 mi.)	M84	193	
EPA ID:: CAC003218583					
BERGER ENTERPRISES	743 WARFIELD AVENUE	E 1/8 - 1/4 (0.172 mi.)	86	198	
EPA ID:: CAC003129224					
SUZI GOLDMACHER	737 WARFIELD AVENUE	ESE 1/8 - 1/4 (0.172 mi.)	K87	200	
EPA ID:: CAC003097821					
MAXWELL & KATE ERNST	388 PALM AVE.	W 1/8 - 1/4 (0.179 mi.)	M90	206	
EPA ID:: CAC003075852					
MAUREEN LAWLOR	507 WICKSON AVENUE #	ESE 1/8 - 1/4 (0.191 mi.)	K93	213	
EPA ID:: CAC003124944					
JAMES ROSS	507 WICKSON AVENUE #	ESE 1/8 - 1/4 (0.191 mi.)	K94	215	
EPA ID:: CAC003140131					
CATHARINE SCHULTZ &	507 WICKSON AVENUE #	ESE 1/8 - 1/4 (0.191 mi.)	K95	218	
EPA ID:: CAC003012216					
MONTEREY BAY COLORS	810 WALKER AVE APT 1	ENE 1/8 - 1/4 (0.206 mi.)	S104	245	
EPA ID:: CAL000412784					
DANIEL PIVNICK	293 EUCLID AVENUE #5	WNW 1/8 - 1/4 (0.208 mi.)	R105	247	
EPA ID:: CAC003199306					
DANIEL PIVNICK	293 EUCLID AVENUE #6	WNW 1/8 - 1/4 (0.208 mi.)	R106	249	
EPA ID:: CAC003154794					
BELLEVUE APARTMENTS	369 BELLEVUE AVE	WSW 1/8 - 1/4 (0.211 mi.)	T107	251	
EPA ID:: CAL000477142					
SHANNON MCCABE	359 BELLEVUE AVENUE	WSW 1/8 - 1/4 (0.213 mi.)	T108	254	
EPA ID:: CAC003259970					
TRUST MATTERS	353 BELLEVUE AVE	W 1/8 - 1/4 (0.214 mi.)	T118	276	
EPA ID:: CAC003033865					
KYLE PARKER	377 PALM AVE #107	W 1/8 - 1/4 (0.218 mi.)	U119	278	
EPA ID:: CAC003040770					
COLLINS MANAGEMENT	377 PALM AVENUE	W 1/8 - 1/4 (0.218 mi.)	U120	281	
EPA ID:: CAC003101219					
COLLINS MANAGEMENT P	377 PALM AVENUE	W 1/8 - 1/4 (0.218 mi.)	U121	283	

## EXECUTIVE SUMMARY

EPA ID:: CAC003085758				
CHRIS CORNFORD	325 ALTA VISTA AVE.	N 1/8 - 1/4 (0.218 mi.)	V122	285
EPA ID:: CAC003146843				
CHRIS CORNFORD	325 ALTA VISTA AVENU	N 1/8 - 1/4 (0.218 mi.)	V123	287
EPA ID:: CAC003155870				
MERIDIAN MANAGEMENT	365 WARWICK AVE #305	WNW 1/8 - 1/4 (0.219 mi.)	R124	290
EPA ID:: CAC003041310				
UNIVERSITY PRESIDENT	365 WARWICK AVE.	WNW 1/8 - 1/4 (0.219 mi.)	R125	292
EPA ID:: CAC003002089				
SCOTT BAILEY	824 VERMONT ST.	ENE 1/8 - 1/4 (0.224 mi.)	S126	294
EPA ID:: CAC003171648				
TOM CHEW	396 JAYNE AVENUE	WNW 1/8 - 1/4 (0.230 mi.)	R132	310
EPA ID:: CAC003008778				
OMAR SHAH	301 ALTA VISTA AVENU	N 1/8 - 1/4 (0.234 mi.)	V134	314
EPA ID:: CAC003244893				
TOM PARATORE	484 CHETWOOD ST	NNW 1/8 - 1/4 (0.235 mi.)	Y136	318
EPA ID:: CAC003025952				
KLAUS WIRSING	525 GLENVIEW AVE. #1	ESE 1/8 - 1/4 (0.237 mi.)	Z137	320
EPA ID:: CAC003067851				
LEXIA LITTLEJOHN	525 MANDANA BLVD #21	E 1/8 - 1/4 (0.242 mi.)	AA138	322
EPA ID:: CAC002996471				
INDEPENDENT PLANNING	525 MANDANA BLVD #30	E 1/8 - 1/4 (0.242 mi.)	AA139	324
EPA ID:: CAC003219651				
SHANNON CARSON	525 MANDANA BOULEVAR	E 1/8 - 1/4 (0.242 mi.)	AA140	327
EPA ID:: CAC003198743				
SAMMY GO	546 GLENVIEW AVE	ESE 1/8 - 1/4 (0.247 mi.)	Z144	334
EPA ID:: CAC003047280				
CINDY BUFFING	492 CHETWOOD ST	NNW 1/8 - 1/4 (0.248 mi.)	Y145	336
EPA ID:: CAC003057807				
<b>Lower Elevation</b>	<b>Address</b>	<b>Direction / Distance</b>	<b>Map ID</b>	<b>Page</b>
VAUGHN MANAGEMENT GR	377 SANTA CLARA AVE	NE 0 - 1/8 (0.015 mi.)	A11	30
EPA ID:: CAC003048298				
BOB & GIGI INC DBA O	3250 GRAND AVE	ESE 0 - 1/8 (0.091 mi.)	E33	63
EPA ID:: CAL000447506				
PRIDE CLEANERS	3401 GRAND AVENUE	ENE 0 - 1/8 (0.121 mi.)	F56	126
EPA ID:: CAC003244764				
GRAND MANDANA GAS ST	3374 GRAND AVE	ENE 1/8 - 1/4 (0.141 mi.)	F69	162
EPA ID:: CAL000330848				
RUTH CASSER	436 LAGUNITAS AVENUE	SSW 1/8 - 1/4 (0.149 mi.)	J72	169
EPA ID:: CAC003259409				
JILL BROADHURST	485 WICKSON AVENUE #	ESE 1/8 - 1/4 (0.159 mi.)	K74	172
EPA ID:: CAC003112238				
CUSHMAN AND WAKEFIEL	496 LAKE PARK AVENUE	SSE 1/8 - 1/4 (0.159 mi.)	L75	174
EPA ID:: CAC003224109				
YOUNG'S AUTOMOTIVE	3509 GRAND AVE	NE 1/8 - 1/4 (0.164 mi.)	N80	184

## EXECUTIVE SUMMARY

EPA ID:: CAL000204795				
MYND PROPERTY MANAGE EPA ID:: CAC003028601	449 LAGUNITAS AVE	SSW 1/8 - 1/4 (0.171 mi.)	O85	196
MAXGEN ENERGY SERVIC EPA ID:: CAC003050630 EPA ID:: CAC003083113	500 LAKE PARK AVE	SE 1/8 - 1/4 (0.174 mi.)	L89	204
HAN, AGNES EPA ID:: CAC003051126	626 GRAND AVENUE	S 1/8 - 1/4 (0.181 mi.)	O91	209
HAN, AGNES EPA ID:: CAC003039498	626 GRAND AVENUE	S 1/8 - 1/4 (0.181 mi.)	O92	211
LINDA HOLLAND EPA ID:: CAC003060190	408 EUCLID AVE	SSW 1/8 - 1/4 (0.192 mi.)	P96	220
DAVID JOHNSON EPA ID:: CAC003140293	558 VALLE VISTA AVEN	NE 1/8 - 1/4 (0.198 mi.)	Q97	222
RYAN YU EPA ID:: CAC003122380	427 LAGUNITAS AVE, #	SSW 1/8 - 1/4 (0.200 mi.)	O98	224
STEPHANE DELEGER EPA ID:: CAC003110786	564 VALLE VISTA AVEN	NE 1/8 - 1/4 (0.213 mi.)	Q109	256
MANKUEN (JENNIE) CHA EPA ID:: CAC003204692	411 EUCLID AVENUE #9	SW 1/8 - 1/4 (0.213 mi.)	P110	258
BLUE SAPPHIRE HOMES EPA ID:: CAC003244104	411 EUCLID AVENUE #1	SW 1/8 - 1/4 (0.213 mi.)	P111	260
MANKUEN (JENNIE) CHA EPA ID:: CAC003220312	411 EUCLID AVENUE #1	SW 1/8 - 1/4 (0.213 mi.)	P112	263
BLUE SAPPHIRE HOMES EPA ID:: CAC003234612	411 EUCLID AVENUE #1	SW 1/8 - 1/4 (0.213 mi.)	P113	265
BLUE SAPPHIRE HOMES EPA ID:: CAC003241428	411 EUCLID AVENUE #2	SW 1/8 - 1/4 (0.213 mi.)	P114	267
MANKUEN (JENNIE) CHA EPA ID:: CAC003205596	411 EUCLID AVENUE #8	SW 1/8 - 1/4 (0.213 mi.)	P115	269
BLUE SAPPHIRE HOMES EPA ID:: CAC003254496	411 EUCLID AVENUE #6	SW 1/8 - 1/4 (0.213 mi.)	P116	272
BLUE SAPPHIRE HOMES EPA ID:: CAC003222138 EPA ID:: CAC003243449	411 EUCLID AVENUE #3	SW 1/8 - 1/4 (0.213 mi.)	P117	274
JACK DOUGLAS EPA ID:: CAC003261919	724 RAND AVENUE	ESE 1/8 - 1/4 (0.224 mi.)	W127	296
JACK DOUGLAS EPA ID:: CAC003253585	722 RAND AVENUE	ESE 1/8 - 1/4 (0.227 mi.)	W128	299
JENNIFER WU EPA ID:: CAC003047725	722 RAND AVE	ESE 1/8 - 1/4 (0.227 mi.)	W129	301
JENNIFER WU EPA ID:: CAC003080665	722 RAND AVENUE	ESE 1/8 - 1/4 (0.227 mi.)	W131	308
BILL MCLETCHE EPA ID:: CAC002998262	410 BELLEVUE AVENUE	SW 1/8 - 1/4 (0.233 mi.)	X133	312
FRANKLIN CHAN EPA ID:: CAC003210550	420 BURK STREET	SSW 1/8 - 1/4 (0.243 mi.)	AC143	332
BLACK OAK PROPERTIES	405 BELLEVUE AVE.	SW 1/8 - 1/4 (0.249 mi.)	X146	338

## EXECUTIVE SUMMARY

EPA ID:: CAC003111527  
 BLACK OAK PROPERTIES 405 BELLEVUE AVENUE SW 1/8 - 1/4 (0.249 mi.) X147 341  
 EPA ID:: CAC002981978

### MINES MRDS: Mineral Resources Data System

A review of the MINES MRDS list, as provided by EDR, and dated 08/23/2022 has revealed that there is 1 MINES MRDS site within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
KAISER INDUSTRIES CO		S 1/8 - 1/4 (0.235 mi.)	135	317

Cortese: The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

A review of the Cortese list, as provided by EDR, and dated 12/13/2023 has revealed that there are 21 Cortese sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>YORK STREET APARTMEN</b> Cleanup Status: COMPLETED - CASE CLOSED	<b>800 YORK</b>	<b>E 1/4 - 1/2 (0.277 mi.)</b>	<b>AA154</b>	<b>389</b>
<b>POY-WING PROPERTY</b> Cleanup Status: OPEN - VERIFICATION MONITORING	<b>240 MACARTHUR BLVD W</b>	<b>NNW 1/4 - 1/2 (0.348 mi.)</b>	<b>AG166</b>	<b>419</b>
<b>SHELL #13-5676</b> Cleanup Status: COMPLETED - CASE CLOSED	<b>230 MACARTHUR</b>	<b>NNW 1/4 - 1/2 (0.348 mi.)</b>	<b>AG170</b>	<b>432</b>
<b>EAST BAY AGENCY FOR</b> Cleanup Status: COMPLETED - CASE CLOSED	<b>303 VAN BUREN AVENUE</b>	<b>WSW 1/4 - 1/2 (0.388 mi.)</b>	<b>AI174</b>	<b>445</b>
<b>CITY OF OAKLAND ENVI</b> Cleanup Status: COMPLETED - CASE CLOSED	<b>172 SANTA CLARA</b>	<b>NNW 1/4 - 1/2 (0.396 mi.)</b>	<b>AK178</b>	<b>456</b>
<b>BP</b> Cleanup Status: COMPLETED - CASE CLOSED	<b>100 MACARTHUR BLVD</b>	<b>NNW 1/4 - 1/2 (0.476 mi.)</b>	<b>AO188</b>	<b>489</b>

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>FYNE BUILDING</b> Cleanup Status: COMPLETED - CASE CLOSED	<b>774 GRAND AVE W</b>	<b>SSE 0 - 1/8 (0.103 mi.)</b>	<b>H48</b>	<b>86</b>
<b>TAYMUREE FOREIGN AUT</b> Cleanup Status: COMPLETED - CASE CLOSED	<b>3509 GRAND</b>	<b>NE 1/8 - 1/4 (0.164 mi.)</b>	<b>N79</b>	<b>181</b>
<b>WU PROPERTY</b> Cleanup Status: COMPLETED - CASE CLOSED	<b>722 RAND AVENUE</b>	<b>ESE 1/8 - 1/4 (0.227 mi.)</b>	<b>W130</b>	<b>303</b>
<b>UNOCAL #5325</b> Cleanup Status: COMPLETED - CASE CLOSED	<b>3220 LAKESHORE AVE.</b>	<b>SE 1/4 - 1/2 (0.262 mi.)</b>	<b>AB149</b>	<b>344</b>
<b>CHEVRON SERV STA #01</b> Cleanup Status: OPEN - SITE ASSESSMENT	<b>LAKESHORE &amp; MCARTHUR</b>	<b>SSE 1/4 - 1/2 (0.267 mi.)</b>	<b>AD152</b>	<b>369</b>
<b>EXXON</b> Cleanup Status: COMPLETED - CASE CLOSED	<b>500 GRAND AVE</b>	<b>SSW 1/4 - 1/2 (0.293 mi.)</b>	<b>AC156</b>	<b>393</b>
<b>WILMOT PROPERTY</b>	<b>433 BELLEVUE AVE</b>	<b>SW 1/4 - 1/2 (0.299 mi.)</b>	<b>AF161</b>	<b>404</b>

## EXECUTIVE SUMMARY

Cleanup Status: COMPLETED - CASE CLOSED				
<b>OAKLAND CITY OF</b>	<b>637 BEACON ST</b>	<b>SSE 1/4 - 1/2 (0.316 mi.)</b>	<b>AD162</b>	<b>409</b>
Cleanup Status: COMPLETED - CASE CLOSED				
<b>CHEVRON #9-0006 / GU</b>	<b>460 GRAND</b>	<b>SW 1/4 - 1/2 (0.332 mi.)</b>	<b>AF164</b>	<b>413</b>
Cleanup Status: COMPLETED - CASE CLOSED				
<b>378 GRAND AVE., LLC</b>	<b>378 GRAND AVE</b>	<b>SW 1/4 - 1/2 (0.385 mi.)</b>	<b>AH173</b>	<b>439</b>
Cleanup Status: COMPLETED - CASE CLOSED				
<b>LAKESIDE PARK</b>	<b>468 BELLEVUE AVE</b>	<b>SSW 1/4 - 1/2 (0.393 mi.)</b>	<b>AJ175</b>	<b>451</b>
Cleanup Status: COMPLETED - CASE CLOSED				
<b>SHELL #13-5698 / DEV</b>	<b>350 GRAND</b>	<b>SW 1/4 - 1/2 (0.421 mi.)</b>	<b>AM181</b>	<b>471</b>
Cleanup Status: COMPLETED - CASE CLOSED				
<b>QUICK STOP #46</b>	<b>363 GRAND</b>	<b>SW 1/4 - 1/2 (0.422 mi.)</b>	<b>AH184</b>	<b>479</b>
Cleanup Status: COMPLETED - CASE CLOSED				
<b>CHAMPLIN FAMILY TRUS</b>	<b>485 ELLITA</b>	<b>SW 1/4 - 1/2 (0.462 mi.)</b>	<b>AN186</b>	<b>486</b>
Cleanup Status: COMPLETED - CASE CLOSED				
<b>SHELL OIL CO</b>	<b>29 WILDWOOD</b>	<b>NNE 1/4 - 1/2 (0.486 mi.)</b>	<b>AP193</b>	<b>513</b>
Cleanup Status: COMPLETED - CASE CLOSED				

DRYCLEANERS: A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaners' agents; linen supply; coin-operated laundries and cleaning; drycleaning plants except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

A review of the DRYCLEANERS list, as provided by EDR, has revealed that there are 4 DRYCLEANERS sites within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>CARSONS MARTINIZING</b>	<b>3250 GRAND AVE</b>	<b>ESE 0 - 1/8 (0.091 mi.)</b>	<b>E32</b>	<b>60</b>
Database: DRYCLEANERS, Date of Government Version: 04/02/2024 EPA Id: CAD981396104				
<b>ONE HOUR MARTINIZING</b>	<b>3250 GRAND AVE</b>	<b>ESE 0 - 1/8 (0.091 mi.)</b>	<b>E35</b>	<b>67</b>
Database: DRYCLEANERS, Date of Government Version: 04/02/2024 Database: DRYCLEAN BAY AREA DIST, Date of Government Version: 02/20/2019 EPA Id: CAL000447506				
<b>PRIDE CLEANERS</b>	<b>3401 GRAND AVE</b>	<b>ENE 0 - 1/8 (0.121 mi.)</b>	<b>F54</b>	<b>97</b>
Database: DRYCLEAN BAY AREA DIST, Date of Government Version: 02/20/2019				
<b>YOUNG'S ONE HOUR DRY</b>	<b>600 GRAND AVE</b>	<b>S 1/8 - 1/4 (0.204 mi.)</b>	<b>O102</b>	<b>239</b>
Database: DRYCLEANERS, Date of Government Version: 04/02/2024 Database: DRYCLEAN BAY AREA DIST, Date of Government Version: 02/20/2019 EPA Id: CAL000355559				

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSTITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there

## EXECUTIVE SUMMARY

are 23 HIST CORTESE sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>RESIDENCE</b> Reg Id: 01-1908	<b>299 EUCLID AVE</b>	<b>WNW 1/8 - 1/4 (0.203 mi.)</b>	<b>R101</b>	<b>238</b>
<b>YORK STREET APARTMEN</b> Reg Id: 01-1689	<b>800 YORK</b>	<b>E 1/4 - 1/2 (0.277 mi.)</b>	<b>AA154</b>	<b>389</b>
<b>POY-WING PROPERTY</b> Reg Id: 01-2434	<b>240 MACARTHUR BLVD W</b>	<b>NNW 1/4 - 1/2 (0.348 mi.)</b>	<b>AG166</b>	<b>419</b>
<b>SHELL #13-5676</b> Reg Id: 01-1345	<b>230 MACARTHUR</b>	<b>NNW 1/4 - 1/2 (0.348 mi.)</b>	<b>AG170</b>	<b>432</b>
<b>CITY OF OAKLAND ENVI</b> Reg Id: 01-0625	<b>172 SANTA CLARA</b>	<b>NNW 1/4 - 1/2 (0.396 mi.)</b>	<b>AK178</b>	<b>456</b>
<b>BP</b> Reg Id: 01-0985	<b>100 MACARTHUR BLVD</b>	<b>NNW 1/4 - 1/2 (0.476 mi.)</b>	<b>AO188</b>	<b>489</b>
<b>UNOCAL</b> Reg Id: 01-1618	<b>96 MACARTHUR BLVD</b>	<b>NNW 1/4 - 1/2 (0.496 mi.)</b>	<b>AO194</b>	<b>518</b>
<b>ARCO</b> Reg Id: 01-0118	<b>731 MACARTHUR</b>	<b>SE 1/4 - 1/2 (0.500 mi.)</b>	<b>195</b>	<b>522</b>
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>PG &amp; E</b> Reg Id: 01-1562	<b>3234 GRAND</b>	<b>SE 0 - 1/8 (0.088 mi.)</b>	<b>E31</b>	<b>59</b>
<b>FYNE BUILDING</b> Reg Id: 01-0674	<b>774 GRAND</b>	<b>SSE 0 - 1/8 (0.103 mi.)</b>	<b>H46</b>	<b>85</b>
<b>UNOCAL</b> Reg Id: 01-1597	<b>411 MACARTHUR BLVD W</b>	<b>SSW 1/8 - 1/4 (0.138 mi.)</b>	<b>J60</b>	<b>133</b>
<b>TAYMUREE FOREIGN AUT</b> Reg Id: 01-1450	<b>3509 GRAND</b>	<b>NE 1/8 - 1/4 (0.164 mi.)</b>	<b>N79</b>	<b>181</b>
<b>UNOCAL #5325</b> Reg Id: 01-1588	<b>3220 LAKESHORE AVE.</b>	<b>SE 1/4 - 1/2 (0.262 mi.)</b>	<b>AB149</b>	<b>344</b>
<b>CHEVRON SERV STA #01</b> Reg Id: 01-0356	<b>LAKESHORE &amp; MCARTHUR</b>	<b>SSE 1/4 - 1/2 (0.267 mi.)</b>	<b>AD152</b>	<b>369</b>
<b>BERG RESIDENCE</b> Reg Id: 2768	<b>3329 LAKESHORE</b>	<b>ESE 1/4 - 1/2 (0.288 mi.)</b>	<b>AE155</b>	<b>392</b>
<b>EXXON</b> Reg Id: 01-1467	<b>500 GRAND AVE</b>	<b>SSW 1/4 - 1/2 (0.293 mi.)</b>	<b>AC156</b>	<b>393</b>
<b>OAKLAND CITY OF</b> Reg Id: 01-0866	<b>637 BEACON ST</b>	<b>SSE 1/4 - 1/2 (0.316 mi.)</b>	<b>AD162</b>	<b>409</b>
<b>CHEVRON #9-0006 / GU</b> Reg Id: 01-0611	<b>460 GRAND</b>	<b>SW 1/4 - 1/2 (0.332 mi.)</b>	<b>AF164</b>	<b>413</b>
<b>LAKESIDE PARK</b> Reg Id: 01-0878	<b>468 BELLEVUE AVE</b>	<b>SSW 1/4 - 1/2 (0.393 mi.)</b>	<b>AJ175</b>	<b>451</b>
<b>SHELL #13-5698 / DEV</b> Reg Id: 01-1360	<b>350 GRAND</b>	<b>SW 1/4 - 1/2 (0.421 mi.)</b>	<b>AM181</b>	<b>471</b>
<b>QUICK STOP #46</b> Reg Id: 01-1218	<b>363 GRAND</b>	<b>SW 1/4 - 1/2 (0.422 mi.)</b>	<b>AH184</b>	<b>479</b>
<b>CHAMPLIN FAMILY TRUS</b>	<b>485 ELLITA</b>	<b>SW 1/4 - 1/2 (0.462 mi.)</b>	<b>AN186</b>	<b>486</b>

## EXECUTIVE SUMMARY

Reg Id: 01-2462

**SHELL OIL CO**

**29 WILDWOOD**

**NNE 1/4 - 1/2 (0.486 mi.) AP190**

**504**

Reg Id: 01-1351

Notify 65: Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

A review of the Notify 65 list, as provided by EDR, and dated 12/06/2023 has revealed that there are 9 Notify 65 sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>CONNELL OLDS</b>	<b>3093 BROADWAY</b>	<b>NW 1/2 - 1 (0.844 mi.)</b>	<b>200</b>	<b>535</b>
CARDIO PULMANARY BUI	365 HAWTHORNE STREET	NW 1/2 - 1 (0.932 mi.)	203	622
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>YOUNG'S AUTOMOTIVE</b>	<b>3509 GRAND AVE</b>	<b>NE 1/8 - 1/4 (0.164 mi.)</b>	<b>N82</b>	<b>188</b>
SERVICE STATION	500 GRAND AVENUE	SSW 1/4 - 1/2 (0.293 mi.)	AC157	401
<b>SUSAN MENDELSON</b>	<b>431 LEE ST.</b>	<b>WSW 1/4 - 1/2 (0.434 mi.)</b>	<b>AI185</b>	<b>483</b>
CROWLEY MARITIME COR	PAC. DRY DOCK YARDS	W 1/2 - 1 (0.772 mi.)	196	523
<b>EUROPEAN MOTORS</b>	<b>2915 BROADWAY</b>	<b>WNW 1/2 - 1 (0.794 mi.)</b>	<b>197</b>	<b>523</b>
BROADWAY VOLKSWAGON	2749 BROADWAY	WNW 1/2 - 1 (0.811 mi.)	199	534
YUEN'S EXXON SERVICE	1901 PARK BOULEVARD	S 1/2 - 1 (0.871 mi.)	201	597

UST FINDER: EPA developed UST Finder, a web map application containing a comprehensive, state-sourced national map of underground storage tank (UST) and leaking UST (LUST) data. It provides the attributes and locations of active and closed USTs, UST facilities, and LUST sites from states and from Tribal lands and US territories. UST Finder contains information about proximity of UST facilities and LUST sites to: surface and groundwater public drinking water protection areas; estimated number of private domestic wells and number of people living nearby; and flooding and wildfires.

A review of the UST FINDER list, as provided by EDR, and dated 06/08/2023 has revealed that there is 1 UST FINDER site within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
GRAND MOBIL	3374 GRAND AVE	ENE 1/8 - 1/4 (0.141 mi.)	F63	138

UST FINDER RELEASE: US EPA's UST Finder data is a national composite of leaking underground storage tanks. This data contains information about, and locations of, leaking underground storage tanks. Data was collected from state sources and standardized into a national profile by EPA's Office of Underground Storage Tanks, Office of Research and Development, and the Association of State and Territorial Solid Waste Management Officials.

A review of the UST FINDER RELEASE list, as provided by EDR, and dated 06/08/2023 has revealed that there are 18 UST FINDER RELEASE sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
YORK STREET APARTMEN	800 YORK	E 1/4 - 1/2 (0.277 mi.)	AA153	388
FORMERLY DODSON LTD	240 MACARTHUR	NNW 1/4 - 1/2 (0.348 mi.)	AG167	430
SHELL #13-5676	230 MACARTHUR	NNW 1/4 - 1/2 (0.348 mi.)	AG168	431

## EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CITY OF OAKLAND FIRE BP #11102	172 SANTA CLARA 100 MACARTHUR	NNW 1/4 - 1/2 (0.396 mi.) NNW 1/4 - 1/2 (0.476 mi.)	AK177 AO189	455 503

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
FYNE BUILDING	774 GRAND AVE W	SSE 0 - 1/8 (0.103 mi.)	H47	85
TAYMUREE FOREIGN AUT	3509 GRAND	NE 1/8 - 1/4 (0.164 mi.)	N78	181
UNOCAL #5325	3220 LAKESHORE AVE.	SE 1/4 - 1/2 (0.262 mi.)	AB148	343
CHEVRON #9-0121	3026 LAKESHORE AVENU	SSE 1/4 - 1/2 (0.267 mi.)	AD150	353
CHEVRON #21-1173 / E	500 GRAND AVE	SSW 1/4 - 1/2 (0.293 mi.)	AC158	402
CITY OF OAKLAND	637 BEACON	SSE 1/4 - 1/2 (0.316 mi.)	AD163	412
CHEVRON #9-0006 / GU	460 GRAND	SW 1/4 - 1/2 (0.332 mi.)	AF165	418
GRAND AVENUE LLC	378 GRAND AVENUE	SW 1/4 - 1/2 (0.385 mi.)	AH172	439
LAKESIDE PARK	468 BELLEVUE AVE	SSW 1/4 - 1/2 (0.393 mi.)	AJ176	454
SHELL #13-5698 / DEV	350 GRAND	SW 1/4 - 1/2 (0.421 mi.)	AM182	477
QUICK STOP #46	363 GRAND	SW 1/4 - 1/2 (0.422 mi.)	AH183	478
CHAMPLIN FAMILY TRUS	485 ELLITA	SW 1/4 - 1/2 (0.462 mi.)	AN187	489
SHELL #13-5765	29 WILDWOOD	NNE 1/4 - 1/2 (0.486 mi.)	AP191	507

### EDR HIGH RISK HISTORICAL RECORDS

#### *EDR Exclusive Records*

EDR Hist Cleaner: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Cleaner list, as provided by EDR, has revealed that there are 14 EDR Hist Cleaner sites within approximately 0.125 miles of the target property.

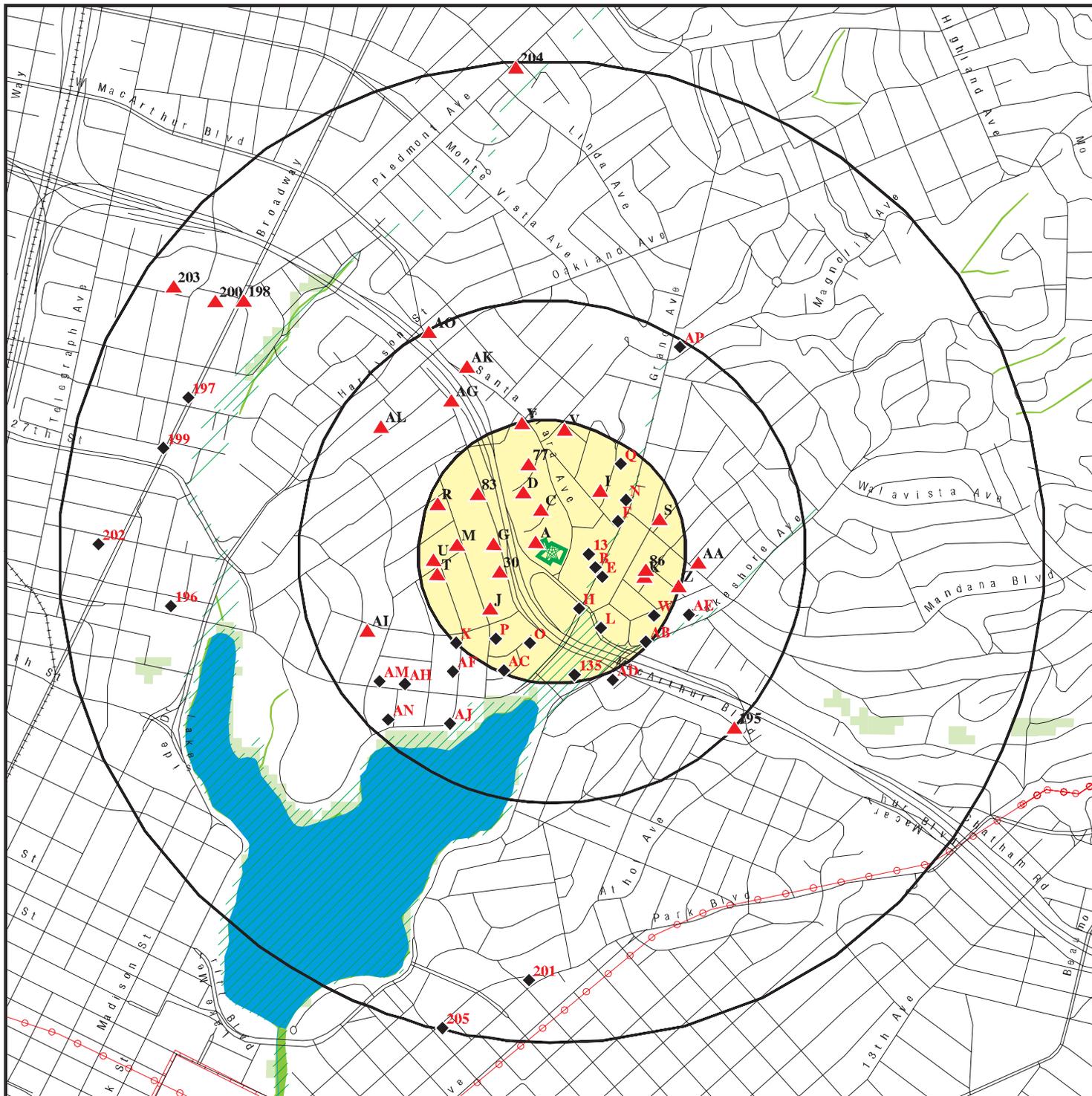
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CHONG WONG	414 SANTA CLARA AV	SE 0 - 1/8 (0.032 mi.)	B12	32
SHERMAN JULIUS	3217 GRAND AVE	SE 0 - 1/8 (0.050 mi.)	B14	33
ALBRIGHT G E	468 SANTA CLARA AV	SSE 0 - 1/8 (0.055 mi.)	B15	33
GLEN VIEW LAUNDRY	474 SANTA CLARA AV	SE 0 - 1/8 (0.061 mi.)	B16	34
ESQUIRE CLEANERS COM	3223 GRAND AVE	ESE 0 - 1/8 (0.070 mi.)	B26	54
ESQUIRE CLEANERS COM	3235 GRAND AVE	ESE 0 - 1/8 (0.070 mi.)	B27	54
LANDOWITZ JOS	3249 GRAND AVE	ESE 0 - 1/8 (0.070 mi.)	B28	55
Y S ONE-HOUR MARTINI	3250 GRAND AVE	ESE 0 - 1/8 (0.091 mi.)	E34	66
BRITE CLEANERS INC	3349 GRAND AVE	ENE 0 - 1/8 (0.096 mi.)	F43	84
GLENVIEW LAUNDRY	3351 GRAND AVE	ENE 0 - 1/8 (0.098 mi.)	F44	85
SIMPSON D R	3322 GRAND AVE	E 0 - 1/8 (0.101 mi.)	F45	85
LIBERTY CLEANERS	755 GRAND AVE	SSE 0 - 1/8 (0.111 mi.)	H53	97
PRIDE CLEANERS	3401 GRAND AVE	ENE 0 - 1/8 (0.121 mi.)	F55	125
WEINTROB ABR	3405 GRAND AVE	ENE 0 - 1/8 (0.124 mi.)	F57	129

## EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 8 records.

<u>Site Name</u>	<u>Database(s)</u>
BROOKLYN BASIN - PARCEL F	ENVIROSTOR, VCP, DEED
BLAZIC INDUSTRIAL BUILDING	LUST
BROOKLYN BASIN - PARCEL H	ENVIROSTOR, VCP
BROOKLYN BASIN - PARCEL G	ENVIROSTOR, VCP
BROOKLYN BASIN - PARCEL C	ENVIROSTOR, VCP
BROOKLYN BASIN - PARCEL E	ENVIROSTOR, VCP
BROOKLYN BASIN - PARCEL A	ENVIROSTOR, VCP
BROOKLYN BASIN - PARCEL D	ENVIROSTOR, VCP

# OVERVIEW MAP - 7660283.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

Power transmission lines

Pipelines

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 401 Santa Clara Ave  
 ADDRESS: 401 Santa Clara Avenue  
 Oakland CA 94610  
 LAT/LONG: 37.812997 / 122.249113

CLIENT: Ninyo & Moore  
 CONTACT: Luke Swickard  
 INQUIRY #: 7660283.2s  
 DATE: May 22, 2024 2:38 pm



## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<b>STANDARD ENVIRONMENTAL RECORDS</b>								
<b><i>Lists of Federal NPL (Superfund) sites</i></b>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
<b><i>Lists of Federal Delisted NPL sites</i></b>								
Delisted NPL	1.000		0	0	0	0	NR	0
<b><i>Lists of Federal sites subject to CERCLA removals and CERCLA orders</i></b>								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
<b><i>Lists of Federal CERCLA sites with NFRAP</i></b>								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
<b><i>Lists of Federal RCRA facilities undergoing Corrective Action</i></b>								
CORRACTS	1.000		0	0	0	0	NR	0
<b><i>Lists of Federal RCRA TSD facilities</i></b>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<b><i>Lists of Federal RCRA generators</i></b>								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		2	2	NR	NR	NR	4
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
<b><i>Federal institutional controls / engineering controls registries</i></b>								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
<b><i>Federal ERNS list</i></b>								
ERNS	TP		NR	NR	NR	NR	NR	0
<b><i>Lists of state- and tribal (Superfund) equivalent sites</i></b>								
RESPONSE	1.000		0	0	0	0	NR	0
<b><i>Lists of state- and tribal hazardous waste facilities</i></b>								
ENVIROSTOR	1.000		0	0	0	4	NR	4
<b><i>Lists of state and tribal landfills and solid waste disposal facilities</i></b>								
SWF/LF	0.500		0	0	0	NR	NR	0

## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<b><i>Lists of state and tribal leaking storage tanks</i></b>								
LUST	0.500		1	7	23	NR	NR	31
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	1	5	NR	NR	6
Alameda County CS	0.500		0	4	17	NR	NR	21
<b><i>Lists of state and tribal registered storage tanks</i></b>								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	3	NR	NR	NR	3
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
<b><i>Lists of state and tribal voluntary cleanup sites</i></b>								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
<b><i>Lists of state and tribal brownfield sites</i></b>								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
<b><u>ADDITIONAL ENVIRONMENTAL RECORDS</u></b>								
<b><i>Local Brownfield lists</i></b>								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
<b><i>Local Lists of Landfill / Solid Waste Disposal Sites</i></b>								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
<b><i>Local Lists of Hazardous waste / Contaminated Sites</i></b>								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CERS HAZ WASTE	0.250		0	1	NR	NR	NR	1
US CDL	TP		NR	NR	NR	NR	NR	0
<b><i>Local Lists of Registered Storage Tanks</i></b>								
SWEEPS UST	0.250		1	4	NR	NR	NR	5
HIST UST	0.250		1	5	NR	NR	NR	6
CERS TANKS	0.250		0	1	NR	NR	NR	1
CA FID UST	0.250		0	2	NR	NR	NR	2

## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<b>Local Land Records</b>								
LIENS	TP		NR	NR	NR	NR	NR	0
LIENS 2	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
<b>Records of Emergency Release Reports</b>								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP		NR	NR	NR	NR	NR	0
LDS	TP		NR	NR	NR	NR	NR	0
MCS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
<b>Other Ascertainable Records</b>								
RCRA NonGen / NLR	0.250	3	26	67	NR	NR	NR	96
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
MINES MRDS	0.250		0	1	NR	NR	NR	1
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP	1	NR	NR	NR	NR	NR	1
ECHO	TP	2	NR	NR	NR	NR	NR	2
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0

## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0
PFAS TSCA	0.250		0	0	NR	NR	NR	0
PFAS TRIS	0.250		0	0	NR	NR	NR	0
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0
PFAS NPDES	0.250		0	0	NR	NR	NR	0
PFAS ECHO	0.250		0	0	NR	NR	NR	0
PFAS ECHO FIRE TRAINING	0.250		0	0	NR	NR	NR	0
PFAS PART 139 AIRPORT	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM NRC	0.250		0	0	NR	NR	NR	0
BIOSOLIDS	TP		NR	NR	NR	NR	NR	0
PFAS	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
CHROME PLATING	0.500		0	0	0	NR	NR	0
Cortese	0.500		1	2	18	NR	NR	21
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		3	1	NR	NR	NR	4
EMI	TP		NR	NR	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
ICE	TP		NR	NR	NR	NR	NR	0
HIST CORTESE	0.500		2	3	18	NR	NR	23
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
HWTS	TP	3	NR	NR	NR	NR	NR	3
HAZNET	TP	3	NR	NR	NR	NR	NR	3
MINES	0.250		0	0	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
PEST LIC	TP		NR	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	1	2	6	NR	9
HAZMAT	0.250		0	0	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
UIC GEO	TP		NR	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	TP		NR	NR	NR	NR	NR	0
PROJECT	TP		NR	NR	NR	NR	NR	0
WDR	TP		NR	NR	NR	NR	NR	0
CIWQS	TP		NR	NR	NR	NR	NR	0
CERS	TP		NR	NR	NR	NR	NR	0
NON-CASE INFO	TP		NR	NR	NR	NR	NR	0
OTHER OIL GAS	TP		NR	NR	NR	NR	NR	0
PROD WATER PONDS	TP		NR	NR	NR	NR	NR	0
SAMPLING POINT	TP		NR	NR	NR	NR	NR	0

## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
WELL STIM PROJ	TP		NR	NR	NR	NR	NR	0
UST FINDER	0.250		0	1	NR	NR	NR	1
UST FINDER RELEASE	0.500		1	1	16	NR	NR	18
<b><u>EDR HIGH RISK HISTORICAL RECORDS</u></b>								
<b><i>EDR Exclusive Records</i></b>								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		14	NR	NR	NR	NR	14
<b><u>EDR RECOVERED GOVERNMENT ARCHIVES</u></b>								
<b><i>Exclusive Recovered Govt. Archives</i></b>								
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		12	52	107	99	10	0	280

**NOTES:**

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Site

Database(s)

EDR ID Number  
EPA ID Number

**A1**  
**Target**  
**Property**

**GRAND LAKE GARDEN**  
**401 SANTA CLARA AVE**  
**OAKLAND, CA 94610**

**FINDS** **1024634020**  
**ECHO** **N/A**

**Site 1 of 11 in cluster A**

**Actual:**  
**48 ft.**

**FINDS:**  
Registry ID: 110071431746

[Click Here for FRS Facility Detail Report:](#)

**Environmental Interest/Information System:**

The Resource Conservation and Recovery Act Information System (RCRAInfo) is EPA's comprehensive information system in support of the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. It tracks many types of information about generators, transporters, treaters, storers, and disposers of hazardous waste.

Registry ID: 110070422407

[Click Here for FRS Facility Detail Report:](#)

**Environmental Interest/Information System:**

The Resource Conservation and Recovery Act Information System (RCRAInfo) is EPA's comprehensive information system in support of the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. It tracks many types of information about generators, transporters, treaters, storers, and disposers of hazardous waste.

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

**ECHO:**

Envid: 1024634020  
Registry ID: 110070422407  
DFR URL: <http://echo.epa.gov/detailed-facility-report?fid=110070422407>  
Name: GRAND LAKE GARDEN  
Address: 401 SANTA CLARA AVE  
City,State,Zip: OAKLAND, CA 94610

**A2**  
**Target**  
**Property**

**GRAND LAKE GARDEN**  
**401 SANTA CLARA AVE**  
**OAKLAND, CA 94610**

**HWTS** **S123634482**  
**HAZNET** **N/A**

**Site 2 of 11 in cluster A**

**Actual:**  
**48 ft.**

**HWTS:**  
Name: GRAND LAKE GARDEN  
Address: 401 SANTA CLARA AVE  
Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAL000417627  
Inactive Date: Not reported  
Create Date: 06/01/2016  
Last Act Date: Not reported  
Mailing Name: Not reported  
Mailing Address: 401 SANTA CLARA AVE  
Mailing Address 2: Not reported  
Mailing City,State,Zip: OAKLAND, CA 94610  
Owner Name: GRAND LAKE GARDEN

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**GRAND LAKE GARDEN (Continued)**

**S123634482**

Owner Address: 401 SANTA CLARA AVE  
Owner Address 2: Not reported  
Owner City,State,Zip: OAKLAND, CA 94610  
Owner Phone: Not reported  
Owner Fax: Not reported  
Contact Name: ZOEY NADEM  
Contact Address: 401 SANTA CLARA AVE  
Contact Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94610  
Contact Phone: Not reported  
Contact Fax: Not reported  
Facility Status: Active  
Facility Type: PERMANENT  
Category: STATE  
Latitude: -90  
Longitude: 180

**NAICS:**

EPA ID: CAL000417627  
Create Date: 2016-06-01 13:42:24.220  
NAICS Code: 623311  
NAICS Description: Continuing Care Retirement Communities  
Issued EPA ID Date: 2016-06-01 13:42:24.15000  
Inactive Date: Not reported  
Facility Name: GRAND LAKE GARDEN  
Facility Address: 401 SANTA CLARA AVE  
Facility Address 2: Not reported  
Facility City: OAKLAND  
Facility County: Not reported  
Facility State: CA  
Facility Zip: 94610

**HAZNET:**

Name: GRAND LAKE GARDEN  
Address: 401 SANTA CLARA AVE  
Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94610  
Contact: ZOEY NADEM  
Telephone: 5105972202  
Mailing Name: Not reported  
Mailing Address: 401 SANTA CLARA AVE

Year: 2020  
Gepaid: CAL000417627  
TSD EPA ID: CAD980884183  
CA Waste Code: 311 - Pharmaceutical waste  
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)  
Tons: 0.013

Year: 2017  
Gepaid: CAL000417627  
TSD EPA ID: NVD980895338  
CA Waste Code: 311 - Pharmaceutical waste  
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**GRAND LAKE GARDEN (Continued)**

**S123634482**

Tons: 0.0145  
Year: 2016  
Gepaid: CAL000417627  
TSD EPA ID: NVD980895338  
CA Waste Code: 311 - Pharmaceutical waste  
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)  
Tons: 0.022

Additional Info:

Year: 2020  
Gen EPA ID: CAL000417627  
Shipment Date: 8/19/2020  
Creation Date: 9/16/2020  
Receipt Date: 9/2/2020  
Manifest ID: 015049911FLE  
Trans EPA ID: MNS000110924  
Trans Name: Stericycle Specialty Waste Solutions Inc  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDF EPA ID: CAD980884183  
Trans Name: GEM Rancho Cordova LLC  
TSDF Alt EPA ID: Not reported  
TSDF Alt Name: Not reported  
Waste Code Description: 311 - Pharmaceutical waste  
RCRA Code: D001,D005,D007,  
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)  
Quantity Tons: 0.013  
Waste Quantity: 26  
Quantity Unit: P  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Detail Two:

Year: 2020  
EM Manifest ID: 4c54e2db-3bf3-4dff-9d25-6bdf6e21ae12  
Shipment Date: 10/3/2019  
Receipt Date: 11/6/2019  
Manifest Number: 013967901FLE  
Generator EPA ID: CAL000417627  
Name: GRAND LAKES GARDENS  
Address: 401 SANTA CLARA AVE  
Address 2: Not reported  
City: OAKLAND  
Zip: 94610  
Telephone: 877-577-2669  
Contact: Not reported  
Contact Telephone: 916-351-0980  
Transporter 1 EPA ID: MNS000110924

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**GRAND LAKE GARDEN (Continued)**

**S123634482**

Transporter 1 Emergency Number: Not reported  
Transporter 2 EPA ID: MNS000110924  
Transporter 2 Emergency Number: Not reported  
TSDf EPA ID: CAD980884183  
TSDf Name: GEM Rancho Cordova LLC  
TSDf Address 1: 11855 White Rock Road  
TSDf Address 2: Not reported  
TSDf City: Rancho Cordova  
TSDf Zip: 95742  
TSDf Telephone: Not reported

Federal:

Year: 2020  
EM Manifest ID: 4c54e2db-3bf3-4dff-9d25-6bdf6e21ae12  
Generator EPA ID: CAL000417627  
Shipment Date: 2019-10-03  
Manifest Number: 013967901FLE  
Line Number: 1  
Method Code: H141  
Quantity Tons: 0.01250  
Quantity Waste: 25.000000  
Quantity Unit: P  
Number of Containers: 1  
Type of Container: Fiber or plastic boxes, cartons, cases  
Quantity Type: Pounds  
Federal Code: D001

Year: 2020  
EM Manifest ID: 4c54e2db-3bf3-4dff-9d25-6bdf6e21ae12  
Generator EPA ID: CAL000417627  
Shipment Date: 2019-10-03  
Manifest Number: 013967901FLE  
Line Number: 1  
Method Code: H141  
Quantity Tons: 0.01250  
Quantity Waste: 25.000000  
Quantity Unit: P  
Number of Containers: 1  
Type of Container: Fiber or plastic boxes, cartons, cases  
Quantity Type: Pounds  
Federal Code: D005

Year: 2020  
EM Manifest ID: 4c54e2db-3bf3-4dff-9d25-6bdf6e21ae12  
Generator EPA ID: CAL000417627  
Shipment Date: 2019-10-03  
Manifest Number: 013967901FLE  
Line Number: 1  
Method Code: H141  
Quantity Tons: 0.01250  
Quantity Waste: 25.000000  
Quantity Unit: P  
Number of Containers: 1  
Type of Container: Fiber or plastic boxes, cartons, cases  
Quantity Type: Pounds  
Federal Code: D007

Year: 2020

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**GRAND LAKE GARDEN (Continued)**

**S123634482**

EM Manifest ID: 4c54e2db-3bf3-4dff-9d25-6bdf6e21ae12  
Generator EPA ID: CAL000417627  
Shipment Date: 2019-10-03  
Manifest Number: 013967901FLE  
Line Number: 1  
Method Code: H141  
Quantity Tons: 0.01250  
Quantity Waste: 25.000000  
Quantity Unit: P  
Number of Containers: 1  
Type of Container: Fiber or plastic boxes, cartons, cases  
Quantity Type: Pounds  
Federal Code: D022

Year: 2020  
EM Manifest ID: 4c54e2db-3bf3-4dff-9d25-6bdf6e21ae12  
Generator EPA ID: CAL000417627  
Shipment Date: 2019-10-03  
Manifest Number: 013967901FLE  
Line Number: 1  
Method Code: H141  
Quantity Tons: 0.01250  
Quantity Waste: 25.000000  
Quantity Unit: P  
Number of Containers: 1  
Type of Container: Fiber or plastic boxes, cartons, cases  
Quantity Type: Pounds  
Federal Code: D024

State:  
Year: 2020  
EM Manifest ID: 4c54e2db-3bf3-4dff-9d25-6bdf6e21ae12  
Generator EPA ID: CAL000417627  
Shipment Date: 2019-10-03  
Manifest Number: 013967901FLE  
Line Number: 1  
Method Code: H141  
Quantity Tons: 0.01250  
Quantity Waste: 25.000000  
Quantity Unit: P  
Number of Containers: 1  
Type of Container: Fiber or plastic boxes, cartons, cases  
Quantity Type: Pounds  
State Code: 311

Additional Info:  
Year: 2017  
Gen EPA ID: CAL000417627  
  
Shipment Date: 20170707  
Creation Date: 8/1/2018 18:31:24  
Receipt Date: 20170718  
Manifest ID: 010679679FLE  
Trans EPA ID: MNS000110924  
Trans Name: STERICYCLE SPECIALTY WASTE SOLUTIONS INC

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**GRAND LAKE GARDEN (Continued)**

**S123634482**

Trans 2 EPA ID:	NED986382133
Trans 2 Name:	SMITH SYSTEMS
TSDf EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMN LLC
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	311 - Pharmaceutical waste
RCRA Code:	D024
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.0065
Waste Quantity:	13
Quantity Unit:	P
Additional Code 1:	D022
Additional Code 2:	D007
Additional Code 3:	D005
Additional Code 4:	D001
Additional Code 5:	Not reported
Shipment Date:	20170406
Creation Date:	5/12/2018 18:31:28
Receipt Date:	20170411
Manifest ID:	010059306FLE
Trans EPA ID:	MNS000110924
Trans Name:	STERICYCLE SPECIALTY WASTE SOLUTIONS INC
Trans 2 EPA ID:	NED986382133
Trans 2 Name:	SMITH SYSTEMS
TSDf EPA ID:	NVD980895338
Trans Name:	21ST CENTURY EMN LLC
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	311 - Pharmaceutical waste
RCRA Code:	D024
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.008
Waste Quantity:	16
Quantity Unit:	P
Additional Code 1:	D022
Additional Code 2:	D007
Additional Code 3:	D005
Additional Code 4:	D001
Additional Code 5:	Not reported

**A3  
 Target  
 Property**

**GRAND LAKE GARDENS  
 401 SANTA CLARA AVE  
 OAKLAND, CA 94610**

**HWTS S118219254  
 HAZNET N/A**

**Site 3 of 11 in cluster A**

**Actual:  
 48 ft.**

HWTS:	
Name:	GRAND LAKE GARDENS
Address:	401 SANTA CLARA AVE
Address 2:	Not reported
City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC002782085
Inactive Date:	11/12/2014
Create Date:	08/13/2014

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**GRAND LAKE GARDENS (Continued)**

**S118219254**

Last Act Date: Not reported  
Mailing Name: Not reported  
Mailing Address: 401 SANTA CLARA AVE  
Mailing Address 2: Not reported  
Mailing City,State,Zip: OAKLAND, CA 946101967  
Owner Name: GRAND LAKE GARDENS  
Owner Address: 401 SANTA CLARA AVE  
Owner Address 2: Not reported  
Owner City,State,Zip: OAKLAND, CA 946101967  
Owner Phone: Not reported  
Owner Fax: Not reported  
Contact Name: GRAND LAKE GARDENS  
Contact Address: 401 SANTA CLARA AVE  
Contact Address 2: Not reported  
City,State,Zip: OAKLAND, CA 946101967  
Contact Phone: Not reported  
Contact Fax: Not reported  
Facility Status: Inactive  
Facility Type: TEMPORARY  
Category: STATE  
Latitude: 37.812846  
Longitude: -122.248603

Name: GRAND LAKE GARDENS  
Address: 401 SANTA CLARA AVENUE  
Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003200833  
Inactive Date: 01/20/2023  
Create Date: 10/21/2022  
Last Act Date: 01/21/2023  
Mailing Name: Not reported  
Mailing Address: 401 SANTA CLARA AVENUE  
Mailing Address 2: Not reported  
Mailing City,State,Zip: OAKLAND, CA  
Owner Name: GRAND LAKE GARDENS  
Owner Address: 401 SANTA CLARA AVENUE  
Owner Address 2: Not reported  
Owner City,State,Zip: OAKLAND, CA 94610  
Owner Phone: 5108899105  
Owner Fax: Not reported  
Contact Name: GRAND LAKE GARDENS  
Contact Address: 401 SANTA CLARA AVENUE  
Contact Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94610  
Contact Phone: 5108899105  
Contact Fax: Not reported  
Facility Status: Not reported  
Facility Type: Not reported  
Category: Not reported  
Latitude: Not reported  
Longitude: Not reported

**HAZNET:**

Name: GRAND LAKE GARDENS  
Address: 401 SANTA CLARA AVE  
Address 2: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**GRAND LAKE GARDENS (Continued)**

**S118219254**

City,State,Zip: OAKLAND, CA 946101967  
 Contact: GRAND LAKE GARDENS  
 Telephone: 5108938897  
 Mailing Name: Not reported  
 Mailing Address: 401 SANTA CLARA AVE  
  
 Year: 2014  
 Gepaid: CAC002782085  
 TSD EPA ID: CAD981382732  
 CA Waste Code: 151 - Asbestos containing waste  
 Disposal Method: H132 - Landfill Or Surface Impoundment That Will Be Closed As  
 Landfill( To Include On-Site Treatment And/Or Stabilization)  
 Tons: 0.4

**Additional Info:**

Year: 2014  
 Gen EPA ID: CAC002782085  
  
 Shipment Date: 20140819  
 Creation Date: 10/26/2014 22:15:05  
 Receipt Date: 20140827  
 Manifest ID: 011869544JJK  
 Trans EPA ID: CAL000160111  
 Trans Name: ALLIANCE ENVIRONMENTAL GROUP  
 Trans 2 EPA ID: CAL000349369  
 Trans 2 Name: FERMA CORPORATION  
 TSDF EPA ID: CAD981382732  
 Trans Name: ALTAMONT LANDFILL  
 TSDF Alt EPA ID: Not reported  
 TSDF Alt Name: Not reported  
 Waste Code Description: 151 - Asbestos-containing waste  
 RCRA Code: Not reported  
 Meth Code: H132 - Landfill Or Surface Impoundment That Will Be Closed As  
 Landfill( To Include On-Site Treatment And/Or Stabilization)  
 Quantity Tons: 0.4  
 Waste Quantity: 1  
 Quantity Unit: Y  
 Additional Code 1: Not reported  
 Additional Code 2: Not reported  
 Additional Code 3: Not reported  
 Additional Code 4: Not reported  
 Additional Code 5: Not reported

**A4  
 Target  
 Property**

**GRAND LAKE GARDEN  
 401 SANTA CLARA AVE  
 OAKLAND, CA 94610**

**RCRA NonGen / NLR 102485240  
 CAL000417627**

**Site 4 of 11 in cluster A**

**Actual:  
 48 ft.**

RCRA Listings:  
 Date Form Received by Agency: 20160601  
 Handler Name: Grand Lake Garden  
 Handler Address: 401 Santa Clara Ave  
 Handler City,State,Zip: OAKLAND, CA 94610  
 EPA ID: CAL000417627  
 Contact Name: ZOHEY NADEM

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**GRAND LAKE GARDEN (Continued)**

**1024855240**

Contact Address:	401 SANTA CLARA AVE
Contact City,State,Zip:	OAKLAND, CA 94610
Contact Telephone:	510-597-2202
Contact Fax:	510-893-0114
Contact Email:	ZOEY.NADEM@HUMANGOOD.ORG
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	401 SANTA CLARA AVE
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Grand Lake Garden
Owner Type:	Other
Operator Name:	Zoey Nadem
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20181120
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**GRAND LAKE GARDEN (Continued)**

**1024855240**

Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Owner  
Owner/Operator Name: GRAND LAKE GARDEN  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 401 SANTA CLARA AVE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-893-8897  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator  
Owner/Operator Name: ZOEY NADEM  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 401 SANTA CLARA AVE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-597-2202  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20160601  
Handler Name: GRAND LAKE GARDEN  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: Not reported  
Recognized Trader Exporter: Not reported  
Spent Lead Acid Battery Importer: Not reported  
Spent Lead Acid Battery Exporter: Not reported  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Code: 623311  
NAICS Description: CONTINUING CARE RETIREMENT COMMUNITIES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**A5  
 Target  
 Property**

**HUMANGOOD NORCAL  
 401 SANTA CLARA AVE.  
 OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1027690120  
 CAC003232567**

**Site 5 of 11 in cluster A**

**Actual:  
 48 ft.**

RCRA Listings:	20230515
Date Form Received by Agency:	20230515
Handler Name:	Humangood Norcal
Handler Address:	401 Santa Clara Ave.
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003232567
Contact Name:	HUMANGOOD NORCAL
Contact Address:	401 SANTA CLARA AVE.
Contact City,State,Zip:	OAKLAND, CA 94610
Contact Telephone:	510-893-8897
Contact Fax:	Not reported
Contact Email:	CSALGADO@GORELIANCE.BIZ
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	401 SANTA CLARA AVE.
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Humangood Norcal
Owner Type:	Other
Operator Name:	Humangood Norcal
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUMANGOOD NORCAL (Continued)**

**1027690120**

Human Exposure Controls Indicator: N/A  
Groundwater Controls Indicator: N/A  
Significant Non-Complier Universe: No  
Unaddressed Significant Non-Complier Universe: No  
Addressed Significant Non-Complier Universe: No  
Significant Non-Complier With a Compliance Schedule Universe: No  
Financial Assurance Required: Not reported  
Handler Date of Last Change: 20230517  
Recognized Trader-Importer: No  
Recognized Trader-Exporter: No  
Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Operator  
Owner/Operator Name: HUMANGOOD NORCAL  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 401 SANTA CLARA AVE.  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-893-8897  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner  
Owner/Operator Name: HUMANGOOD NORCAL  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 401 SANTA CLARA AVE.  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-893-8897  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20230515  
Handler Name: HUMANGOOD NORCAL  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUMANGOOD NORCAL (Continued)**

**1027690120**

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**A6  
Target  
Property**

**HUMANGOOD NORCAL  
401 SANTA CLARA AVE.  
OAKLAND, CA 94610**

**ECHO 1027730712  
N/A**

**Site 6 of 11 in cluster A**

**Actual:  
48 ft.**

ECHO:  
Envid: 1027730712  
Registry ID: 110071431746  
DFR URL: <http://echo.epa.gov/detailed-facility-report?fid=110071431746>  
Name: HUMANGOOD NORCAL  
Address: 401 SANTA CLARA AVE.  
City,State,Zip: OAKLAND, CA 94610

**A7  
Target  
Property**

**HUMANGOOD NORCAL  
401 SANTA CLARA AVE.  
OAKLAND, CA 94610**

**HWTS S123583817  
HAZNET N/A**

**Site 7 of 11 in cluster A**

**Actual:  
48 ft.**

HWTS:  
Name: AMERICAN BAPTIST HOMES OF THE WEST  
Address: 401 SANTA CLARA AVE  
Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC002629013  
Inactive Date: 10/09/2008  
Create Date: 04/11/2008  
Last Act Date: Not reported  
Mailing Name: Not reported  
Mailing Address: 6120 STONERIDGE MALL RD STE 300  
Mailing Address 2: Not reported  
Mailing City,State,Zip: PLEASANTON, CA 945883298  
Owner Name: AMERICAN BAPTIST HOMES OF THE WEST  
Owner Address: 401 SANTA CLARA AVE  
Owner Address 2: Not reported  
Owner City,State,Zip: OAKLAND, CA 946101967  
Owner Phone: Not reported  
Owner Fax: Not reported  
Contact Name: BRUCE SELMLY  
Contact Address: 401 SANTA CLARA AVE  
Contact Address 2: Not reported  
City,State,Zip: OAKLAND, CA 946101967  
Contact Phone: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUMANGOOD NORCAL (Continued)**

**S123583817**

Contact Fax: Not reported  
Facility Status: Inactive  
Facility Type: TEMPORARY  
Category: STATE  
Latitude: 37.812694  
Longitude: -122.248771

Name: HUMANGOOD NORCAL  
Address: 401 SANTA CLARA AVE.  
Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003232567  
Inactive Date: 08/14/2023  
Create Date: 05/15/2023  
Last Act Date: 08/15/2023  
Mailing Name: Not reported  
Mailing Address: 401 SANTA CLARA AVE.  
Mailing Address 2: Not reported  
Mailing City,State,Zip: OAKLAND, CA  
Owner Name: HUMANGOOD NORCAL  
Owner Address: 401 SANTA CLARA AVE.  
Owner Address 2: Not reported  
Owner City,State,Zip: OAKLAND, CA 94610  
Owner Phone: 5108938897  
Owner Fax: Not reported  
Contact Name: HUMANGOOD NORCAL  
Contact Address: 401 SANTA CLARA AVE.  
Contact Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94610  
Contact Phone: 5108938897  
Contact Fax: Not reported  
Facility Status: Not reported  
Facility Type: Not reported  
Category: Not reported  
Latitude: Not reported  
Longitude: Not reported

**HAZNET:**

Name: AMERICAN BAPTIST HOMES OF THE WEST  
Address: 401 SANTA CLARA AVE  
Address 2: Not reported  
City,State,Zip: OAKLAND, CA 946101967  
Contact: BRUCE SELMLY  
Telephone: 9259346133  
Mailing Name: Not reported  
Mailing Address: 6120 STONERIDGE MALL RD STE 300

Year: 2008  
Gepaid: CAC002629013  
TSD EPA ID: CAD981382732  
CA Waste Code: 151 - Asbestos containing waste  
Disposal Method: H132 - Landfill Or Surface Impoundment That Will Be Closed As  
Landfill( To Include On-Site Treatment And/Or Stabilization)  
Tons: 6

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**HUMANGOOD NORCAL (Continued)**

**S123583817**

Additional Info:  
 Year: 2008  
 Gen EPA ID: CAC002629013

Shipment Date: 20080425  
 Creation Date: 6/9/2008 18:30:32  
 Receipt Date: 20080430  
 Manifest ID: 000762368JJK  
 Trans EPA ID: CAL000091436  
 Trans Name: BLUEWATER ENVIRONMENTAL SERVICES  
 Trans 2 EPA ID: Not reported  
 Trans 2 Name: Not reported  
 TSDF EPA ID: CAD981382732  
 Trans Name: ALTAMONT LANDFILL  
 TSDF Alt EPA ID: Not reported  
 TSDF Alt Name: Not reported  
 Waste Code Description: 151 - Asbestos-containing waste  
 RCRA Code: Not reported  
 Meth Code: H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill( To Include On-Site Treatment And/Or Stabilization)

Quantity Tons: 6  
 Waste Quantity: 15  
 Quantity Unit: Y

Additional Code 1: Not reported  
 Additional Code 2: Not reported  
 Additional Code 3: Not reported  
 Additional Code 4: Not reported  
 Additional Code 5: Not reported

**A8 GRAND LAKE GARDENS**  
**Target 401 SANTA CLARA AVENUE**  
**Property OAKLAND, CA 94610**

**RCRA NonGen / NLR 1027462284**  
**CAC003200833**

**Site 8 of 11 in cluster A**

**Actual:** RCRA Listings:  
**48 ft.** Date Form Received by Agency: 20221021  
 Handler Name: Grand Lake Gardens  
 Handler Address: 401 Santa Clara Avenue  
 Handler City,State,Zip: OAKLAND, CA 94610  
 EPA ID: CAC003200833  
 Contact Name: GRAND LAKE GARDENS  
 Contact Address: 401 SANTA CLARA AVENUE  
 Contact City,State,Zip: OAKLAND, CA 94610  
 Contact Telephone: 510-889-9105  
 Contact Fax: Not reported  
 Contact Email: CHELSEY@ENV-REM.COM  
 Contact Title: Not reported  
 EPA Region: 09  
 Land Type: Not reported  
 Federal Waste Generator Description: Not a generator, verified  
 Non-Notifier: Not reported  
 Biennial Report Cycle: Not reported  
 Accessibility: Not reported  
 Active Site Indicator: Not reported  
 State District Owner: Not reported  
 State District: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**GRAND LAKE GARDENS (Continued)**

**1027462284**

Mailing Address:	401 SANTA CLARA AVENUE
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Grand Lake Gardens
Owner Type:	Other
Operator Name:	Grand Lake Gardens
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20221023
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

**Handler - Owner Operator:**

Owner/Operator Indicator:	Owner
Owner/Operator Name:	GRAND LAKE GARDENS
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	401 SANTA CLARA AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-889-9105

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**GRAND LAKE GARDENS (Continued)**

**1027462284**

Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name: GRAND LAKE GARDENS	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	401 SANTA CLARA AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-889-9105
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20221021
Handler Name:	GRAND LAKE GARDENS
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
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Evaluation Action Summary:

Evaluations:	No Evaluations Found
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**A9  
 NW  
 < 1/8  
 0.010 mi.  
 55 ft.**

**TRENT DEHART  
 370 SANTA CLARA AVENUE  
 OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1027446546  
 CAC003184117**

**Site 9 of 11 in cluster A**

**Relative:  
 Higher  
 Actual:  
 80 ft.**

RCRA Listings:	
Date Form Received by Agency:	20220707
Handler Name:	Trent Dehart
Handler Address:	370 Santa Clara Avenue
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003184117
Contact Name:	TRENT DEHART
Contact Address:	370 SANTA CLARA AVENUE
Contact City,State,Zip:	OAKLAND, CA 94610

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**TRENT DEHART (Continued)**

**1027446546**

Contact Telephone:	415-860-3240
Contact Fax:	Not reported
Contact Email:	AKATRENT@GMAIL.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	370 SANTA CLARA AVENUE
Mailing City, State, Zip:	OAKLAND, CA 94610
Owner Name:	Trent Dehart
Owner Type:	Other
Operator Name:	Trent Dehart
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20220707
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**TRENT DEHART (Continued)**

**1027446546**

Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Owner  
Owner/Operator Name: TRENT DEHART  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 370 SANTA CLARA AVENUE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 415-860-3240  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator  
Owner/Operator Name: TRENT DEHART  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 370 SANTA CLARA AVENUE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 415-860-3240  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20220707  
Handler Name: TRENT DEHART  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**A10**  
**NW**  
**< 1/8**  
**0.010 mi.**  
**55 ft.**

**CHARLIE KALB**  
**370 SANTA CLARA AVENUE #3**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**    **1027460252**  
**CAC003198698**

**Site 10 of 11 in cluster A**

**Relative:**  
**Higher**  
**Actual:**  
**80 ft.**

RCRA Listings:	20221010
Date Form Received by Agency:	Charlie Kalb
Handler Name:	370 Santa Clara Avenue #3
Handler Address:	OAKLAND, CA 94610
Handler City,State,Zip:	CAC003198698
EPA ID:	CHARLIE KALB
Contact Name:	370 SANTA CLARA AVENUE #3
Contact Address:	OAKLAND, CA 94610
Contact City,State,Zip:	650-743-8990
Contact Telephone:	Not reported
Contact Fax:	GISELLE.ESPIRITU@SYNERGYCOMPANIES.ORG
Contact Email:	Not reported
Contact Title:	09
EPA Region:	Not reported
Land Type:	Not a generator, verified
Federal Waste Generator Description:	Not reported
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	370 SANTA CLARA AVENUE #3
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Charlie Kalb
Owner Type:	Other
Operator Name:	Charlie Kalb
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHARLIE KALB (Continued)**

**1027460252**

Human Exposure Controls Indicator: N/A  
Groundwater Controls Indicator: N/A  
Significant Non-Complier Universe: No  
Unaddressed Significant Non-Complier Universe: No  
Addressed Significant Non-Complier Universe: No  
Significant Non-Complier With a Compliance Schedule Universe: No  
Financial Assurance Required: Not reported  
Handler Date of Last Change: 20221012  
Recognized Trader-Importer: No  
Recognized Trader-Exporter: No  
Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Operator  
Owner/Operator Name: CHARLIE KALB  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 370 SANTA CLARA AVENUE #3  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 650-743-8990  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner  
Owner/Operator Name: CHARLIE KALB  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 370 SANTA CLARA AVENUE #3  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 650-743-8990  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20221010  
Handler Name: CHARLIE KALB  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**CHARLIE KALB (Continued)**

**1027460252**

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
 NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**A11  
 NE  
 < 1/8  
 0.015 mi.  
 78 ft.**

**VAUGHN MANAGEMENT GROUP  
 377 SANTA CLARA AVE  
 OAKLAND, CA 94610  
 Site 11 of 11 in cluster A**

**RCRA NonGen / NLR**

**1026042111  
 CAC003048298**

**Relative:  
 Lower  
 Actual:  
 40 ft.**

RCRA Listings:  
 Date Form Received by Agency: 20191223  
 Handler Name: Vaughn Management Group  
 Handler Address: 377 Santa Clara Ave  
 Handler City,State,Zip: OAKLAND, CA 94610-2667  
 EPA ID: CAC003048298  
 Contact Name: VAUGHN MANAGEMENT GROUP  
 Contact Address: 377 SANTA CLARA AVE  
 Contact City,State,Zip: OAKLAND, CA 94610-2667  
 Contact Telephone: 510-867-2956  
 Contact Fax: 510-651-7702  
 Contact Email: MICKIEL@PWSEI.COM  
 Contact Title: Not reported  
 EPA Region: 09  
 Land Type: Not reported  
 Federal Waste Generator Description: Not a generator, verified  
 Non-Notifier: Not reported  
 Biennial Report Cycle: Not reported  
 Accessibility: Not reported  
 Active Site Indicator: Not reported  
 State District Owner: Not reported  
 State District: Not reported  
 Mailing Address: 377 SANTA CLARA AVE  
 Mailing City,State,Zip: OAKLAND, CA 94610-2667  
 Owner Name: Vaughn Management Group  
 Owner Type: Other  
 Operator Name: Vaughn Management Group  
 Operator Type: Other  
 Short-Term Generator Activity: No  
 Importer Activity: No  
 Mixed Waste Generator: No  
 Transporter Activity: No  
 Transfer Facility Activity: No  
 Recycler Activity with Storage: No  
 Small Quantity On-Site Burner Exemption: No  
 Smelting Melting and Refining Furnace Exemption: No  
 Underground Injection Control: No  
 Off-Site Waste Receipt: No  
 Universal Waste Indicator: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**VAUGHN MANAGEMENT GROUP (Continued)**

**1026042111**

Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20200210
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

**Handler - Owner Operator:**

Owner/Operator Indicator:	Owner
Owner/Operator Name:	VAUGHN MANAGEMENT GROUP
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	377 SANTA CLARA AVE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610-2667
Owner/Operator Telephone:	510-867-2956
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	VAUGHN MANAGEMENT GROUP
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	377 SANTA CLARA AVE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610-2667
Owner/Operator Telephone:	510-867-2956
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**VAUGHN MANAGEMENT GROUP (Continued)**

**1026042111**

Historic Generators:

Receive Date:	20191223
Handler Name:	VAUGHN MANAGEMENT GROUP
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	237130
NAICS Description:	POWER AND COMMUNICATION LINE AND RELATED STRUCTURES CONSTRUCTION

Facility Has Received Notices of Violations:

Violations:	No Violations Found
-------------	---------------------

Evaluation Action Summary:

Evaluations:	No Evaluations Found
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**B12**  
**SE**  
 < 1/8  
 0.032 mi.  
 170 ft.

**CHONG WONG**  
**414 SANTA CLARA AVE**  
**OAKLAND, CA**

**EDR Hist Cleaner**    **1009142112**  
**N/A**

**Site 1 of 7 in cluster B**

**Relative:**  
**Lower**

EDR Hist Cleaner

**Actual:**  
**29 ft.**

Year:	Name:	Type:
1943	CHONG WONG	LAUNDRIES-CHINESE

**13**  
**East**  
 < 1/8  
 0.049 mi.  
 257 ft.

**COMMERCIAL PROPERTY**  
**3315 GRAND AVE**  
**OAKLAND, CA 94610**

**SWEEPS UST**    **S106924825**  
**N/A**

**Relative:**  
**Lower**

**SWEEPS UST:**

Name:	COMMERCIAL PROPERTY
Address:	3315 GRAND AVE
City:	OAKLAND
Status:	Not reported
Comp Number:	1397
Number:	Not reported
Board Of Equalization:	Not reported
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported

**Actual:**  
**37 ft.**

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**COMMERCIAL PROPERTY (Continued)**

**S106924825**

SWRCB Tank Id: 01-000-001397-000001  
 Tank Status: Not reported  
 Capacity: 500  
 Active Date: Not reported  
 Tank Use: M.V. FUEL  
 STG: PRODUCT  
 Content: REG UNLEADED  
 Number Of Tanks: 1

Name: COMMERCIAL PROPERTY  
 Address: 3315 GRAND AVE  
 City: OAKLAND  
 Status: Active  
 Comp Number: 1397  
 Number: 2  
 Board Of Equalization: Not reported  
 Referral Date: 03-18-93  
 Action Date: 11-24-93  
 Created Date: 11-24-93  
 Owner Tank Id: Not reported  
 SWRCB Tank Id: Not reported  
 Tank Status: Not reported  
 Capacity: Not reported  
 Active Date: Not reported  
 Tank Use: Not reported  
 STG: Not reported  
 Content: Not reported  
 Number Of Tanks: Not reported

**B14**  
**SE**  
 < 1/8  
 0.050 mi.  
 263 ft.

**SHERMAN JULIUS**  
**3217 GRAND AVE**  
**OAKLAND, CA**  
 Site 2 of 7 in cluster B

**EDR Hist Cleaner**    **1009140360**  
 N/A

**Relative:**  
**Lower**

EDR Hist Cleaner

**Actual:**  
 26 ft.

Year: Name:  
 1933 SHERMAN JULIUS

Type:  
 CLOTHES PRESSERS AND CLEANERS

**B15**  
**SSE**  
 < 1/8  
 0.055 mi.  
 289 ft.

**ALBRIGHT G E**  
**468 SANTA CLARA AVE**  
**OAKLAND, CA**  
 Site 3 of 7 in cluster B

**EDR Hist Cleaner**    **1009140430**  
 N/A

**Relative:**  
**Lower**

EDR Hist Cleaner

**Actual:**  
 22 ft.

Year: Name:  
 1933 ALBRIGHT G E

Type:  
 CLOTHES PRESSERS AND CLEANERS

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**B16**  
**SE**  
 < 1/8  
 0.061 mi.  
 322 ft.

**GLEN VIEW LAUNDRY**  
**474 SANTA CLARA AVE**  
**OAKLAND, CA**

**EDR Hist Cleaner**    **1009140455**  
 N/A

**Relative:**  
**Lower**

EDR Hist Cleaner

**Actual:**  
 22 ft.

Year:    Name:  
 1933    GLEN VIEW LAUNDRY

Type:  
 LAUNDRIES-ORIENTAL

**C17**  
**NW**  
 < 1/8  
 0.063 mi.  
 334 ft.

**RICHARD MAHER**  
**455 CRESCENT STREET #102**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**    **1028898293**  
**CAC003259948**

**Site 1 of 9 in cluster C**

**Relative:**  
**Higher**

RCRA Listings:

**Actual:**  
 94 ft.

Date Form Received by Agency:	20231107
Handler Name:	Richard Maher
Handler Address:	455 Crescent Street #102
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003259948
Contact Name:	RICHARD MAHER
Contact Address:	455 CRESCENT STREET #102
Contact City,State,Zip:	OAKLAND, CA 94610
Contact Telephone:	707-853-1686
Contact Fax:	Not reported
Contact Email:	MAHERRI@GMAIL.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	455 CRESCENT STREET #102
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Richard Maher
Owner Type:	Other
Operator Name:	Richard Maher
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**RICHARD MAHER (Continued)**

**1028898293**

Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20231107
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	RICHARD MAHER
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	455 CRESCENT STREET #102
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	707-853-1686
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	RICHARD MAHER
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	455 CRESCENT STREET #102
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	707-853-1686
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20231107
Handler Name:	RICHARD MAHER
Federal Waste Generator Description:	Not a generator, verified

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**RICHARD MAHER (Continued)**

**1028898293**

State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
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Evaluation Action Summary:

Evaluations:	No Evaluations Found
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**C18  
 NW  
 < 1/8  
 0.063 mi.  
 334 ft.**

**COLLINS MGMNT.- 455 CRESCENT  
 455 CRESCENT STREET UNIT 309  
 OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1027211642  
 CAC003176086**

**Site 2 of 9 in cluster C**

**Relative:  
 Higher  
 Actual:  
 94 ft.**

RCRA Listings:	
Date Form Received by Agency:	20220513
Handler Name:	Collins Mgmt.- 455 Crescent
Handler Address:	455 Crescent Street Unit 309
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003176086
Contact Name:	BETH NIELSON
Contact Address:	455 CRESCENT STREET UNIT 309
Contact City,State,Zip:	OAKLAND, CA 94610
Contact Telephone:	510-262-1795
Contact Fax:	Not reported
Contact Email:	LAILAA@PWSEI.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	455 CRESCENT STREET UNIT 309
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Beth Nielson
Owner Type:	Other
Operator Name:	Beth Nielson
Operator Type:	Other
Short-Term Generator Activity:	No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**COLLINS MGMNT.- 455 CRESCENT (Continued)**

**1027211642**

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20220517
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name: BETH NIELSON	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	455 CRESCENT STREET UNIT 309
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-262-1795
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name: BETH NIELSON	
Legal Status:	Other

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**COLLINS MGMNT.- 455 CRESCENT (Continued)**

**1027211642**

Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	455 CRESCENT STREET UNIT 309
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-262-1795
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20220513
Handler Name:	COLLINS MGMNT.- 455 CRESCENT
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
-------------	---------------------

Evaluation Action Summary:

Evaluations:	No Evaluations Found
--------------	----------------------

**C19**  
**NW**  
**< 1/8**  
**0.063 mi.**  
**334 ft.**

**KILEY RUSSELL**  
**455 CRESCENT STREET APT 105**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR 1025839733**  
**CAC003019333**

**Site 3 of 9 in cluster C**

**Relative:**  
**Higher**  
**Actual:**  
**94 ft.**

RCRA Listings:	
Date Form Received by Agency:	20190612
Handler Name:	Kiley Russell
Handler Address:	455 Crescent Street Apt 105
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003019333
Contact Name:	KILEY RUSSELL
Contact Address:	455 CRESCENT STREET APT 105
Contact City,State,Zip:	OAKLAND, CA 94610
Contact Telephone:	510-778-0900
Contact Fax:	Not reported
Contact Email:	MARIAE@PWSEI.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**KILEY RUSSELL (Continued)**

**1025839733**

Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	455 CRESCENT STREET APT 105
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Kiley Russell
Owner Type:	Other
Operator Name:	Kiley Russell
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20190627
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:  
 Owner/Operator Indicator: Owner  
 Owner/Operator Name: KILEY RUSSELL

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**KILEY RUSSELL (Continued)**

**1025839733**

Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 455 CRESCENT STREET APT 105  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-778-0900  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator  
Owner/Operator Name: KILEY RUSSELL  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 455 CRESCENT STREET APT 105  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-778-0900  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:  
Receive Date: 20190612  
Handler Name: KILEY RUSSELL  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:  
NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:  
Violations: No Violations Found

Evaluation Action Summary:  
Evaluations: No Evaluations Found

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**C20**  
**NW**  
 < 1/8  
 0.063 mi.  
 334 ft.

**COLLINS MANAGEMENT COMPANY**  
**455 CRESCENT STREET #402**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1026485841**  
**CAC003091985**

**Site 4 of 9 in cluster C**

**Relative:**  
**Higher**  
**Actual:**  
**94 ft.**

RCRA Listings:	20201109
Date Form Received by Agency:	Collins Management Company
Handler Name:	455 Crescent Street #402
Handler Address:	OAKLAND, CA 94610
Handler City,State,Zip:	CAC003091985
EPA ID:	COLLINS MANAGEMENT COMPANY
Contact Name:	500 ALFRED NOBEL DRIVE STE 250
Contact Address:	HERCULES, CA 94547
Contact City,State,Zip:	510-262-1795
Contact Telephone:	Not reported
Contact Fax:	NICOLE@ENV-REM.COM
Contact Email:	Not reported
Contact Title:	09
EPA Region:	Not reported
Land Type:	Not a generator, verified
Federal Waste Generator Description:	Not reported
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	500 ALFRED NOBEL DRIVE STE 250
Mailing City,State,Zip:	HERCULES, CA 94547
Owner Name:	Collins Management Company
Owner Type:	Other
Operator Name:	Collins Management Company
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**COLLINS MANAGEMENT COMPANY (Continued)**

**1026485841**

Human Exposure Controls Indicator: N/A  
Groundwater Controls Indicator: N/A  
Significant Non-Complier Universe: No  
Unaddressed Significant Non-Complier Universe: No  
Addressed Significant Non-Complier Universe: No  
Significant Non-Complier With a Compliance Schedule Universe: No  
Financial Assurance Required: Not reported  
Handler Date of Last Change: 20201117  
Recognized Trader-Importer: No  
Recognized Trader-Exporter: No  
Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Owner  
Owner/Operator Name: COLLINS MANAGEMENT COMPANY  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 500 ALFRED NOBEL DRIVE STE 250  
Owner/Operator City,State,Zip: HERCULES, CA 94547  
Owner/Operator Telephone: 510-262-1795  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator  
Owner/Operator Name: COLLINS MANAGEMENT COMPANY  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 500 ALFRED NOBEL DRIVE STE 250  
Owner/Operator City,State,Zip: HERCULES, CA 94547  
Owner/Operator Telephone: 510-262-1795  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20201109  
Handler Name: COLLINS MANAGEMENT COMPANY  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**COLLINS MANAGEMENT COMPANY (Continued)**

**1026485841**

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
 NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**C21  
 NW  
 < 1/8  
 0.063 mi.  
 334 ft.**

**CHRISSEY BARLOW  
 455 CRESCENT STREET #313  
 OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1025859610  
 CAC003040175**

**Site 5 of 9 in cluster C**

**Relative:  
 Higher  
 Actual:  
 94 ft.**

RCRA Listings:

Date Form Received by Agency:	20191023
Handler Name:	Chrissy Barlow
Handler Address:	455 Crescent Street #313
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003040175
Contact Name:	CHRISSEY BARLOW
Contact Address:	4096 PIEDMONT AVENUE #813
Contact City,State,Zip:	OAKLAND, CA 94611
Contact Telephone:	510-267-4019
Contact Fax:	Not reported
Contact Email:	NICOLE@ENV-REM.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	4096 PIEDMONT AVENUE #813
Mailing City,State,Zip:	OAKLAND, CA 94611
Owner Name:	Chrissy Barlow
Owner Type:	Other
Operator Name:	Chrissy Barlow
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHRISSEY BARLOW (Continued)**

**1025859610**

Universal Waste Destination Facility: No  
Federal Universal Waste: No  
Active Site State-Reg Handler: ---  
Federal Facility Indicator: Not reported  
Hazardous Secondary Material Indicator: N  
Sub-Part K Indicator: Not reported  
2018 GPRA Permit Baseline: Not on the Baseline  
2018 GPRA Renewals Baseline: Not on the Baseline  
202 GPRA Corrective Action Baseline: No  
Subject to Corrective Action Universe: No  
Non-TSDFs Where RCRA CA has Been Imposed Universe: No  
Corrective Action Priority Ranking: No NCAPS ranking  
Environmental Control Indicator: No  
Institutional Control Indicator: No  
Human Exposure Controls Indicator: N/A  
Groundwater Controls Indicator: N/A  
Significant Non-Complier Universe: No  
Unaddressed Significant Non-Complier Universe: No  
Addressed Significant Non-Complier Universe: No  
Significant Non-Complier With a Compliance Schedule Universe: No  
Financial Assurance Required: Not reported  
Handler Date of Last Change: 20191025  
Recognized Trader-Importer: No  
Recognized Trader-Exporter: No  
Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

**Handler - Owner Operator:**

Owner/Operator Indicator: Operator  
Owner/Operator Name: CHRISSEY BARLOW  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 4096 PIEDMONT AVENUE #813  
Owner/Operator City,State,Zip: OAKLAND, CA 94611  
Owner/Operator Telephone: 510-267-4019  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner  
Owner/Operator Name: CHRISSEY BARLOW  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 4096 PIEDMONT AVENUE #813  
Owner/Operator City,State,Zip: OAKLAND, CA 94611  
Owner/Operator Telephone: 510-267-4019  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHRISSEY BARLOW (Continued)**

**1025859610**

Historic Generators:

Receive Date: 20191023  
Handler Name: CHRISSEY BARLOW  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**C22  
NW  
< 1/8  
0.063 mi.  
334 ft.**

**YIHEIS GEDLE  
455 CRESENT STREET #306  
OAKLAND, CA 94610**

**RCRA NonGen / NLR 1027204350  
CAC003168362**

**Site 6 of 9 in cluster C**

**Relative:  
Higher  
Actual:  
94 ft.**

RCRA Listings:

Date Form Received by Agency: 20220328  
Handler Name: Yiheis Gedle  
Handler Address: 455 Cresent Street #306  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003168362  
Contact Name: YIHEIS GEDLE  
Contact Address: 455 CRESENT STREET #306  
Contact City,State,Zip: OAKLAND, CA 94610  
Contact Telephone: 510-207-3971  
Contact Fax: Not reported  
Contact Email: CHELSEY@ENV-REM.COM  
Contact Title: Not reported  
EPA Region: 09  
Land Type: Not reported  
Federal Waste Generator Description: Not a generator, verified  
Non-Notifier: Not reported  
Biennial Report Cycle: Not reported  
Accessibility: Not reported  
Active Site Indicator: Not reported  
State District Owner: Not reported  
State District: Not reported  
Mailing Address: 455 CRESENT STREET #306  
Mailing City,State,Zip: OAKLAND, CA 94610  
Owner Name: Yiheis Gedle

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**YIHEIS GEDLE (Continued)**

**1027204350**

Owner Type:	Other
Operator Name:	Yiheis Gedle
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20220328
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	YIHEIS GEDLE
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	455 CRESENT STREET #306
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-207-3971
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**YIHEIS GEDLE (Continued)**

**1027204350**

Owner/Operator Indicator: Operator  
Owner/Operator Name: YIHEIS GEDLE  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 455 CRESENT STREET #306  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-207-3971  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20220328  
Handler Name: YIHEIS GEDLE  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**C23  
NW  
< 1/8  
0.063 mi.  
334 ft.**

**COLLINS MANAGEMENT  
455 CRESCENT STREET #318  
OAKLAND, CA 94610**

**RCRA NonGen / NLR 1026801080  
CAC003113003**

**Site 7 of 9 in cluster C**

**Relative:  
Higher**

RCRA Listings:

**Actual:  
94 ft.**

Date Form Received by Agency: 20210401  
Handler Name: Collins Management  
Handler Address: 455 Crescent Street #318  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003113003  
Contact Name: DIANA PROPERTY MANAGEMENT  
Contact Address: 500 ALFRED NOBEL DRIVE #250  
Contact City,State,Zip: HERCULES, CA 94547  
Contact Telephone: 510-637-9294  
Contact Fax: Not reported  
Contact Email: NICOLE@ENV-REM.COM  
Contact Title: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**COLLINS MANAGEMENT (Continued)**

**1026801080**

EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	500 ALFRED NOBEL DRIVE #250
Mailing City,State,Zip:	HERCULES, CA 94547
Owner Name:	Collins Management
Owner Type:	Other
Operator Name:	Diana Property Management
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20210415
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**COLLINS MANAGEMENT (Continued)**

**1026801080**

Handler - Owner Operator:

Owner/Operator Indicator: Owner  
Owner/Operator Name: COLLINS MANAGEMENT  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 500 ALFRED NOBEL DRIVE #250  
Owner/Operator City,State,Zip: HERCULES, CA 94547  
Owner/Operator Telephone: 925-435-2348  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator  
Owner/Operator Name: DIANA PROPERTY MANAGEMENT  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 500 ALFRED NOBEL DRIVE #250  
Owner/Operator City,State,Zip: HERCULES, CA 94547  
Owner/Operator Telephone: 510-637-9294  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20210401  
Handler Name: COLLINS MANAGEMENT  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**C24**  
**NW**  
**< 1/8**  
**0.063 mi.**  
**334 ft.**

**COLLINS MANAGEMENT**  
**455 CRESCENT STREET**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1026716755**  
**CAC003105247**

**Site 8 of 9 in cluster C**

**Relative:**  
**Higher**  
**Actual:**  
**94 ft.**

RCRA Listings:	20210211
Date Form Received by Agency:	Collins Management
Handler Name:	455 Crescent Street
Handler Address:	OAKLAND, CA 94610
Handler City,State,Zip:	CAC003105247
EPA ID:	COLLINS MANAGEMENT
Contact Name:	500 ALFRED NOBEL DRIVE #250
Contact Address:	HERCULES, CA 94547
Contact City,State,Zip:	925-435-2348
Contact Telephone:	Not reported
Contact Fax:	NICOLE@ENV-REM.COM
Contact Email:	Not reported
Contact Title:	09
EPA Region:	Not reported
Land Type:	Not a generator, verified
Federal Waste Generator Description:	Not reported
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	500 ALFRED NOBEL DRIVE #250
Mailing City,State,Zip:	HERCULES, CA 94547
Owner Name:	Collins Management
Owner Type:	Other
Operator Name:	Collins Management
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**COLLINS MANAGEMENT (Continued)**

**1026716755**

Human Exposure Controls Indicator: N/A  
Groundwater Controls Indicator: N/A  
Significant Non-Complier Universe: No  
Unaddressed Significant Non-Complier Universe: No  
Addressed Significant Non-Complier Universe: No  
Significant Non-Complier With a Compliance Schedule Universe: No  
Financial Assurance Required: Not reported  
Handler Date of Last Change: 20210226  
Recognized Trader-Importer: No  
Recognized Trader-Exporter: No  
Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Owner  
Owner/Operator Name: COLLINS MANAGEMENT  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 500 ALFRED NOBEL DRIVE #250  
Owner/Operator City,State,Zip: HERCULES, CA 94547  
Owner/Operator Telephone: 925-435-2348  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator  
Owner/Operator Name: COLLINS MANAGEMENT  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 500 ALFRED NOBEL DRIVE #250  
Owner/Operator City,State,Zip: HERCULES, CA 94547  
Owner/Operator Telephone: 925-435-2348  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20210211  
Handler Name: COLLINS MANAGEMENT  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

EDR ID Number  
 EPA ID Number

---

**COLLINS MANAGEMENT (Continued)**

**1026716755**

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
 NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**C25  
 NNW  
 < 1/8  
 0.064 mi.  
 337 ft.**

**PETER PROWS/KAREN NELSON-MUNSON  
 483 CRESCENT STREET  
 OAKLAND, CA 94610  
 Site 9 of 9 in cluster C**

**RCRA NonGen / NLR 1026809273  
 CAC003121638**

**Relative:  
 Higher  
 Actual:  
 79 ft.**

RCRA Listings: 20210526  
 Date Form Received by Agency: Peter Prows/Karen Nelson-Munson  
 Handler Name: 483 Crescent Street  
 Handler Address: OAKLAND, CA 94610  
 Handler City,State,Zip: CAC003121638  
 EPA ID: PETER PROWS/KAREN NELSON-MUNSON  
 Contact Name: 483 CRESCENT STREET  
 Contact Address: OAKLAND, CA 94610  
 Contact City,State,Zip: 510-419-0553  
 Contact Telephone: Not reported  
 Contact Fax: ALONDRA.DIAZ@SYNERGYCOMPANIES.ORG  
 Contact Email: Not reported  
 Contact Title: 09  
 EPA Region: Not reported  
 Land Type: Not a generator, verified  
 Federal Waste Generator Description: Not reported  
 Non-Notifier: Not reported  
 Biennial Report Cycle: Not reported  
 Accessibility: Not reported  
 Active Site Indicator: Not reported  
 State District Owner: Not reported  
 State District: Not reported  
 Mailing Address: 483 CRESCENT STREET  
 Mailing City,State,Zip: OAKLAND, CA 94610  
 Owner Name: Peter Prows/Karen Nelson-Munson  
 Owner Type: Other  
 Operator Name: Peter Prows/Karen Nelson-Munson  
 Operator Type: Other  
 Short-Term Generator Activity: No  
 Importer Activity: No  
 Mixed Waste Generator: No  
 Transporter Activity: No  
 Transfer Facility Activity: No  
 Recycler Activity with Storage: No  
 Small Quantity On-Site Burner Exemption: No  
 Smelting Melting and Refining Furnace Exemption: No  
 Underground Injection Control: No  
 Off-Site Waste Receipt: No  
 Universal Waste Indicator: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**PETER PROWS/KAREN NELSON-MUNSON (Continued)**

**1026809273**

Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20210601
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	PETER PROWS/KAREN NELSON-MUNSON
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	483 CRESCENT STREET
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-419-0553
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	PETER PROWS/KAREN NELSON-MUNSON
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	483 CRESCENT STREET
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-419-0553
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**PETER PROWS/KAREN NELSON-MUNSON (Continued)**

**1026809273**

Historic Generators:

Receive Date:	20210526
Handler Name:	PETER PROWS/KAREN NELSON-MUNSON
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
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Evaluation Action Summary:

Evaluations:	No Evaluations Found
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**B26**  
**ESE**  
 < 1/8  
 0.070 mi.  
 368 ft.  
**Relative:**  
**Lower**

**ESQUIRE CLEANERS COMPANY**  
**3223 GRAND AVE**  
**OAKLAND, CA 94610**  
**Site 5 of 7 in cluster B**

**EDR Hist Cleaner 1009142842**  
**N/A**

EDR Hist Cleaner

**Actual:**  
**21 ft.**

Year:	Name:	Type:
1967	GRAND WASH HOUSE	LAUNDRIES
1989	ESQUIRE CLEANERS COMPANY	Drycleaning Plants, Except Rugs
1990	ESQUIRE CLEANERS COMPANY	Drycleaning Plants, Except Rugs
1991	ESQUIRE CLEANERS COMPANY	Drycleaning Plants, Except Rugs
1992	ESQUIRE CLEANERS COMPANY	Drycleaning Plants, Except Rugs
1993	ESQUIRE CLEANERS COMPANY	Drycleaning Plants, Except Rugs

**B27**  
**ESE**  
 < 1/8  
 0.070 mi.  
 368 ft.  
**Relative:**  
**Lower**

**ESQUIRE CLEANERS COMPANY**  
**3235 GRAND AVE**  
**OAKLAND, CA 94610**  
**Site 6 of 7 in cluster B**

**EDR Hist Cleaner 1019982903**  
**N/A**

EDR Hist Cleaner

**Actual:**  
**20 ft.**

Year:	Name:	Type:
1994	ESQUIRE CLEANERS COMPANY	Drycleaning Plants, Except Rugs
1995	ESQUIRE CLEANERS COMPANY	Drycleaning Plants, Except Rugs
1996	ESQUIRE CLEANERS COMPANY	Drycleaning Plants, Except Rugs
1997	ESQUIRE CLEANERS COMPANY	Drycleaning Plants, Except Rugs

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**ESQUIRE CLEANERS COMPANY (Continued)**

**1019982903**

2001	ESQUIRE CLEANERS COMPANY	Drycleaning Plants, Except Rugs
2002	ESQUIRE CLEANERS COMPANY	Drycleaning Plants, Except Rugs
2003	ESQUIRE CLEANERS COMPANY	Drycleaning Plants, Except Rugs
2004	ESQUIRE CLEANERS COMPANY	Drycleaning Plants, Except Rugs
2005	ESQUIRE CLEANERS COMPANY	Drycleaning Plants, Except Rugs

**B28**  
**ESE**  
 < 1/8  
 0.070 mi.  
 370 ft.

**LANDOWITZ JOS**  
**3249 GRAND AVE**  
**OAKLAND, CA**

**EDR Hist Cleaner**    **1009141426**  
**N/A**

**Site 7 of 7 in cluster B**

**Relative:**    EDR Hist Cleaner  
**Lower**

<b>Actual:</b>	Year:	Name:	Type:
19 ft.	1933	LANDOWITZ JOS	CLOTHES PRESSERS AND CLEANERS

**D29**  
**North**  
 < 1/8  
 0.080 mi.  
 421 ft.

**491 CRESCENT, LP**  
**491 CRESCENT STREET #303**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**    **1027459397**  
**CAC003197776**

**Site 1 of 3 in cluster D**

**Relative:**  
**Higher**  
**Actual:**  
 72 ft.

<b>Relative:</b>	RCRA Listings:	
	Date Form Received by Agency:	20221004
	Handler Name:	491 Crescent, Lp
	Handler Address:	491 Crescent Street #303
	Handler City,State,Zip:	OAKLAND, CA 94610
	EPA ID:	CAC003197776
	Contact Name:	491 CRESCENT, LP
	Contact Address:	ONE BUSH STREET, SUITE 900
	Contact City,State,Zip:	SAN FRANCISCO, CA 94104
	Contact Telephone:	408-597-5542
	Contact Fax:	Not reported
	Contact Email:	GISELLE.ESPIRITU@SYNERGYCOMPANIES.ORG
	Contact Title:	Not reported
	EPA Region:	09
	Land Type:	Not reported
	Federal Waste Generator Description:	Not a generator, verified
	Non-Notifier:	Not reported
	Biennial Report Cycle:	Not reported
	Accessibility:	Not reported
	Active Site Indicator:	Not reported
	State District Owner:	Not reported
	State District:	Not reported
	Mailing Address:	ONE BUSH STREET, SUITE 900
	Mailing City,State,Zip:	SAN FRANCISCO, CA 94104
	Owner Name:	491 Crescent, Lp
	Owner Type:	Other
	Operator Name:	491 Crescent, Lp
	Operator Type:	Other
	Short-Term Generator Activity:	No
	Importer Activity:	No
	Mixed Waste Generator:	No
	Transporter Activity:	No
	Transfer Facility Activity:	No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**491 CRESCENT, LP (Continued)**

**1027459397**

Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20221004
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name: 491 CRESCENT, LP	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	ONE BUSH STREET, SUITE 900
Owner/Operator City,State,Zip:	SAN FRANCISCO, CA 94104
Owner/Operator Telephone:	408-597-5542
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name: 491 CRESCENT, LP	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	ONE BUSH STREET, SUITE 900
Owner/Operator City,State,Zip:	SAN FRANCISCO, CA 94104

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**491 CRESCENT, LP (Continued)**

**1027459397**

Owner/Operator Telephone: 408-597-5542  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20221004  
Handler Name: 491 CRESCENT, LP  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

30  
WSW  
< 1/8  
0.086 mi.  
453 ft.

**ARVAND SEBETIN**  
**369 MACARTHUR BLVD**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1027086042**  
**CAC003158347**

**Relative:**  
**Higher**  
**Actual:**  
**65 ft.**

RCRA Listings:

Date Form Received by Agency: 20220124  
Handler Name: Arvand Sebetin  
Handler Address: 369 Macarthur Blvd  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003158347  
Contact Name: ARVAND SEBETIN  
Contact Address: 369 MACARTHUR BLVD  
Contact City,State,Zip: OAKLAND, CA 94610  
Contact Telephone: 415-419-9533  
Contact Fax: 707-480-6538  
Contact Email: I@ARVAND.COM  
Contact Title: Not reported  
EPA Region: 09  
Land Type: Not reported  
Federal Waste Generator Description: Not a generator, verified  
Non-Notifier: Not reported  
Biennial Report Cycle: Not reported  
Accessibility: Not reported  
Active Site Indicator: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**ARVAND SEBETIN (Continued)**

**1027086042**

State District Owner:	Not reported
State District:	Not reported
Mailing Address:	369 MACARTHUR BLVD
Mailing City, State, Zip:	OAKLAND, CA 94610
Owner Name:	Arvand Sebetin
Owner Type:	Other
Operator Name:	Arvand Sebetin
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20220124
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	ARVAND SEBETIN
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	369 MACARTHUR BLVD

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**ARVAND SEBETIN (Continued)**

**1027086042**

Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	415-419-9533
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	ARVAND SEBETIN
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	369 MACARTHUR BLVD
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	415-419-9533
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20220124
Handler Name:	ARVAND SEBETIN
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
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Evaluation Action Summary:

Evaluations:	No Evaluations Found
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**E31**  
**SE**  
 < 1/8  
 0.088 mi.  
 467 ft.

**PG & E**  
**3234 GRAND**  
**OAKLAND, CA 94601**  
**Site 1 of 5 in cluster E**

**HIST CORTESE** **S102435156**  
**N/A**

**Relative:**  
**Lower**  
**Actual:**  
**17 ft.**

HIST CORTESE:	
edr_fname:	PG & E
edr_fadd1:	3234 GRAND
City,State,Zip:	OAKLAND, CA 94601
Region:	CORTESE
Facility County Code:	1
Reg By:	LTNKA

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**PG & E (Continued)**

**S102435156**

Reg Id: 01-1562

**E32**  
**ESE**  
 < 1/8  
 0.091 mi.  
 483 ft.

**CARSONS MARTINIZING**  
**3250 GRAND AVE**  
**OAKLAND, CA 94610**

**RCRA-SQG 1000385419**  
**DRYCLEANERS CAD981396104**

**Site 2 of 5 in cluster E**

**Relative:**  
**Lower**  
**Actual:**  
 15 ft.

RCRA Listings:	
Date Form Received by Agency:	19860421
Handler Name:	Carsons Martinizing
Handler Address:	3250 Grand Ave
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAD981396104
Contact Name:	ENVIRONMENTAL MANAGER
Contact Address:	3250 GRAND AVE
Contact City,State,Zip:	OAKLAND, CA 94610
Contact Telephone:	415-452-3594
Contact Fax:	Not reported
Contact Email:	Not reported
Contact Title:	Not reported
EPA Region:	09
Land Type:	Other
Federal Waste Generator Description:	Small Quantity Generator
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Ca
State District:	2
Mailing Address:	3250 GRAND AVE
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Grant L Carson
Owner Type:	Private
Operator Name:	Not Required
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CARSONS MARTINIZING (Continued)**

**1000385419**

Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20020627
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name: NOT REQUIRED	
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	NOT REQUIRED
Owner/Operator City,State,Zip:	NOT REQUIRED, ME 99999
Owner/Operator Telephone:	415-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name: GRANT L CARSON	
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	NOT REQUIRED
Owner/Operator City,State,Zip:	NOT REQUIRED, ME 99999
Owner/Operator Telephone:	415-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	19860421
Handler Name: CARSONS MARTINIZING	
Federal Waste Generator Description:	Small Quantity Generator
State District Owner:	Ca
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CARSONS MARTINIZING (Continued)**

**1000385419**

Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Code: 81232  
NAICS Description: DRYCLEANING AND LAUNDRY SERVICES (EXCEPT COIN-OPERATED)

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**DRYCLEANERS:**

Name: BOB & GIGI INC DBA ONE HOUR MARTINIZING  
Address: 3250 GRAND AVE  
City,State,Zip: OAKLAND, CA 946102739  
EPA Id: CAD981396104  
NAICS Code: 81232  
NAICS Description: Drycleaning and Laundry Services (except Coin-Operated)  
SIC Code: 7211  
SIC Description: Power Laundries, Family and Commercial  
Create Date: 04/10/1987  
Facility Active: No  
Inactive Date: 06/30/2014  
Facility Addr2: Not reported  
Owner Name: BOB & GIGI, INC.  
Owner Address: 3250 GRAND AVE  
Owner Address 2: Not reported  
Owner Telephone: 5104523594  
Contact Name: GIGI CHANG  
Contact Address: 3250 GRAND AVE  
Contact Address 2: Not reported  
Contact Telephone: 5104523594  
Contact Fax: 0  
Mailing Name: Not reported  
Mailing Address 1: 3250 GRAND AVE  
Mailing Address 2: Not reported  
Mailing City: OAKLAND  
Mailing State: CA  
Mailing Zip: 946102739  
Owner Fax: 0  
Region Code: 2  
Latitude: 37.81211  
Longitude: -122.247524



Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BOB & GIGI INC DBA ONE HOUR MARTINIZING (Continued)**

**1025874375**

Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20230607
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name: BOB & GIGI INC	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	3250 GRAND AVE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-452-3594
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name: GIGI CHANG	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	3250 GRAND AVE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610-2739
Owner/Operator Telephone:	510-452-3594
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name: BOB & GIGI INC	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	3250 GRAND AVE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610-2739
Owner/Operator Telephone:	510-452-3594
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name: BOB & GIGI INC	
Legal Status:	Other

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BOB & GIGI INC DBA ONE HOUR MARTINIZING (Continued)**

**1025874375**

Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 3250 GRAND AVE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-452-3594  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20190716  
Handler Name: ONE HOUR MARTINIZING  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: No  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

Receive Date: 20230605  
Handler Name: BOB & GIGI INC DBA ONE HOUR MARTINIZING  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 812320  
NAICS Description: DRYCLEANING AND LAUNDRY SERVICES (EXCEPT COIN-OPERATED)

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

E34  
ESE  
< 1/8  
0.091 mi.  
483 ft.

**Y S ONE-HOUR MARTINIZING**  
**3250 GRAND AVE**  
**OAKLAND, CA 94610**

**EDR Hist Cleaner**    **1009142668**  
**N/A**

**Relative:**    EDR Hist Cleaner  
**Lower**

**Actual:**  
**15 ft.**

Year:	Name:	Type:
1967	CARSON S ONE HOUR MARTINIZING	CLEANERS AND DYERS
1971	CARSONS ONE HOUR MARTNZNG CLRS	Drycleaning Plants, Except Rugs
1972	CARSONS ONE HOUR MARTNZNG CLRS	Drycleaning Plants, Except Rugs
1973	CARSONS ONE HOUR MARTNZNG CLRS	Drycleaning Plants, Except Rugs
1974	CARSONS ONE HOUR MARTNZNG CLRS	Drycleaning Plants, Except Rugs
1976	CARSONS ONE HR MARTINIZNG CLRS	Drycleaning Plants, Except Rugs
1977	CARSONS ONE HR MARTINIZNG CLRS	Drycleaning Plants, Except Rugs
1978	CARSONS ONE HR MARTINIZNG CLRS	Drycleaning Plants, Except Rugs
1979	CARSONS ONE HR MARTINIZNG CLRS	Drycleaning Plants, Except Rugs
1980	CARSONS ONE HR MARTINIZNG CLRS	Drycleaning Plants, Except Rugs
1982	CARSONS ONE HR MARTINIZNG CLRS	Drycleaning Plants, Except Rugs
1983	CARSONS ONE HR MARTINIZNG CLRS	Drycleaning Plants, Except Rugs
1985	CARSONS ONE HR MARTINIZNG CLRS	Drycleaning Plants, Except Rugs
1986	CARSONS ONE HR MARTINIZNG CLRS	Drycleaning Plants, Except Rugs
1987	CARSONS ONE HR MARTINIZNG CLRS	Drycleaning Plants, Except Rugs
1988	CARSONS ONE HR MARTINIZNG CLRS	Drycleaning Plants, Except Rugs
1989	CARSONS ONE HR MRTINIZING CLRS	Drycleaning Plants, Except Rugs
1990	CARSONS ONE HR MRTINIZING CLRS	Drycleaning Plants, Except Rugs
1991	CARSONS ONE HR MRTINIZING CLRS	Drycleaning Plants, Except Rugs
1992	CARSONS ONE HR MRTINIZING CLRS	Drycleaning Plants, Except Rugs
1993	CARSONS ONE HR MRTINIZING CLRS	Drycleaning Plants, Except Rugs
1994	CARSONS ONE HR MRTINIZING CLRS	Drycleaning Plants, Except Rugs
1995	Y S ONE-HOUR MARTINIZING	Drycleaning Plants, Except Rugs
1996	Y S ONE-HOUR MARTINIZING	Drycleaning Plants, Except Rugs
1997	Y S ONE-HOUR MARTINIZING	Drycleaning Plants, Except Rugs
1998	Y S ONE-HOUR MARTINIZING	Drycleaning Plants, Except Rugs
1999	Y S ONE-HOUR MARTINIZING	Drycleaning Plants, Except Rugs
2000	Y S ONE-HOUR MARTINIZING	Drycleaning Plants, Except Rugs
2001	Y S ONE-HOUR MARTINIZING	Drycleaning Plants, Except Rugs
2002	Y S ONE-HOUR MARTINIZING	Drycleaning Plants, Except Rugs
2003	Y S ONE-HOUR MARTINIZING	Drycleaning Plants, Except Rugs
2004	Y S ONE-HOUR MARTINIZING	Drycleaning Plants, Except Rugs
2005	Y S ONE-HOUR MARTINIZING	Laundry And Drycleaner Agents
2006	Y S ONE-HOUR MARTINIZING	Laundry And Drycleaner Agents
2007	Y S ONE-HOUR MARTINIZING	Laundry And Drycleaner Agents
2008	Y S ONE-HOUR MARTINIZING	Laundry And Drycleaner Agents
2009	Y S ONE-HOUR MARTINIZING	Laundry And Drycleaner Agents
2010	Y S ONE-HOUR MARTINIZING	Laundry And Drycleaner Agents
2011	Y S ONE-HOUR MARTINIZING	Laundry And Drycleaner Agents
2012	Y S ONE-HOUR MARTINIZING	Laundry And Drycleaner Agents
2013	Y S ONE-HOUR MARTINIZING	Laundry And Drycleaner Agents
2014	Y S ONE-HOUR MARTINIZING	Laundry And Drycleaner Agents

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**E35** **ONE HOUR MARTINIZING**  
**ESE** **3250 GRAND AVE**  
**< 1/8** **OAKLAND, CA 94610**  
**0.091 mi.**  
**483 ft.** **Site 5 of 5 in cluster E**

**DRYCLEANERS** **S113004814**  
**HWTS** **N/A**  
**HAZNET**

**Relative:**  
**Lower**  
**Actual:**  
**15 ft.**

**DRYCLEANERS:**  
Name: ONE HOUR MARTINIZING  
Address: 3250 GRAND AVE  
City,State,Zip: OAKLAND, CA 946102739  
EPA Id: CAL000447506  
NAICS Code: 812320  
NAICS Description: Drycleaning and Laundry Services (except Coin-Operated)  
SIC Code: 7211  
SIC Description: Power Laundries, Family and Commercial  
Create Date: 07/16/2019  
Facility Active: Yes  
Inactive Date: Not reported  
Facility Addr2: Not reported  
Owner Name: BOB & GIGI INC  
Owner Address: 3250 GRAND AVE  
Owner Address 2: Not reported  
Owner Telephone: 5104523594  
Contact Name: GIGI CHANG  
Contact Address: 3250 GRAND AVE  
Contact Address 2: Not reported  
Contact Telephone: 5104523594  
Contact Fax: 0  
Mailing Name: Not reported  
Mailing Address 1: 3250 GRAND AVE  
Mailing Address 2: Not reported  
Mailing City: OAKLAND  
Mailing State: CA  
Mailing Zip: 946102739  
Owner Fax: 0  
Region Code: 2  
Latitude: 37.81211  
Longitude: -122.247524

**DRYCLEAN BAY AREA DIST:**

Facility ID: 10598  
Name: ONE HOUR MARTINIZING  
Address: 3250 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610-2739  
NAICS Code: 812320  
Facility Status: Registered  
Device Name: VaporPress Closed-loop, 35 lb  
Drum Capacity: 35  
Device Status: Shutdown  
Facility Permit Expiration Date: 2019-06-01 00:00:00  
Name: Perchloroethylene  
Annual Usage: 194

Facility ID: 10598  
Name: ONE HOUR MARTINIZING  
Address: 3250 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610-2739  
NAICS Code: 812320  
Facility Status: Registered

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**ONE HOUR MARTINIZING (Continued)**

**S113004814**

Device Name: Prima, 60lb Petroleum Closed Loop Machine[PRI60P]  
Drum Capacity: 60  
Device Status: Registered  
Facility Permit Expiration Date: 2019-06-01 00:00:00  
Name: Petroleum or Hydrocarbon Solvent, High Flash Point  
Annual Usage: 50

**HWTS:**

Name: BOB & GIGI INC DBA ONE HOUR MARTINIZING  
Address: 3250 GRAND AVE  
Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAD981396104  
Inactive Date: 06/30/2014  
Create Date: 04/10/1987  
Last Act Date: Not reported  
Mailing Name: Not reported  
Mailing Address: 3250 GRAND AVE  
Mailing Address 2: Not reported  
Mailing City,State,Zip: OAKLAND, CA 946102739  
Owner Name: BOB & GIGI, INC.  
Owner Address: 3250 GRAND AVE  
Owner Address 2: Not reported  
Owner City,State,Zip: OAKLAND, CA 946102739  
Owner Phone: Not reported  
Owner Fax: Not reported  
Contact Name: GIGI CHANG  
Contact Address: 3250 GRAND AVE  
Contact Address 2: Not reported  
City,State,Zip: OAKLAND, CA 946102739  
Contact Phone: Not reported  
Contact Fax: Not reported  
Facility Status: Inactive  
Facility Type: PERMANENT  
Category: FEDERAL  
Latitude: 37.81211  
Longitude: -122.247524

**NAICS:**

EPA ID: CAD981396104  
Create Date: 2002-03-14 16:36:26.000  
NAICS Code: 81232  
NAICS Description: Drycleaning and Laundry Services (except Coin-Operated)  
Issued EPA ID Date: 1987-04-10 00:00:00  
Inactive Date: 2014-06-30 00:00:00  
Facility Name: BOB & GIGI INC DBA ONE HOUR MARTINIZING  
Facility Address: 3250 GRAND AVE  
Facility Address 2: Not reported  
Facility City: OAKLAND  
Facility County: Not reported  
Facility State: CA  
Facility Zip: 946102739

**HAZNET:**

Name: BOB & GIGI INC DBA ONE HOUR MARTINIZING  
Address: 3250 GRAND AVE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**ONE HOUR MARTINIZING (Continued)**

**S113004814**

Address 2: Not reported  
City,State,Zip: OAKLAND, CA 946102739  
Contact: GIGI CHANG  
Telephone: 5104523594  
Mailing Name: Not reported  
Mailing Address: 3250 GRAND AVE

Year: 2002  
Gepaid: CAD981396104  
TSD EPA ID: CAT080014079  
CA Waste Code: 741 - Liquids with halogenated organic compounds >= 1,000 Mg./L  
Disposal Method: H01 - Transfer Station  
Tons: 0.22935

Year: 2001  
Gepaid: CAD981396104  
TSD EPA ID: CAT080014079  
CA Waste Code: 741 - Liquids with halogenated organic compounds >= 1,000 Mg./L  
Disposal Method: H01 - Transfer Station  
Tons: 0.1251

Additional Info:

Year: 2002  
Gen EPA ID: CAD981396104

Shipment Date: 20020107  
Creation Date: 5/31/2005 7:41:35  
Receipt Date: 20020114  
Manifest ID: 21712520  
Trans EPA ID: CAR000086777  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSD EPA ID: CAT080014079  
Trans Name: Not reported  
TSD Alt EPA ID: CAT080014079  
TSD Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: F002  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.22935  
Waste Quantity: 55  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Additional Info:

Year: 2001  
Gen EPA ID: CAD981396104

Shipment Date: 20010323  
Creation Date: 5/27/2005 14:57:18

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**ONE HOUR MARTINIZING (Continued)**

**S113004814**

Receipt Date: 20010326  
 Manifest ID: 20780248  
 Trans EPA ID: CAR000086777  
 Trans Name: Not reported  
 Trans 2 EPA ID: Not reported  
 Trans 2 Name: Not reported  
 TSDF EPA ID: CAT080014079  
 Trans Name: Not reported  
 TSDF Alt EPA ID: CAT080014079  
 TSDF Alt Name: Not reported  
 Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
 RCRA Code: F002  
 Meth Code: H01 - Transfer Station  
 Quantity Tons: 0.1251  
 Waste Quantity: 30  
 Quantity Unit: G  
 Additional Code 1: Not reported  
 Additional Code 2: Not reported  
 Additional Code 3: Not reported  
 Additional Code 4: Not reported  
 Additional Code 5: Not reported

**F36**  
**ENE**  
 < 1/8  
 0.095 mi.  
 501 ft.

**UNION OIL SS 3443**  
**3347 GRAND AVE**  
**OAKLAND, CA 94610**  
 Site 1 of 16 in cluster F

**HIST UST** **S118416483**  
**N/A**

**Relative:**  
**Lower**  
**Actual:**  
**9 ft.**

**HIST UST:**  
 Name: UNION OIL SS 3443  
 Address: 3347 GRAND AVE  
 City,State,Zip: OAKLAND, CA 94610  
 File Number: 00036461  
 URL: <https://documents.geotracker.waterboards.ca.gov/ustpdfs/pdf/00036461.pdf>  
 Region: Not reported  
 Facility ID: Not reported  
 Facility Type: Not reported  
 Other Type: Not reported  
 Contact Name: Not reported  
 Telephone: Not reported  
 Owner Name: Not reported  
 Owner Address: Not reported  
 Owner City,St,Zip: Not reported  
 Total Tanks: Not reported  
  
 Tank Num: Not reported  
 Container Num: Not reported  
 Year Installed: Not reported  
 Tank Capacity: Not reported  
 Tank Used for: Not reported  
 Type of Fuel: Not reported  
 Container Construction Thickness: Not reported  
 Leak Detection: Not reported

Click here for Geo Tracker PDF:



Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**VERITAS (Continued)**

**1027680324**

Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20230311
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name: VERITAS RYND	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	345 MACARTHUR BLVD #UNIT 302
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	800-400-5058
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name: VERITAS RYND	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	345 MACARTHUR BLVD #UNIT 302
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	800-400-5058
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20230310
Handler Name: VERITAS	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**VERITAS (Continued)**

**1027680324**

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
 NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**G38**  
**West**  
**< 1/8**  
**0.096 mi.**  
**505 ft.**

**VPI GROWTH VENTURE 1, LP**  
**345 MACARTHUR BLVD., #208**  
**OAKLAND, CA 94610**  
**Site 2 of 6 in cluster G**

**RCRA NonGen / NLR**

**1027515614**  
**CAC003207482**

**Relative:**  
**Higher**  
**Actual:**  
**83 ft.**

RCRA Listings:  
 Date Form Received by Agency: 20221207  
 Handler Name: Vpi Growth Venture 1, Lp  
 Handler Address: 345 Macarthur Blvd., #208  
 Handler City,State,Zip: OAKLAND, CA 94610  
 EPA ID: CAC003207482  
 Contact Name: TESS HOLENSTEIN-HALL  
 Contact Address: 345 MACARTHUR BLVD.  
 Contact City,State,Zip: OAKLAND, CA 94610  
 Contact Telephone: 415-868-3379  
 Contact Fax: Not reported  
 Contact Email: THOLENSTEIN-HALL@GREENTREEPMCO.COM  
 Contact Title: Not reported  
 EPA Region: 09  
 Land Type: Not reported  
 Federal Waste Generator Description: Not a generator, verified  
 Non-Notifier: Not reported  
 Biennial Report Cycle: Not reported  
 Accessibility: Not reported  
 Active Site Indicator: Not reported  
 State District Owner: Not reported  
 State District: Not reported  
 Mailing Address: ONE POST STREET  
 Mailing City,State,Zip: SAN FRANCISCO, CA 94104  
 Owner Name: Vip Growth Venture 1, Lp  
 Owner Type: Other  
 Operator Name: Tess Holenstein-Hall  
 Operator Type: Other  
 Short-Term Generator Activity: No  
 Importer Activity: No  
 Mixed Waste Generator: No  
 Transporter Activity: No  
 Transfer Facility Activity: No  
 Recycler Activity with Storage: No  
 Small Quantity On-Site Burner Exemption: No  
 Smelting Melting and Refining Furnace Exemption: No  
 Underground Injection Control: No  
 Off-Site Waste Receipt: No  
 Universal Waste Indicator: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**VPI GROWTH VENTURE 1, LP (Continued)**

**1027515614**

Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20221207
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

**Handler - Owner Operator:**

Owner/Operator Indicator:	Operator
Owner/Operator Name: TESS HOLENSTEIN-HALL	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	345 MACARTHUR BLVD.
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	415-868-3379
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name: VIP GROWTH VENTURE 1, LP	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	ONE POST STREET
Owner/Operator City,State,Zip:	SAN FRANCISCO, CA 94104
Owner/Operator Telephone:	415-868-3379
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**VPI GROWTH VENTURE 1, LP (Continued)**

**1027515614**

Historic Generators:

Receive Date: 20221207  
Handler Name: VPI GROWTH VENTURE 1, LP  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 56291  
NAICS Description: REMEDIATION SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**G39**  
**West**  
**< 1/8**  
**0.096 mi.**  
**505 ft.**

**345 MACARTHUR, G1, LP**  
**345 MACARTHUR BOULEVARD**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1027691415**  
**CAC003233950**

**Site 3 of 6 in cluster G**

**Relative:**  
**Higher**  
**Actual:**  
**83 ft.**

RCRA Listings:

Date Form Received by Agency: 20230524  
Handler Name: 345 Macarthur, G1, Lp  
Handler Address: 345 Macarthur Boulevard  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003233950  
Contact Name: MARIA RECHT  
Contact Address: 1 POST STREET  
Contact City,State,Zip: SAN FRANCISCO, CA 94101  
Contact Telephone: 415-523-1006  
Contact Fax: Not reported  
Contact Email: MRECHT@GREENTREEPMCO.COM  
Contact Title: Not reported  
EPA Region: 09  
Land Type: Not reported  
Federal Waste Generator Description: Not a generator, verified  
Non-Notifier: Not reported  
Biennial Report Cycle: Not reported  
Accessibility: Not reported  
Active Site Indicator: Not reported  
State District Owner: Not reported  
State District: Not reported  
Mailing Address: 1 POST STREET  
Mailing City,State,Zip: SAN FRANCISCO, CA 94101  
Owner Name: 345 Macarthur, G1, Lp

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**345 MACARTHUR, G1, LP (Continued)**

**1027691415**

Owner Type:	Other
Operator Name:	Maria Recht
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20230525
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	MARIA RECHT
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	1 POST STREET
Owner/Operator City,State,Zip:	SAN FRANCISCO, CA 94101
Owner/Operator Telephone:	415-523-1006
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**345 MACARTHUR, G1, LP (Continued)**

**1027691415**

Owner/Operator Indicator:	Owner
Owner/Operator Name: 345 MACARTHUR, G1, LP	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	1 POST STREET
Owner/Operator City,State,Zip:	SAN FRANCISCO, CA 94101
Owner/Operator Telephone:	415-523-1006
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20230524
Handler Name: 345 MACARTHUR, G1, LP	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	56291
NAICS Description:	REMEDIATION SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
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Evaluation Action Summary:

Evaluations:	No Evaluations Found
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**G40**  
**West**  
**< 1/8**  
**0.096 mi.**  
**505 ft.**

**345 MACARTHUR G1, LP**  
**345 MACARTHUR BLVD. #112**  
**OAKLAND, CA 94610**  
**Site 4 of 6 in cluster G**

**RCRA NonGen / NLR**

**1026470664**  
**CAC003076209**

**Relative:**  
**Higher**  
**Actual:**  
**83 ft.**

RCRA Listings:	
Date Form Received by Agency:	20200724
Handler Name:	345 Macarthur G1, Lp
Handler Address:	345 Macarthur Blvd. #112
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003076209
Contact Name:	345 MACARTHUR G1, LP
Contact Address:	ONE BUSH STREET, SUITE 900
Contact City,State,Zip:	SAN FRANCISCO, CA 94104
Contact Telephone:	510-378-2076
Contact Fax:	Not reported
Contact Email:	GISELLE.ESPIRITU@SYNERGYCOMPANIES.ORG
Contact Title:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**345 MACARTHUR G1, LP (Continued)**

**1026470664**

EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	ONE BUSH STREET, SUITE 900
Mailing City,State,Zip:	SAN FRANCISCO, CA 94104
Owner Name:	345 Macarthur G1, Lp
Owner Type:	Other
Operator Name:	345 Macarthur G1, Lp
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20200814
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**345 MACARTHUR G1, LP (Continued)**

**1026470664**

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	345 MACARTHUR G1, LP
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	ONE BUSH STREET, SUITE 900
Owner/Operator City,State,Zip:	SAN FRANCISCO, CA 94104
Owner/Operator Telephone:	510-378-2076
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	345 MACARTHUR G1, LP
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	ONE BUSH STREET, SUITE 900
Owner/Operator City,State,Zip:	SAN FRANCISCO, CA 94104
Owner/Operator Telephone:	510-378-2076
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20200724
Handler Name:	345 MACARTHUR G1, LP
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
-------------	---------------------

Evaluation Action Summary:

Evaluations:	No Evaluations Found
--------------	----------------------

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**G41**  
**West**  
**< 1/8**  
**0.096 mi.**  
**505 ft.**

**345 MACARTHUR G1, LP**  
**345 MACARTHUR BLVD. #109**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1026470740**  
**CAC003076291**

**Site 5 of 6 in cluster G**

**Relative:**  
**Higher**  
**Actual:**  
**83 ft.**

RCRA Listings:	
Date Form Received by Agency:	20200724
Handler Name:	345 Macarthur G1, Lp
Handler Address:	345 Macarthur Blvd. #109
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003076291
Contact Name:	345 MACARTHUR G1, LP
Contact Address:	ONE BUSH STREET, SUITE 900
Contact City,State,Zip:	SAN FRANCISCO, CA 94104
Contact Telephone:	510-378-2076
Contact Fax:	Not reported
Contact Email:	GISELLE.ESPIRITU@SYNERGYCOMPANIES.ORG
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	ONE BUSH STREET, SUITE 900
Mailing City,State,Zip:	SAN FRANCISCO, CA 94104
Owner Name:	345 Macarthur G1, Lp
Owner Type:	Other
Operator Name:	345 Macarthur G1, Lp
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRa Permit Baseline:	Not on the Baseline
2018 GPRa Renewals Baseline:	Not on the Baseline
202 GPRa Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**345 MACARTHUR G1, LP (Continued)**

**1026470740**

Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20200814
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name: 345 MACARTHUR G1, LP	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	ONE BUSH STREET, SUITE 900
Owner/Operator City,State,Zip:	SAN FRANCISCO, CA 94104
Owner/Operator Telephone:	510-378-2076
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name: 345 MACARTHUR G1, LP	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	ONE BUSH STREET, SUITE 900
Owner/Operator City,State,Zip:	SAN FRANCISCO, CA 94104
Owner/Operator Telephone:	510-378-2076
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20200724
Handler Name: 345 MACARTHUR G1, LP	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**345 MACARTHUR G1, LP (Continued)**

**1026470740**

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
 NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**G42**  
**West**  
**< 1/8**  
**0.096 mi.**  
**505 ft.**

**345 MACARTHUR, G1, LP**  
**345 MACARTHUR BLVD**  
**OAKLAND, CA 94610**  
**Site 6 of 6 in cluster G**

**RCRA NonGen / NLR**

**1028883492**  
**CAC003244049**

**Relative:**  
**Higher**  
**Actual:**  
**83 ft.**

RCRA Listings:  
 Date Form Received by Agency: 20230727  
 Handler Name: 345 Macarthur, G1, Lp  
 Handler Address: 345 Macarthur Blvd  
 Handler City,State,Zip: OAKLAND, CA 94610  
 EPA ID: CAC003244049  
 Contact Name: JEFFREY BRUTON  
 Contact Address: 345 MACARTHUR BLVD  
 Contact City,State,Zip: OAKLAND, CA 94610  
 Contact Telephone: 415-516-5192  
 Contact Fax: Not reported  
 Contact Email: JBRUTON@GREENTREEPMCO.COM  
 Contact Title: Not reported  
 EPA Region: 09  
 Land Type: Not reported  
 Federal Waste Generator Description: Not a generator, verified  
 Non-Notifier: Not reported  
 Biennial Report Cycle: Not reported  
 Accessibility: Not reported  
 Active Site Indicator: Not reported  
 State District Owner: Not reported  
 State District: Not reported  
 Mailing Address: 1 POST STREET  
 Mailing City,State,Zip: SAN FRANCISCO, CA 94104  
 Owner Name: 345 Macarthur, G1, Lp  
 Owner Type: Other  
 Operator Name: Jeffrey Bruton  
 Operator Type: Other  
 Short-Term Generator Activity: No  
 Importer Activity: No  
 Mixed Waste Generator: No  
 Transporter Activity: No  
 Transfer Facility Activity: No  
 Recycler Activity with Storage: No  
 Small Quantity On-Site Burner Exemption: No  
 Smelting Melting and Refining Furnace Exemption: No  
 Underground Injection Control: No  
 Off-Site Waste Receipt: No  
 Universal Waste Indicator: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**345 MACARTHUR, G1, LP (Continued)**

**1028883492**

Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20230728
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

**Handler - Owner Operator:**

Owner/Operator Indicator:	Owner
Owner/Operator Name: 345 MACARTHUR, G1, LP	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	1 POST STREET
Owner/Operator City,State,Zip:	SAN FRANCISCO, CA 94104
Owner/Operator Telephone:	415-516-5192
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name: JEFFREY BRUTON	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	345 MACARTHUR BLVD
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	415-516-5192
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**345 MACARTHUR, G1, LP (Continued)**

**1028883492**

Historic Generators:

Receive Date:	20230727
Handler Name:	345 MACARTHUR, G1, LP
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	56291
NAICS Description:	REMEDIATION SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
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Evaluation Action Summary:

Evaluations:	No Evaluations Found
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**F43**  
**ENE**  
**< 1/8**  
**0.096 mi.**  
**509 ft.**  
**Relative:**  
**Lower**

**BRITE CLEANERS INC**  
**3349 GRAND AVE**  
**OAKLAND, CA 94610**  
**Site 2 of 16 in cluster F**

**EDR Hist Cleaner**    **1009139895**  
**N/A**

**Actual:**  
**9 ft.**

Year:	Name:	Type:
1933	CEBOLLERO BRIGITTE MRS	CLOTHES PRESSERS AND CLEANERS
1992	BRITE CLEANERS	Drycleaning Plants, Except Rugs
1993	BRITE CLEANERS	Drycleaning Plants, Except Rugs
1994	BRITE CLEANERS	Drycleaning Plants, Except Rugs
1995	BRITE CLEANERS INC	Drycleaning Plants, Except Rugs
1996	BRITE CLEANERS INC	Drycleaning Plants, Except Rugs
1997	BRITE CLEANERS INC	Drycleaning Plants, Except Rugs
1998	BRITE CLEANERS INC	Drycleaning Plants, Except Rugs
1999	BRITE CLEANERS INC	Drycleaning Plants, Except Rugs
2000	BRITE CLEANERS INC	Drycleaning Plants, Except Rugs
2001	BRITE CLEANERS INC	Drycleaning Plants, Except Rugs
2002	BRITE CLEANERS INC	Drycleaning Plants, Except Rugs
2003	BRITE CLEANERS INC	Drycleaning Plants, Except Rugs
2004	BRITE CLEANERS INC	Drycleaning Plants, Except Rugs
2005	BRITE CLEANERS INC	Drycleaning Plants, Except Rugs
2006	BRITE CLEANERS INC	Drycleaning Plants, Except Rugs
2007	BRITE CLEANERS INC	Drycleaning Plants, Except Rugs
2008	BRITE CLEANERS INC	Drycleaning Plants, Except Rugs
2009	BRITE CLEANERS INC	Drycleaning Plants, Except Rugs
2010	BRITE CLEANERS INC	Drycleaning Plants, Except Rugs
2011	BRITE CLEANERS INC	Drycleaning Plants, Except Rugs
2012	BRITE CLEANERS INC	Drycleaning Plants, Except Rugs

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BRITE CLEANERS INC (Continued)**

**1009139895**

2013 BRITE CLEANERS INC  
2014 BRITE CLEANERS INC

Drycleaning Plants, Except Rugs  
Drycleaning Plants, Except Rugs

**F44**  
**ENE**  
**< 1/8**  
**0.098 mi.**  
**516 ft.**

**GLENVIEW LAUNDRY**  
**3351 GRAND AVE**  
**OAKLAND, CA**  
**Site 3 of 16 in cluster F**

**EDR Hist Cleaner** **1009140964**  
**N/A**

**Relative:**  
**Lower**

EDR Hist Cleaner

**Actual:**  
**9 ft.**

Year: Name:  
1967 GLENVIEW LAUNDRY

Type:  
LAUNDRIES

**F45**  
**East**  
**< 1/8**  
**0.101 mi.**  
**532 ft.**

**SIMPSON D R**  
**3322 GRAND AVE**  
**OAKLAND, CA**  
**Site 4 of 16 in cluster F**

**EDR Hist Cleaner** **1009143105**  
**N/A**

**Relative:**  
**Lower**

EDR Hist Cleaner

**Actual:**  
**13 ft.**

Year: Name:  
1933 SIMPSON D R

Type:  
CLOTHES PRESSERS AND CLEANERS

**H46**  
**SSE**  
**< 1/8**  
**0.103 mi.**  
**543 ft.**

**FYNE BUILDING**  
**774 GRAND**  
**OAKLAND, CA 94612**  
**Site 1 of 5 in cluster H**

**HIST CORTESE** **S101293699**  
**N/A**

**Relative:**  
**Lower**

HIST CORTESE:  
edr\_fname: FYNE BUILDING  
edr\_fadd1: 774 GRAND  
City,State,Zip: OAKLAND, CA 94612  
Region: CORTESE  
Facility County Code: 1  
Reg By: LTNKA  
Reg Id: 01-0674

**Actual:**  
**19 ft.**

**H47**  
**SSE**  
**< 1/8**  
**0.103 mi.**  
**543 ft.**

**FYNE BUILDING**  
**774 GRAND AVE W**  
**OAKLAND, CA 94612**  
**Site 2 of 5 in cluster H**

**UST FINDER RELEASE** **1028967872**  
**N/A**

**Relative:**  
**Lower**

UST FINDER RELEASE:  
Object ID: 41016  
Facility ID: Not reported  
Lust ID: CAT0600100620  
Name: FYNE BUILDING  
Address: 774 GRAND AVE W  
City,State,Zip: OAKLAND, CA 94612

**Actual:**  
**19 ft.**

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**FYNE BUILDING (Continued)**

**1028967872**

Address Match Type:	StreetAddress
Reported Date:	Not reported
Status:	No Further Action
Substance:	Not reported
Population within 1500ft:	4043
Domestic Wells within 1500ft:	0
Land Use:	Developed, High Intensity
Within SPA:	No
SPA PWS Facility ID:	Not reported
SPA Water Type:	Not reported
SPA Facility Type:	Not reported
SPA HUC12:	Not reported
Within WHPA:	No
WHPA PWS Facility ID:	Not reported
WHPA Water Type:	Not reported
WHPA Facility Type:	Not reported
WHPA HUC12:	Not reported
Within 100yr Floodplain:	No
Tribe:	Not reported
EPA Region:	9
NFA Letter 1:	Not reported
NFA Letter 2:	Not reported
NFA Letter 3:	Not reported
NFA Letter 4:	Not reported
Closed With Residual Contaminate:	Not reported
Coordinate Source:	Geocode
X Coord:	-122.27523
Y Coord:	37.8132900000001
Latitude:	37.81329
Longitude:	-122.2752299999999

**H48**  
**SSE**  
 < 1/8  
 0.103 mi.  
 543 ft.

**FYNE BUILDING**  
**774 GRAND AVE W**  
**OAKLAND, CA 94612**

**Site 3 of 5 in cluster H**

**LUST** **S109283938**  
**Cortese** **N/A**  
**CERS**

**Relative:**  
**Lower**  
**Actual:**  
 19 ft.

**LUST:**

Name:	FYNE BUILDING
Address:	774 GRAND AVE W
City,State,Zip:	OAKLAND, CA 94612
Lead Agency:	ALAMEDA COUNTY LOP
Case Type:	LUST Cleanup Site
Geo Track:	<a href="http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600100620">http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600100620</a>
Global Id:	T0600100620
Latitude:	37.813547
Longitude:	-122.274728
Status:	Completed - Case Closed
Status Date:	06/16/1988
Case Worker:	Not reported
RB Case Number:	01-0674
Local Agency:	Not reported
File Location:	All Files are on GeoTracker or in the Local Agency Database
Local Case Number:	RO0003051
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
EPA Region:	9
Coordinate Source:	* Historical Geocode - Exact Address Match

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**FYNE BUILDING (Continued)**

**S109283938**

Cuf Case: NO  
Quantity Released Gallons: 0  
Begin Date: 03/16/1988  
Leak Reported Date: 03/16/1988  
How Discovered: Tank Closure  
How Discovered Description: UST REMOVAL  
Discharge Source: Other  
Discharge Cause: Unknown  
Stop Method: Close and Remove Tank  
Stop Description: Not reported  
No Further Action Date: 06/16/1988  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Not reported  
CA Enviroscreen 3 Score: 71-75%  
CA Enviroscreen 4 Score: 85-90%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Not reported

**LUST:**

Global Id: T0600100620  
Action Type: Other  
Date: 03/16/1988  
Action: Leak Discovery

Global Id: T0600100620  
Action Type: Other  
Date: 03/16/1988  
Action: Leak Reported

Global Id: T0600100620  
Action Type: Other  
Date: 03/16/1988  
Action: Leak Stopped

**LUST:**

Global Id: T0600100620  
Status: Open - Case Begin Date  
Status Date: 03/16/1988

Global Id: T0600100620  
Status: Open - Site Assessment  
Status Date: 06/01/1988

Global Id: T0600100620  
Status: Completed - Case Closed  
Status Date: 06/16/1988

**CORTESE:**

Name: FYNE BUILDING  
Address: 774 GRAND AVE W  
City,State,Zip: OAKLAND, CA 94612  
Region: CORTESE  
Envirostor Id: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**FYNE BUILDING (Continued)**

**S109283938**

Global ID: T0600100620  
Site/Facility Type: LUST CLEANUP SITE  
Cleanup Status: COMPLETED - CASE CLOSED  
Status Date: Not reported  
Site Code: Not reported  
Latitude: Not reported  
Longitude: Not reported  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: active  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported  
File Name: Active Open

**CERS:**

Name: FYNE BUILDING  
Address: 774 GRAND AVE W  
City,State,Zip: OAKLAND, CA 94612  
Site ID: 732923  
CERS ID: T0600100620  
CERS Description: Leaking Underground Storage Tank Cleanup Site

**I49  
NE  
< 1/8  
0.109 mi.  
575 ft.**

**HAVA LIBERMAN  
433 ELWOOD AVENUE  
OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1026720898  
CAC003109633**

**Site 1 of 4 in cluster I**

**Relative:  
Higher  
Actual:  
68 ft.**

RCRA Listings:  
Date Form Received by Agency: 20210311  
Handler Name: Hava Liberman  
Handler Address: 433 Elwood Avenue  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003109633  
Contact Name: HAVA LIBERMAN  
Contact Address: 433 ELWOOD AVENUE  
Contact City,State,Zip: OAKLAND, CA 94610  
Contact Telephone: 415-203-1587  
Contact Fax: Not reported  
Contact Email: ALONDRA.DIAZ@SYNERGYCOMPANIES.ORG  
Contact Title: Not reported  
EPA Region: 09  
Land Type: Not reported  
Federal Waste Generator Description: Not a generator, verified  
Non-Notifier: Not reported  
Biennial Report Cycle: Not reported  
Accessibility: Not reported  
Active Site Indicator: Not reported  
State District Owner: Not reported  
State District: Not reported  
Mailing Address: 433 ELWOOD AVENUE

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**HAVA LIBERMAN (Continued)**

**1026720898**

Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Hava Liberman
Owner Type:	Other
Operator Name:	Hava Liberman
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20210312
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

**Handler - Owner Operator:**

Owner/Operator Indicator:	Owner
Owner/Operator Name:	HAVA LIBERMAN
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	433 ELWOOD AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	415-203-1587
Owner/Operator Telephone Ext:	Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**HAVA LIBERMAN (Continued)**

**1026720898**

Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	HAVA LIBERMAN
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	433 ELWOOD AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	415-203-1587
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20210311
Handler Name:	HAVA LIBERMAN
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
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Evaluation Action Summary:

Evaluations:	No Evaluations Found
--------------	----------------------

**150  
 NE  
 < 1/8  
 0.109 mi.  
 575 ft.**

**HAVA LIBERMAN  
 433 ELWOOD AVENUE  
 OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1026715385  
 CAC003103802**

**Site 2 of 4 in cluster I**

**Relative:  
 Higher  
 Actual:  
 68 ft.**

RCRA Listings:	
Date Form Received by Agency:	20210203
Handler Name:	Hava Liberman
Handler Address:	433 Elwood Avenue
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003103802
Contact Name:	HAVA LIBERMAN
Contact Address:	433 ELWOOD AVENUE
Contact City,State,Zip:	OAKLAND, CA 94610
Contact Telephone:	415-203-1587

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**HAVA LIBERMAN (Continued)**

**1026715385**

Contact Fax:	Not reported
Contact Email:	GISELLE.ESPIRITU@SYNERGYCOMPANIES.ORG
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	433 ELWOOD AVENUE
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Hava Liberman
Owner Type:	Other
Operator Name:	Hava Liberman
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20210226
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HAVA LIBERMAN (Continued)**

**1026715385**

Sub-Part P Indicator: No

Handler - Owner Operator:  
Owner/Operator Indicator: Operator  
Owner/Operator Name: HAVA LIBERMAN  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 433 ELWOOD AVENUE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 415-203-1587  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner  
Owner/Operator Name: HAVA LIBERMAN  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 433 ELWOOD AVENUE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 415-203-1587  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:  
Receive Date: 20210203  
Handler Name: HAVA LIBERMAN  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:  
NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:  
Violations: No Violations Found

Evaluation Action Summary:  
Evaluations: No Evaluations Found

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**D51**  
**NNW**  
**< 1/8**  
**0.109 mi.**  
**577 ft.**

**HOLLAND BROOKS BUILDERS**  
**472 JEAN ST #6**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1025848526**  
**CAC003028577**

**Site 2 of 3 in cluster D**

**Relative:**  
**Higher**  
**Actual:**  
**107 ft.**

RCRA Listings:	20190809
Date Form Received by Agency:	Holland Brooks Builders
Handler Name:	472 Jean St #6
Handler Address:	OAKLAND, CA 94610
Handler City,State,Zip:	CAC003028577
EPA ID:	NICK DEMOPOULOS
Contact Name:	472 JEAN ST #6
Contact Address:	OAKLAND, CA 94610
Contact City,State,Zip:	510-504-2738
Contact Telephone:	Not reported
Contact Fax:	AGARRISON@RMC.COM
Contact Email:	Not reported
Contact Title:	09
EPA Region:	Not reported
Land Type:	Not a generator, verified
Federal Waste Generator Description:	Not reported
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	472 JEAN ST #6
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Nick Demopoulos
Owner Type:	Other
Operator Name:	Nick Demopoulos
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HOLLAND BROOKS BUILDERS (Continued)**

**1025848526**

Human Exposure Controls Indicator: N/A  
Groundwater Controls Indicator: N/A  
Significant Non-Complier Universe: No  
Unaddressed Significant Non-Complier Universe: No  
Addressed Significant Non-Complier Universe: No  
Significant Non-Complier With a Compliance Schedule Universe: No  
Financial Assurance Required: Not reported  
Handler Date of Last Change: 20190910  
Recognized Trader-Importer: No  
Recognized Trader-Exporter: No  
Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Owner  
Owner/Operator Name: NICK DEMOPOULOS  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 472 JEAN ST #6  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-504-2738  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator  
Owner/Operator Name: NICK DEMOPOULOS  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 472 JEAN ST #6  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-504-2738  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20190809  
Handler Name: HOLLAND BROOKS BUILDERS  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**HOLLAND BROOKS BUILDERS (Continued)**

**1025848526**

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
 NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**D52**  
**NNW**  
 < 1/8  
 0.109 mi.  
 577 ft.

**472 JEAN A2, LP**  
**472 JEAN STREET #4**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1026800153**  
**CAC003112025**

**Site 3 of 3 in cluster D**

**Relative:**  
**Higher**  
**Actual:**  
**107 ft.**

RCRA Listings:

Date Form Received by Agency:	20210326
Handler Name:	472 Jean A2, Lp
Handler Address:	472 Jean Street #4
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003112025
Contact Name:	472 JEAN A2, LP
Contact Address:	472 JEAN STREET #4
Contact City,State,Zip:	OAKLAND, CA 94610
Contact Telephone:	510-378-2076
Contact Fax:	Not reported
Contact Email:	ALONDRA.DIAZ@SYNERGYCOMPANIES.ORG
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	472 JEAN STREET #4
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	472 Jean A2, Lp
Owner Type:	Other
Operator Name:	472 Jean A2, Lp
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**472 JEAN A2, LP (Continued)**

**1026800153**

Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20210415
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name: 472 JEAN A2, LP	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	472 JEAN STREET #4
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-378-2076
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name: 472 JEAN A2, LP	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	472 JEAN STREET #4
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-378-2076
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**472 JEAN A2, LP (Continued)**

**1026800153**

Historic Generators:

Receive Date:	20210326
Handler Name:	472 JEAN A2, LP
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
-------------	---------------------

Evaluation Action Summary:

Evaluations:	No Evaluations Found
--------------	----------------------

**H53**  
**SSE**  
 < 1/8  
 0.111 mi.  
 588 ft.  
 Relative:  
 Lower  
 Actual:  
 18 ft.

**LIBERTY CLEANERS**  
**755 GRAND AVE**  
**OAKLAND, CA**  
 Site 4 of 5 in cluster H

**EDR Hist Cleaner**    **1009143083**  
 N/A

EDR Hist Cleaner

Year:	Name:	Type:
1925	LIBERTY CLEANERS	CLEANERS DYERS AND PRESSERS

**F54**  
**ENE**  
 < 1/8  
 0.121 mi.  
 641 ft.  
 Relative:  
 Lower  
 Actual:  
 10 ft.

**PRIDE CLEANERS**  
**3401 GRAND AVE**  
**OAKLAND, CA 94610**  
 Site 5 of 16 in cluster F

**RCRA-SQG**    **1000185498**  
**FINDS**    **CAD981669666**  
**ECHO**  
**DRYCLEANERS**  
**EMI**  
**HWTS**  
**HAZNET**  
**CERS**

RCRA Listings:

Date Form Received by Agency:	19861120
Handler Name:	Pride Cleaners
Handler Address:	Grand Ave
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAD981669666
Contact Name:	ENVIRONMENTAL MANAGER
Contact Address:	3401 GRAND AVE
Contact City,State,Zip:	OAKLAND, CA 94610

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**PRIDE CLEANERS (Continued)**

**1000185498**

Contact Telephone:	Not reported
Contact Fax:	Not reported
Contact Email:	Not reported
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Small Quantity Generator
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Ca
State District:	2
Mailing Address:	GRAND AVE
Mailing City, State, Zip:	OAKLAND, CA 94610
Owner Name:	Kelly Howard W & Son Inc
Owner Type:	Private
Operator Name:	Not Required
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20000915
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No

Map ID  
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MAP FINDINGS

Site

Database(s)

EDR ID Number  
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**PRIDE CLEANERS (Continued)**

**1000185498**

Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:  
Owner/Operator Indicator: Operator  
Owner/Operator Name: NOT REQUIRED  
Legal Status: Private  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: NOT REQUIRED  
Owner/Operator City,State,Zip: NOT REQUIRED, ME 99999  
Owner/Operator Telephone: 415-555-1212  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner  
Owner/Operator Name: KELLY HOWARD W & SON INC  
Legal Status: Private  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: NOT REQUIRED  
Owner/Operator City,State,Zip: NOT REQUIRED, ME 99999  
Owner/Operator Telephone: 415-555-1212  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:  
Receive Date: 19861120  
Handler Name: PRIDE CLEANERS  
Federal Waste Generator Description: Small Quantity Generator  
State District Owner: Ca  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:  
NAICS Codes: No NAICS Codes Found

Facility Has Received Notices of Violations:  
Violations: No Violations Found

Evaluation Action Summary:  
Evaluations: No Evaluations Found

FINDS:

Map ID  
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MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIDE CLEANERS (Continued)**

**1000185498**

Registry ID: 110001184744

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:

THE EMISSION INVENTORY SYSTEM (EIS) MAINTAINS AN INVENTORY OF LARGE STATIONARY SOURCES AND VOLUNTARILY-REPORTED SMALLER SOURCES OF AIR POINT POLLUTANT EMITTERS. IT CONTAINS INFORMATION ABOUT FACILITY SITES AND THEIR PHYSICAL LOCATION, EMISSIONS UNITS, EMISSIONS PROCESSES, RELEASE POINTS, CONTROL APPROACHES, AND REGULATIONS. FACILITY INVENTORY DATA ARE KEPT SEPARATE FROM THE EMISSIONS DATA AND HAVE STABLE IDENTIFIERS TO IMPROVE CONTINUITY FROM YEAR TO YEAR AND TO HELP IDENTIFY DUPLICATE OR MISSING FACILITIES

The Resource Conservation and Recovery Act Information System (RCRAInfo) is EPA's comprehensive information system in support of the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. It tracks many types of information about generators, transporters, treaters, storers, and disposers of hazardous waste.

California's Hazardous Waste Tracking System Data Mart (HWTS-DATAMART) provides information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: 1000185498  
Registry ID: 110001184744  
DFR URL: <http://echo.epa.gov/detailed-facility-report?fid=110001184744>  
Name: PRIDE CLEANERS  
Address: 3401 GRAND AVENUE  
City,State,Zip: OAKLAND, CA 94610

DRYCLEAN BAY AREA DIST:

Facility ID: 4364  
Name: PRIDE CLEANERS  
Address: 3401 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610-2013  
NAICS Code: 812320  
Facility Status: Registered  
Device Name: Renzacci 60lb Petroleum Closed Loop Machine [REN60P]  
Drum Capacity: 60  
Device Status: Registered  
Facility Permit Expiration Date: 2019-03-01 00:00:00  
Name: Petroleum or Hydrocarbon Solvent, High Flash Point  
Annual Usage: 50

EMI:

Name: PRIDE CLEANERS  
Address: 3401 GRAND AVENUE  
City,State,Zip: OAKLAND, CA 946100000  
Year: 1990  
County Code: 1  
Air Basin: SF  
Facility ID: 4364  
Air District Name: BA

Map ID  
Direction  
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MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIDE CLEANERS (Continued)**

**1000185498**

SIC Code: 7216  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 2  
Reactive Organic Gases Tons/Yr: 0  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smllr Tons/Yr:0

Name: PRIDE CLEANERS  
Address: 3401 GRAND AVENUE  
City,State,Zip: OAKLAND, CA 946100000  
Year: 1996  
County Code: 1  
Air Basin: SF  
Facility ID: 4364  
Air District Name: BA  
SIC Code: 7216  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0  
Reactive Organic Gases Tons/Yr: 0  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smllr Tons/Yr:0

Name: PRIDE CLEANERS  
Address: 3401 GRAND AVENUE  
City,State,Zip: OAKLAND, CA 946100000  
Year: 1997  
County Code: 1  
Air Basin: SF  
Facility ID: 4364  
Air District Name: BA  
SIC Code: 7216  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0  
Reactive Organic Gases Tons/Yr: 0  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smllr Tons/Yr:0

Name: PRIDE CLEANERS  
Address: 3401 GRAND AVENUE  
City,State,Zip: OAKLAND, CA 946100000  
Year: 1998  
County Code: 1

Map ID  
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MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIDE CLEANERS (Continued)**

1000185498

Air Basin: SF  
Facility ID: 4364  
Air District Name: BA  
SIC Code: 7216  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0  
Reactive Organic Gases Tons/Yr: 0  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: PRIDE CLEANERS  
Address: 3401 GRAND AVENUE  
City,State,Zip: OAKLAND, CA 946100000  
Year: 1999  
County Code: 1  
Air Basin: SF  
Facility ID: 4364  
Air District Name: BA  
SIC Code: 7216  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 1  
Reactive Organic Gases Tons/Yr: 0  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: PRIDE CLEANERS  
Address: 3401 GRAND AVENUE  
City,State,Zip: OAKLAND, CA 946100000  
Year: 2000  
County Code: 1  
Air Basin: SF  
Facility ID: 4364  
Air District Name: BA  
SIC Code: 7216  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 1  
Reactive Organic Gases Tons/Yr: 0  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: PRIDE CLEANERS  
Address: 3401 GRAND AVENUE

Map ID  
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MAP FINDINGS

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Database(s)

EDR ID Number  
EPA ID Number

**PRIDE CLEANERS (Continued)**

1000185498

City,State,Zip: OAKLAND, CA 946100000  
Year: 2001  
County Code: 1  
Air Basin: SF  
Facility ID: 4364  
Air District Name: BA  
SIC Code: 7216  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0  
Reactive Organic Gases Tons/Yr: 0  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: PRIDE CLEANERS  
Address: 3401 GRAND AVENUE  
City,State,Zip: OAKLAND, CA 946100000  
Year: 2002  
County Code: 1  
Air Basin: SF  
Facility ID: 4364  
Air District Name: BA  
SIC Code: 7216  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0  
Reactive Organic Gases Tons/Yr: 0  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: PRIDE CLEANERS  
Address: 3401 GRAND AVENUE  
City,State,Zip: OAKLAND, CA 946100000  
Year: 2003  
County Code: 1  
Air Basin: SF  
Facility ID: 4364  
Air District Name: BA  
SIC Code: 7216  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0  
Reactive Organic Gases Tons/Yr: 0  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Map ID  
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**PRIDE CLEANERS (Continued)**

**1000185498**

Name: PRIDE CLEANERS  
Address: 3401 GRAND AVENUE  
City,State,Zip: OAKLAND, CA 946100000  
Year: 2004  
County Code: 1  
Air Basin: SF  
Facility ID: 4364  
Air District Name: BA  
SIC Code: 7216  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0.442  
Reactive Organic Gases Tons/Yr: 0  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: PRIDE CLEANERS  
Address: 3401 GRAND AVENUE  
City,State,Zip: OAKLAND, CA 946100000  
Year: 2005  
County Code: 1  
Air Basin: SF  
Facility ID: 4364  
Air District Name: BA  
SIC Code: 7216  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0  
Reactive Organic Gases Tons/Yr: 0  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: PRIDE CLEANERS  
Address: 3401 GRAND AVENUE  
City,State,Zip: OAKLAND, CA 946100000  
Year: 2006  
County Code: 1  
Air Basin: SF  
Facility ID: 4364  
Air District Name: BA  
SIC Code: 7216  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: .479  
Reactive Organic Gases Tons/Yr: 0  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0

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**PRIDE CLEANERS (Continued)**

**1000185498**

Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: PRIDE CLEANERS  
Address: 3401 GRAND AVENUE  
City,State,Zip: OAKLAND, CA  
Year: 2007  
County Code: 1  
Air Basin: SF  
Facility ID: 4364  
Air District Name: BA  
SIC Code: 7216  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: .489  
Reactive Organic Gases Tons/Yr: .3416154  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: PRIDE CLEANERS  
Address: 3401 GRAND AVENUE  
City,State,Zip: OAKLAND, CA 94610  
Year: 2008  
County Code: 1  
Air Basin: SF  
Facility ID: 4364  
Air District Name: BA  
SIC Code: 7216  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: .809  
Reactive Organic Gases Tons/Yr: .128  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: PRIDE CLEANERS  
Address: 3401 GRAND AVENUE  
City,State,Zip: OAKLAND, CA 94610  
Year: 2009  
County Code: 1  
Air Basin: SF  
Facility ID: 4364  
Air District Name: BA  
SIC Code: 7216  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0.4889999999999999  
Reactive Organic Gases Tons/Yr: 0

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**PRIDE CLEANERS (Continued)**

1000185498

Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smllr Tons/Yr:0

Name: PRIDE CLEANERS  
Address: 3401 GRAND AVENUE  
City,State,Zip: OAKLAND, CA 94610  
Year: 2010  
County Code: 1  
Air Basin: SF  
Facility ID: 4364  
Air District Name: BA  
SIC Code: 7216  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0.80900000000000005  
Reactive Organic Gases Tons/Yr: 0.46961540000000002  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smllr Tons/Yr:0

**HWTS:**

Name: PRIDE CLEANERS  
Address: 3401 GRAND AVENUE  
Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003244764  
Inactive Date: 10/31/2023  
Create Date: 08/01/2023  
Last Act Date: 11/01/2023  
Mailing Name: Not reported  
Mailing Address: 3401 GRAND AVENUE  
Mailing Address 2: Not reported  
Mailing City,State,Zip: OAKLAND, CA  
Owner Name: PRANAV SHERMA  
Owner Address: 3401 GRAND AVENUE  
Owner Address 2: Not reported  
Owner City,State,Zip: OAKLAND, CA 94610  
Owner Phone: 5104521892  
Owner Fax: Not reported  
Contact Name: PRANAV SHERMA  
Contact Address: 3401 GRAND AVENUE  
Contact Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94610  
Contact Phone: 5104521892  
Contact Fax: Not reported  
Facility Status: Not reported  
Facility Type: Not reported  
Category: Not reported  
Latitude: Not reported  
Longitude: Not reported

Map ID  
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MAP FINDINGS

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Database(s)

EDR ID Number  
EPA ID Number

**PRIDE CLEANERS (Continued)**

**1000185498**

Name: PRIDE CLEANERS  
Address: 3401 GRAND AVE  
Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAD981669666  
Inactive Date: Not reported  
Create Date: 04/10/1987  
Last Act Date: Not reported  
Mailing Name: Not reported  
Mailing Address: 3401 GRAND AVE  
Mailing Address 2: Not reported  
Mailing City,State,Zip: OAKLAND, CA 946100000  
Owner Name: CHUNG BAE KIM  
Owner Address: 3401 GRAND AVE  
Owner Address 2: Not reported  
Owner City,State,Zip: OAKLAND, CA 946100000  
Owner Phone: Not reported  
Owner Fax: Not reported  
Contact Name: CHUNG BAE KIM OWNER  
Contact Address: 3401 GRAND AVE  
Contact Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94610  
Contact Phone: Not reported  
Contact Fax: Not reported  
Facility Status: Active  
Facility Type: PERMANENT  
Category: FEDERAL  
Latitude: 37.813683  
Longitude: -122.246577

**HAZNET:**

Name: PRIDE CLEANERS  
Address: 3401 GRAND AVE  
Address 2: Not reported  
City,State,Zip: OAKLAND, CA 946100000  
Contact: CHUNG BAE KIM OWNER  
Telephone: 5104521892  
Mailing Name: Not reported  
Mailing Address: 3401 GRAND AVE

Year: 2001  
Gepaid: CAD981669666  
TSD EPA ID: CAT080014079  
CA Waste Code: 741 - Liquids with halogenated organic compounds >= 1,000 Mg./L  
Disposal Method: -  
Tons: 0

Year: 2001  
Gepaid: CAD981669666  
TSD EPA ID: CAT080014079  
CA Waste Code: 741 - Liquids with halogenated organic compounds >= 1,000 Mg./L  
Disposal Method: H01 - Transfer Station  
Tons: 0.2502

Year: 2000  
Gepaid: CAD981669666  
TSD EPA ID: CAD981397417

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MAP FINDINGS

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EDR ID Number  
EPA ID Number

**PRIDE CLEANERS (Continued)**

**1000185498**

CA Waste Code:	211 - Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method:	R01 - Recycler
Tons:	0.2209
Year:	2000
Gepaid:	CAD981669666
TSD EPA ID:	CAD981397417
CA Waste Code:	211 - Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method:	-
Tons:	0
Year:	1999
Gepaid:	CAD981669666
TSD EPA ID:	CAD981397417
CA Waste Code:	211 - Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method:	-
Tons:	0.1542
Year:	1999
Gepaid:	CAD981669666
TSD EPA ID:	CAD981397417
CA Waste Code:	-
Disposal Method:	R01 - Recycler
Tons:	0
Year:	1999
Gepaid:	CAD981669666
TSD EPA ID:	CAD981397417
CA Waste Code:	211 - Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method:	R01 - Recycler
Tons:	0.471
Year:	1998
Gepaid:	CAD981669666
TSD EPA ID:	CAD981397417
CA Waste Code:	211 - Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method:	R01 - Recycler
Tons:	0.3335
Year:	1998
Gepaid:	CAD981669666
TSD EPA ID:	CAD053044053
CA Waste Code:	741 - Liquids with halogenated organic compounds >= 1,000 Mg/L
Disposal Method:	H01 - Transfer Station
Tons:	0.195
Year:	1998
Gepaid:	CAD981669666
TSD EPA ID:	CAD981397417
CA Waste Code:	-
Disposal Method:	R01 - Recycler
Tons:	0

Map ID  
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MAP FINDINGS

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Database(s)

EDR ID Number  
EPA ID Number

**PRIDE CLEANERS (Continued)**

**1000185498**

[Click this hyperlink](#) while viewing on your computer to access 6 additional CA HAZNET: record(s) in the EDR Site Report.

Additional Info:

Year:	2001
Gen EPA ID:	CAD981669666
Shipment Date:	20010716
Creation Date:	10/1/2001 0:00:00
Receipt Date:	20010718
Manifest ID:	21184568
Trans EPA ID:	CAR000086777
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAT080014079
Trans Name:	Not reported
TSDf Alt EPA ID:	CAT080014079
TSDf Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	- Not reported
Quantity Tons:	0
Waste Quantity:	0
Quantity Unit:	Not reported
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20010716
Creation Date:	10/1/2001 0:00:00
Receipt Date:	20010718
Manifest ID:	21184568
Trans EPA ID:	CAR000086777
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAT080014079
Trans Name:	Not reported
TSDf Alt EPA ID:	CAT080014079
TSDf Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.1251
Waste Quantity:	30
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20010427

Map ID  
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MAP FINDINGS

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Database(s)

EDR ID Number  
EPA ID Number

**PRIDE CLEANERS (Continued)**

**1000185498**

Creation Date: 7/10/2001 0:00:00  
Receipt Date: 20010501  
Manifest ID: 20780343  
Trans EPA ID: CAR000086777  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAT080014079  
Trans Name: Not reported  
TSDf Alt EPA ID: CAT080014079  
TSDf Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: F002  
Meth Code: - Not reported  
Quantity Tons: 0  
Waste Quantity: 0  
Quantity Unit: Not reported  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20010427  
Creation Date: 7/10/2001 0:00:00  
Receipt Date: 20010501  
Manifest ID: 20780343  
Trans EPA ID: CAR000086777  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAT080014079  
Trans Name: Not reported  
TSDf Alt EPA ID: CAT080014079  
TSDf Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: F002  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.1251  
Waste Quantity: 30  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Additional Info:  
Year: 2000  
Gen EPA ID: CAD981669666

Shipment Date: 20000827  
Creation Date: 1/9/2001 0:00:00  
Receipt Date: 20001013  
Manifest ID: 20150737  
Trans EPA ID: CAL000072733  
Trans Name: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIDE CLEANERS (Continued)**

1000185498

Trans 2 EPA ID:	CAD008802903
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD981397417
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD981397417
TSDF Alt Name:	Not reported
Waste Code Description:	211 - Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.
RCRA Code:	F002
Meth Code:	- Not reported
Quantity Tons:	0
Waste Quantity:	0
Quantity Unit:	Not reported
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20000827
Creation Date:	1/9/2001 0:00:00
Receipt Date:	20001013
Manifest ID:	20150737
Trans EPA ID:	CAL000072733
Trans Name:	Not reported
Trans 2 EPA ID:	CAD008802903
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD981397417
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD981397417
TSDF Alt Name:	Not reported
Waste Code Description:	211 - Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.
RCRA Code:	F002
Meth Code:	R01 - Recycler
Quantity Tons:	0.1125
Waste Quantity:	27
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20000203
Creation Date:	8/9/2000 0:00:00
Receipt Date:	20000207
Manifest ID:	99705091
Trans EPA ID:	CAR000030841
Trans Name:	Not reported
Trans 2 EPA ID:	CAD076548635
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD981397417
Trans Name:	Not reported
TSDF Alt EPA ID:	CAD981397417
TSDF Alt Name:	Not reported
Waste Code Description:	211 - Halogenated solvents (chloroform, methyl chloride,

Map ID  
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MAP FINDINGS

Site

Database(s)

EDR ID Number  
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**PRIDE CLEANERS (Continued)**

**1000185498**

perchloroethylene, etc.  
RCRA Code: F002  
Meth Code: R01 - Recycler  
Quantity Tons: 0  
Waste Quantity: 0  
Quantity Unit: P  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20000203  
Creation Date: 8/9/2000 0:00:00  
Receipt Date: 20000207  
Manifest ID: 99705091  
Trans EPA ID: CAR000030841  
Trans Name: Not reported  
Trans 2 EPA ID: CAD076548635  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD981397417  
Trans Name: Not reported  
TSDf Alt EPA ID: CAD981397417  
TSDf Alt Name: Not reported  
Waste Code Description: 211 - Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)

RCRA Code: F002  
Meth Code: R01 - Recycler  
Quantity Tons: 0.1084  
Waste Quantity: 26  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Additional Info:  
Year: 1999  
Gen EPA ID: CAD981669666

Shipment Date: 19991119  
Creation Date: 8/2/2000 0:00:00  
Receipt Date: Not reported  
Manifest ID: 99093407  
Trans EPA ID: CAR000030841  
Trans Name: Not reported  
Trans 2 EPA ID: CAD063547996  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD981397417  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 211 - Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)

RCRA Code: F002  
Meth Code: - Not reported

Map ID  
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Distance  
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MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIDE CLEANERS (Continued)**

**1000185498**

Quantity Tons: 0.1542  
Waste Quantity: 37  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19990916  
Creation Date: 5/1/2000 0:00:00  
Receipt Date: 19990921  
Manifest ID: 99483963  
Trans EPA ID: CAR000030841  
Trans Name: Not reported  
Trans 2 EPA ID: CAD076548635  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD981397417  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: - Not reported  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0  
Waste Quantity: 0  
Quantity Unit: Not reported  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19990916  
Creation Date: 5/1/2000 0:00:00  
Receipt Date: 19990921  
Manifest ID: 99483963  
Trans EPA ID: CAR000030841  
Trans Name: Not reported  
Trans 2 EPA ID: CAD076548635  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD981397417  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 211 - Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.  
RCRA Code: F002  
Meth Code: R01 - Recycler  
Quantity Tons: 0.1167  
Waste Quantity: 28  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIDE CLEANERS (Continued)**

**1000185498**

Shipment Date: 19990610  
Creation Date: 11/22/1999 0:00:00  
Receipt Date: 19990622  
Manifest ID: 99093200  
Trans EPA ID: CAR000030841  
Trans Name: Not reported  
Trans 2 EPA ID: CAD063547996  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD981397417  
Trans Name: Not reported  
TSDf Alt EPA ID: CAD981397417  
TSDf Alt Name: Not reported  
Waste Code Description: - Not reported  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0  
Waste Quantity: 0  
Quantity Unit: Not reported  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19990610  
Creation Date: 11/22/1999 0:00:00  
Receipt Date: 19990622  
Manifest ID: 99093200  
Trans EPA ID: CAR000030841  
Trans Name: Not reported  
Trans 2 EPA ID: CAD063547996  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD981397417  
Trans Name: Not reported  
TSDf Alt EPA ID: CAD981397417  
TSDf Alt Name: Not reported  
Waste Code Description: 211 - Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)  
RCRA Code: F002  
Meth Code: R01 - Recycler  
Quantity Tons: 0.1167  
Waste Quantity: 28  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19990429  
Creation Date: 9/1/1999 0:00:00  
Receipt Date: 19990510  
Manifest ID: 99297428  
Trans EPA ID: CAR000030841  
Trans Name: Not reported  
Trans 2 EPA ID: CAD076548635  
Trans 2 Name: Not reported

Map ID  
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Distance  
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MAP FINDINGS

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Database(s)

EDR ID Number  
EPA ID Number

**PRIDE CLEANERS (Continued)**

**1000185498**

TSDF EPA ID: CAD981397417  
Trans Name: Not reported  
TSDF Alt EPA ID: Not reported  
TSDF Alt Name: Not reported  
Waste Code Description: - Not reported  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0  
Waste Quantity: 0  
Quantity Unit: Not reported  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19990429  
Creation Date: 9/1/1999 0:00:00  
Receipt Date: 19990510  
Manifest ID: 99297428  
Trans EPA ID: CAR000030841  
Trans Name: Not reported  
Trans 2 EPA ID: CAD076548635  
Trans 2 Name: Not reported  
TSDF EPA ID: CAD981397417  
Trans Name: Not reported  
TSDF Alt EPA ID: Not reported  
TSDF Alt Name: Not reported  
Waste Code Description: 211 - Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.  
RCRA Code: F002  
Meth Code: R01 - Recycler  
Quantity Tons: 0.1167  
Waste Quantity: 28  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19990224  
Creation Date: 6/3/1999 0:00:00  
Receipt Date: 19990308  
Manifest ID: 98761683  
Trans EPA ID: CAR000030841  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDF EPA ID: CAD981397417  
Trans Name: Not reported  
TSDF Alt EPA ID: Not reported  
TSDF Alt Name: Not reported  
Waste Code Description: - Not reported  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0

Map ID  
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Database(s)

EDR ID Number  
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**PRIDE CLEANERS (Continued)**

1000185498

Waste Quantity:	0
Quantity Unit:	Not reported
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19990224
Creation Date:	6/3/1999 0:00:00
Receipt Date:	19990308
Manifest ID:	98761683
Trans EPA ID:	CAR000030841
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD981397417
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	211 - Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.
RCRA Code:	F002
Meth Code:	R01 - Recycler
Quantity Tons:	0.1209
Waste Quantity:	29
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Additional Info:	
Year:	1998
Gen EPA ID:	CAD981669666
Shipment Date:	19981008
Creation Date:	1/21/1999 0:00:00
Receipt Date:	19981015
Manifest ID:	98442580
Trans EPA ID:	CAR000030841
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD981397417
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	- Not reported
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0
Waste Quantity:	0
Quantity Unit:	Not reported
Additional Code 1:	Not reported
Additional Code 2:	Not reported

Map ID  
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MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIDE CLEANERS (Continued)**

**1000185498**

Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19981008  
Creation Date: 1/21/1999 0:00:00  
Receipt Date: 19981015  
Manifest ID: 98442580  
Trans EPA ID: CAR000030841  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD981397417  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 211 - Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.  
RCRA Code: F002  
Meth Code: R01 - Recycler  
Quantity Tons: 0.1501  
Waste Quantity: 36  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19980608  
Creation Date: 9/15/1998 0:00:00  
Receipt Date: 19980611  
Manifest ID: 98112403  
Trans EPA ID: CAR000030841  
Trans Name: Not reported  
Trans 2 EPA ID: CAR000030841  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD981397417  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 211 - Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.  
RCRA Code: F002  
Meth Code: R01 - Recycler  
Quantity Tons: 0.1834  
Waste Quantity: 44  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19980608  
Creation Date: 9/15/1998 0:00:00  
Receipt Date: 19980611

Map ID  
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MAP FINDINGS

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Database(s)

EDR ID Number  
EPA ID Number

**PRIDE CLEANERS (Continued)**

**1000185498**

Manifest ID:	98112403
Trans EPA ID:	CAR000030841
Trans Name:	Not reported
Trans 2 EPA ID:	CAR000030841
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD981397417
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	- Not reported
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0
Waste Quantity:	0
Quantity Unit:	Not reported
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19980121
Creation Date:	3/31/1998 0:00:00
Receipt Date:	19980121
Manifest ID:	97362015
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.195
Waste Quantity:	390
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Additional Info:	
Year:	1997
Gen EPA ID:	CAD981669666
Shipment Date:	19970730
Creation Date:	12/11/1997 0:00:00
Receipt Date:	19970730
Manifest ID:	96666426
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported

Map ID  
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MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIDE CLEANERS (Continued)**

**1000185498**

TSDF EPA ID: CAD053044053  
Trans Name: Not reported  
TSDF Alt EPA ID: Not reported  
TSDF Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: F002  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.0975  
Waste Quantity: 195  
Quantity Unit: P  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19970305  
Creation Date: 6/26/1997 0:00:00  
Receipt Date: 19970305  
Manifest ID: 96373456  
Trans EPA ID: ILD984908202  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDF EPA ID: CAD053044053  
Trans Name: Not reported  
TSDF Alt EPA ID: Not reported  
TSDF Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: F002  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.0975  
Waste Quantity: 195  
Quantity Unit: P  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Additional Info:

Year: 1996  
Gen EPA ID: CAD981669666

Shipment Date: 19961015  
Creation Date: 5/30/1997 0:00:00  
Receipt Date: 19961015  
Manifest ID: 96479014  
Trans EPA ID: ILD984908202  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDF EPA ID: CAD053044053  
Trans Name: Not reported  
TSDF Alt EPA ID: Not reported  
TSDF Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIDE CLEANERS (Continued)**

**1000185498**

RCRA Code:	F002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0975
Waste Quantity:	195
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19960708
Creation Date:	5/20/1997 0:00:00
Receipt Date:	19960708
Manifest ID:	96097310
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD053044053
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0975
Waste Quantity:	195
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19960422
Creation Date:	5/21/1997 0:00:00
Receipt Date:	19960422
Manifest ID:	95948917
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD053044053
Trans Name:	Not reported
TSDf Alt EPA ID:	CAD053044053
TSDf Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0975
Waste Quantity:	195
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIDE CLEANERS (Continued)**

**1000185498**

Additional Code 5:	Not reported
Additional Info:	
Year:	1995
Gen EPA ID:	CAD981669666
Shipment Date:	19951109
Creation Date:	7/26/1996 0:00:00
Receipt Date:	19951109
Manifest ID:	92372059
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0975
Waste Quantity:	195
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19950821
Creation Date:	4/3/1996 0:00:00
Receipt Date:	19950821
Manifest ID:	95633726
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0975
Waste Quantity:	195
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19950503
Creation Date:	4/2/1996 0:00:00
Receipt Date:	19950503

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIDE CLEANERS (Continued)**

**1000185498**

Manifest ID: 95518012  
Trans EPA ID: ILD984908202  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDF EPA ID: CAD053044053  
Trans Name: Not reported  
TSDF Alt EPA ID: CAD053044053  
TSDF Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: F002  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.0975  
Waste Quantity: 195  
Quantity Unit: P  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19950214  
Creation Date: 3/29/1996 0:00:00  
Receipt Date: 19950214  
Manifest ID: 95050409  
Trans EPA ID: ILD984908202  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDF EPA ID: CAD053044053  
Trans Name: Not reported  
TSDF Alt EPA ID: CAD053044053  
TSDF Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: F002  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.0975  
Waste Quantity: 195  
Quantity Unit: P  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Additional Info:  
Year: 1994  
Gen EPA ID: CAD981669666

Shipment Date: 19941116  
Creation Date: 3/28/1996 0:00:00  
Receipt Date: 19941116  
Manifest ID: 93765148  
Trans EPA ID: ILD984908202  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported

Map ID  
Direction  
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MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIDE CLEANERS (Continued)**

**1000185498**

TSDF EPA ID: CAD053044053  
Trans Name: Not reported  
TSDF Alt EPA ID: CAD053044053  
TSDF Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: F002  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.0975  
Waste Quantity: 195  
Quantity Unit: P  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19940824  
Creation Date: 3/26/1996 0:00:00  
Receipt Date: 19940824  
Manifest ID: 93466491  
Trans EPA ID: ILD984908202  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDF EPA ID: CAD053044053  
Trans Name: Not reported  
TSDF Alt EPA ID: CAD053044053  
TSDF Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: F002  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.0675  
Waste Quantity: 135  
Quantity Unit: P  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19940616  
Creation Date: 3/26/1996 0:00:00  
Receipt Date: 19940616  
Manifest ID: 93646484  
Trans EPA ID: ILD984908202  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDF EPA ID: CAD053044053  
Trans Name: Not reported  
TSDF Alt EPA ID: CAD053044053  
TSDF Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: F002  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.0975  
Waste Quantity: 195

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIDE CLEANERS (Continued)**

**1000185498**

Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19940310
Creation Date:	10/5/1995 0:00:00
Receipt Date:	19940310
Manifest ID:	93545406
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD053044053
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0975
Waste Quantity:	195
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Additional Info:	
Year:	1993
Gen EPA ID:	CAD981669666
Shipment Date:	19931215
Creation Date:	9/14/1995 0:00:00
Receipt Date:	19931215
Manifest ID:	92610847
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD053044053
Trans Name:	Not reported
TSDf Alt EPA ID:	CAD053044053
TSDf Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	F002
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0675
Waste Quantity:	135
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**PRIDE CLEANERS (Continued)**

**1000185498**

Additional Code 5: Not reported

Shipment Date: 19930824  
 Creation Date: 9/11/1995 0:00:00  
 Receipt Date: 19930824  
 Manifest ID: 92610829  
 Trans EPA ID: ILD984908202  
 Trans Name: Not reported  
 Trans 2 EPA ID: Not reported  
 Trans 2 Name: Not reported  
 TSDf EPA ID: CAD053044053  
 Trans Name: Not reported  
 TSDf Alt EPA ID: CAD053044053  
 TSDf Alt Name: Not reported  
 Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
 RCRA Code: F002  
 Meth Code: H01 - Transfer Station  
 Quantity Tons: 0.0975  
 Waste Quantity: 195  
 Quantity Unit: P  
 Additional Code 1: Not reported  
 Additional Code 2: Not reported  
 Additional Code 3: Not reported  
 Additional Code 4: Not reported  
 Additional Code 5: Not reported

**CERS:**

Name: PRIDE CLEANERS  
 Address: 3401 GRAND AVENUE  
 City,State,Zip: OAKLAND, CA 94610-2013  
 Site ID: 488097  
 CERS ID: 110001184744  
 CERS Description: US EPA Air Emission Inventory System (EIS)

**Affiliation:**

Affiliation Type Desc: Environmental Contact  
 Entity Name: ENVIR MGMT  
 Entity Title: Not reported  
 Affiliation Address: 3401 GRAND AVE  
 Affiliation City: OAKLAND  
 Affiliation State: CA  
 Affiliation Country: Not reported  
 Affiliation Zip: Not reported  
 Affiliation Phone: ,

**F55**  
**ENE**  
 < 1/8  
 0.121 mi.  
 641 ft.

**PRIDE CLEANERS**  
**3401 GRAND AVE**  
**OAKLAND, CA**  
**Site 6 of 16 in cluster F**

**EDR Hist Cleaner 1009140513**  
**N/A**

**Relative:**  
**Lower**

EDR Hist Cleaner

**Actual:**  
**10 ft.**

Year:	Name:	Type:
1967	PRIDE CLEANERS	CLEANERS AND DYERS
1969	PRIDE CLEANERS	Drycleaning Plants, Except Rugs
1970	PRIDE CLEANERS	Drycleaning Plants, Except Rugs

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**PRIDE CLEANERS (Continued)**

**1009140513**

1971	PRIDE CLEANERS	Drycleaning Plants, Except Rugs
1976	PRIDE CLEANERS	Garment Pressing And Cleaners' Agents
1977	PRIDE CLEANERS	Garment Pressing And Cleaners' Agents
1978	PRIDE CLEANERS	Garment Pressing And Cleaners' Agents
1979	PRIDE CLEANERS	Garment Pressing And Cleaners' Agents
1980	PRIDE CLEANERS	Garment Pressing And Cleaners' Agents
1982	PRIDE CLEANERS	Garment Pressing And Cleaners' Agents
1983	PRIDE CLEANERS	Garment Pressing And Cleaners' Agents
1985	PRIDE CLEANERS	Garment Pressing And Cleaners' Agents
1986	PRIDE CLEANERS	Garment Pressing And Cleaners' Agents
1987	PRIDE CLEANERS	Garment Pressing And Cleaners' Agents
1988	PRIDE CLEANERS	Garment Pressing And Cleaners' Agents
1989	PRIDE CLEANERS	Laundry And Drycleaner Agents
1990	PRIDE CLEANERS	Laundry And Drycleaner Agents
1991	PRIDE CLEANERS	Laundry And Drycleaner Agents
1992	PRIDE CLEANERS	Laundry And Drycleaner Agents
1993	PRIDE CLEANERS	Laundry And Drycleaner Agents
1996	PRIDE CLEANERS	Drycleaning Plants, Except Rugs
1997	PRIDE CLEANERS	Drycleaning Plants, Except Rugs
1998	PRIDE CLEANERS	Drycleaning Plants, Except Rugs
1999	PRIDE CLEANERS	Drycleaning Plants, Except Rugs
2000	PRIDE CLEANERS	Drycleaning Plants, Except Rugs
2001	PRIDE CLEANERS	Drycleaning Plants, Except Rugs
2002	PRIDE CLEANERS	Drycleaning Plants, Except Rugs
2003	PRIDE CLEANERS	Drycleaning Plants, Except Rugs
2004	PRIDE CLEANERS	Drycleaning Plants, Except Rugs
2005	PRIDE CLEANERS	Drycleaning Plants, Except Rugs
2006	PRIDE CLEANERS	Drycleaning Plants, Except Rugs
2007	PRIDE CLEANERS	Drycleaning Plants, Except Rugs
2008	PRIDE CLEANERS	Drycleaning Plants, Except Rugs
2009	PRIDE CLEANERS	Drycleaning Plants, Except Rugs
2010	PRIDE CLEANERS	Drycleaning Plants, Except Rugs
2011	PRIDE CLEANERS	Drycleaning Plants, Except Rugs
2012	PRIDE CLEANERS	Drycleaning Plants, Except Rugs
2013	PRIDE CLEANERS	Drycleaning Plants, Except Rugs
2014	PRIDE CLEANERS	Drycleaning Plants, Except Rugs

**F56**  
**ENE**  
 < 1/8  
 0.121 mi.  
 641 ft.

**PRIDE CLEANERS**  
**3401 GRAND AVENUE**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**    **1028884140**  
**CAC003244764**

**Site 7 of 16 in cluster F**

**Relative:**  
**Lower**  
**Actual:**  
**10 ft.**

RCRA Listings:	20230801
Date Form Received by Agency:	Pride Cleaners
Handler Name:	3401 Grand Avenue
Handler Address:	OAKLAND, CA 94610
Handler City,State,Zip:	CAC003244764
EPA ID:	PRANAV SHERMA
Contact Name:	3401 GRAND AVENUE
Contact Address:	OAKLAND, CA 94610
Contact City,State,Zip:	510-452-1892
Contact Telephone:	Not reported
Contact Fax:	KARENK@TECHNICHEM.COM
Contact Email:	Not reported
Contact Title:	09
EPA Region:	Not reported
Land Type:	

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**PRIDE CLEANERS (Continued)**

**1028884140**

Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	3401 GRAND AVENUE
Mailing City, State, Zip:	OAKLAND, CA 94610
Owner Name:	Pranav Sherma
Owner Type:	Other
Operator Name:	Pranav Sherma
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20230801
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:

Operator

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIDE CLEANERS (Continued)**

**1028884140**

Owner/Operator Name: PRANAV SHERMA  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 3401 GRAND AVENUE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-452-1892  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner  
Owner/Operator Name: PRANAV SHERMA  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 3401 GRAND AVENUE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-452-1892  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:  
Receive Date: 20230801  
Handler Name: PRIDE CLEANERS  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:  
NAICS Code: 812320  
NAICS Description: DRYCLEANING AND LAUNDRY SERVICES (EXCEPT COIN-OPERATED)

Facility Has Received Notices of Violations:  
Violations: No Violations Found

Evaluation Action Summary:  
Evaluations: No Evaluations Found

MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Site

Database(s)

EDR ID Number  
EPA ID Number

**F57**      **WEINTROB ABR**      **EDR Hist Cleaner**      **1009141028**  
**ENE**      **3405 GRAND AVE**      **N/A**  
**< 1/8**      **OAKLAND, CA**  
**0.124 mi.**  
**655 ft.**      **Site 8 of 16 in cluster F**  
**Relative:**      EDR Hist Cleaner  
**Lower**  
**Actual:**      Year:      Name:      Type:  
**10 ft.**      1933      WEINTROB ABR      CLOTHES PRESSERS AND CLEANERS

**J58**      **RAJ TEDDY**      **RCRA NonGen / NLR**      **1025830018**  
**SW**      **520 VAN BUREN AVENUE #429**      **CAC003009572**  
**1/8-1/4**      **OAKLAND, CA 94610**  
**0.130 mi.**  
**685 ft.**      **Site 1 of 5 in cluster J**  
**Relative:**      RCRA Listings:  
**Higher**      Date Form Received by Agency:      20190410  
**Actual:**      Handler Name:      Raj Teddy  
**52 ft.**      Handler Address:      520 Van Buren Avenue #429  
                          Handler City,State,Zip:      OAKLAND, CA 94610  
                          EPA ID:      CAC003009572  
                          Contact Name:      RAJ TEDDY  
                          Contact Address:      7251 MUSCAT PLACE  
                          Contact City,State,Zip:      HANFORD, CA 93230  
                          Contact Telephone:      559-587-1318  
                          Contact Fax:      Not reported  
                          Contact Email:      TIFFANY.RELIANCE@GMAIL.COM  
                          Contact Title:      Not reported  
                          EPA Region:      09  
                          Land Type:      Not reported  
                          Federal Waste Generator Description:      Not a generator, verified  
                          Non-Notifier:      Not reported  
                          Biennial Report Cycle:      Not reported  
                          Accessibility:      Not reported  
                          Active Site Indicator:      Handler Activities  
                          State District Owner:      Not reported  
                          State District:      Not reported  
                          Mailing Address:      7251 MUSCAT PLACE  
                          Mailing City,State,Zip:      HANFORD, CA 93230  
                          Owner Name:      Raj Teddy  
                          Owner Type:      Other  
                          Operator Name:      Raj Teddy  
                          Operator Type:      Other  
                          Short-Term Generator Activity:      No  
                          Importer Activity:      No  
                          Mixed Waste Generator:      No  
                          Transporter Activity:      No  
                          Transfer Facility Activity:      No  
                          Recycler Activity with Storage:      No  
                          Small Quantity On-Site Burner Exemption:      No  
                          Smelting Melting and Refining Furnace Exemption:      No  
                          Underground Injection Control:      No  
                          Off-Site Waste Receipt:      No  
                          Universal Waste Indicator:      Yes  
                          Universal Waste Destination Facility:      Yes  
                          Federal Universal Waste:      No  
                          Active Site State-Reg Handler:      ---  
                          Federal Facility Indicator:      Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**RAJ TEDDY (Continued)**

**1025830018**

Hazardous Secondary Material Indicator: N  
Sub-Part K Indicator: Not reported  
2018 GPRA Permit Baseline: Not on the Baseline  
2018 GPRA Renewals Baseline: Not on the Baseline  
202 GPRA Corrective Action Baseline: No  
Subject to Corrective Action Universe: No  
Non-TSDFs Where RCRA CA has Been Imposed Universe: No  
Corrective Action Priority Ranking: No NCAPS ranking  
Environmental Control Indicator: No  
Institutional Control Indicator: No  
Human Exposure Controls Indicator: N/A  
Groundwater Controls Indicator: N/A  
Significant Non-Complier Universe: No  
Unaddressed Significant Non-Complier Universe: No  
Addressed Significant Non-Complier Universe: No  
Significant Non-Complier With a Compliance Schedule Universe: No  
Financial Assurance Required: Not reported  
Handler Date of Last Change: 20190626  
Recognized Trader-Importer: No  
Recognized Trader-Exporter: No  
Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Operator  
Owner/Operator Name: RAJ TEDDY  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 7251 MUSCAT PLACE  
Owner/Operator City,State,Zip: HANFORD, CA 93230  
Owner/Operator Telephone: 559-587-1318  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner  
Owner/Operator Name: RAJ TEDDY  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 7251 MUSCAT PLACE  
Owner/Operator City,State,Zip: HANFORD, CA 93230  
Owner/Operator Telephone: 559-587-1318  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20190410  
Handler Name: RAJ TEDDY  
Federal Waste Generator Description: Not a generator, verified

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**RAJ TEDDY (Continued)**

**1025830018**

State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
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Evaluation Action Summary:

Evaluations:	No Evaluations Found
--------------	----------------------

**I59**  
**NE**  
**1/8-1/4**  
**0.135 mi.**  
**711 ft.**

**FAITH DARLING**  
**509 VALLE VISTA AVENUE**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1028893237**  
**CAC003254507**

**Site 3 of 4 in cluster I**

**Relative:**  
**Higher**  
**Actual:**  
**56 ft.**

RCRA Listings:

Date Form Received by Agency:	20231002
Handler Name:	Faith Darling
Handler Address:	509 Valle Vista Avenue
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003254507
Contact Name:	FAITH DARLING
Contact Address:	509 VALLE VISTA AVENUE
Contact City,State,Zip:	OAKLAND, CA 94610
Contact Telephone:	510-993-6208
Contact Fax:	Not reported
Contact Email:	GISELLE.ESPIRITU@SYNERGYCOMPANIES.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	509 VALLE VISTA AVENUE
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Faith Darling
Owner Type:	Other
Operator Name:	Faith Darling
Operator Type:	Other
Short-Term Generator Activity:	No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**FAITH DARLING (Continued)**

**1028893237**

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20231002
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

**Handler - Owner Operator:**

Owner/Operator Indicator:	Owner
Owner/Operator Name: FAITH DARLING	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	509 VALLE VISTA AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-993-6208
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name: FAITH DARLING	
Legal Status:	Other

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**FAITH DARLING (Continued)**

**1028893237**

Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 509 VALLE VISTA AVENUE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-993-6208  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20231002  
Handler Name: FAITH DARLING  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

J60  
SSW  
1/8-1/4  
0.138 mi.  
727 ft.

**UNOCAL**  
**411 MACARTHUR BLVD W**  
**OAKLAND, CA 94609**

**Site 2 of 5 in cluster J**

**LUST**  
**Alameda County CS**  
**HIST CORTESE**

**S104660359**  
**N/A**

**Relative:**  
**Lower**

LUST REG 2:

**Actual:**  
**46 ft.**

Region: 2  
Facility Id: 01-1597  
Facility Status: Preliminary site assessment underway  
Case Number: 3627  
How Discovered: Tank Closure  
Leak Cause: Structure Failure  
Leak Source: Tank  
Date Leak Confirmed: Not reported  
Oversight Program: LUST  
Prelim. Site Assessment Wokplan Submitted: Not reported  
Preliminary Site Assesment Began: 10/31/1989  
Pollution Characterization Began: Not reported  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNOCAL (Continued)**

**S104660359**

Alameda County CS:

Name: 411 MACARTHUR REDEVELOPMENT  
Address: 411 MACARTHUR BLVD  
City,State,Zip: OAKLAND, CA 94609-  
Status: Pollution Characterization  
Record Id: RO0003192  
PE: 5502  
Facility Status: Pollution Charaterization  
Latitude: Not reported  
Longitude: Not reported

HIST CORTESE:

edr\_fname: UNOCAL  
edr\_fadd1: 411 MACARTHUR  
City,State,Zip: OAKLAND, CA 94609  
Region: CORTESE  
Facility County Code: 1  
Reg By: LTNKA  
Reg Id: 01-1597

J61  
SSW  
1/8-1/4  
0.138 mi.  
728 ft.

**TIM HAGGERTY**  
**525 VAN BUREN AVE**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR 1025851556**  
**CAC003031675**

**Site 3 of 5 in cluster J**

**Relative:**  
**Higher**  
**Actual:**  
**48 ft.**

RCRA Listings:

Date Form Received by Agency: 20190829  
Handler Name: Tim Haggerty  
Handler Address: 525 Van Buren Ave  
Handler City,State,Zip: OAKLAND, CA 94610-3518  
EPA ID: CAC003031675  
Contact Name: TIM HAGGERTY  
Contact Address: 525 VAN BUREN AVE  
Contact City,State,Zip: OAKLAND, CA 94610-3518  
Contact Telephone: 510-681-9080  
Contact Fax: Not reported  
Contact Email: RUTH.DELGADILLO@SYNERGYCOMPANIES.ORG  
Contact Title: Not reported  
EPA Region: 09  
Land Type: Not reported  
Federal Waste Generator Description: Not a generator, verified  
Non-Notifier: Not reported  
Biennial Report Cycle: Not reported  
Accessibility: Not reported  
Active Site Indicator: Not reported  
State District Owner: Not reported  
State District: Not reported  
Mailing Address: 525 VAN BUREN AVE  
Mailing City,State,Zip: OAKLAND, CA 94610-3518  
Owner Name: Tim Haggerty  
Owner Type: Other  
Operator Name: Tim Haggerty  
Operator Type: Other  
Short-Term Generator Activity: No  
Importer Activity: No  
Mixed Waste Generator: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**TIM HAGGERTY (Continued)**

**1025851556**

Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20190910
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	TIM HAGGERTY
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	525 VAN BUREN AVE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610-3518
Owner/Operator Telephone:	510-681-9080
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	TIM HAGGERTY
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**TIM HAGGERTY (Continued)**

**1025851556**

Owner/Operator Address: 525 VAN BUREN AVE  
 Owner/Operator City,State,Zip: OAKLAND, CA 94610-3518  
 Owner/Operator Telephone: 510-681-9080  
 Owner/Operator Telephone Ext: Not reported  
 Owner/Operator Fax: Not reported  
 Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20190829  
 Handler Name: TIM HAGGERTY  
 Federal Waste Generator Description: Not a generator, verified  
 State District Owner: Not reported  
 Large Quantity Handler of Universal Waste: No  
 Recognized Trader Importer: No  
 Recognized Trader Exporter: No  
 Spent Lead Acid Battery Importer: No  
 Spent Lead Acid Battery Exporter: No  
 Current Record: Yes  
 Non Storage Recycler Activity: Not reported  
 Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
 NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**F62**  
**ENE**  
**1/8-1/4**  
**0.141 mi.**  
**745 ft.**

**GRAND MOBIL**  
**3374 GRAND AVE**  
**OAKLAND, CA 94610**  
**Site 9 of 16 in cluster F**

**UST U004343895**  
**N/A**

**Relative:**  
**Lower**  
**Actual:**  
**15 ft.**

UST:  
 Name: GRAND MOBIL  
 Address: 3374 GRAND AVE  
 City,State,Zip: OAKLAND, CA 94610  
 Facility ID: 10601803  
 Permitting Agency: Alameda County Environmental Health  
 CERSID: 10601803  
 Latitude: 37.8138300  
 Longitude: -122.246090  
 Owner type: Non-Government  
 Facility type: Motor Vehicle Fueling  
 Num of inuse ust: Not reported  
 Num of closed ust: 0  
 Num of oos ust: 0  
 Epa region: 9  
 Tribal lands: No  
 Tank owner name: CHRISTINA PHAM  
 Tank owner mailing address: 3374 GRAND AVENUE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**GRAND MOBIL (Continued)**

**U004343895**

Tank owner mailing city: OAKLAND  
Tank owner mailing zip: 94610  
Tank owner mailing state: CA  
Tank operator name: CHRISTINA PHAM  
Tank operator mailing address: 3374 GRAND AVENUE  
Tank operator mailing city: OAKLAND  
Tank operator mailing zip: 94610  
Tank operator mailing state: CA  
Tankidnumber: Super  
Tank status: Renewal Permit  
Tank configuration: Stand Alone Tank  
Tank closure date: Not reported  
Tank installation date: 1/1/1900 12:00:00 AM  
Tank num of compartments: 1  
Tank contents: Premium Unleaded  
Tank capacity gallons: 12000  
Tank type: Single Wall  
Tank pc construction: Fiberglass  
Tank pwpiping construction: Fiberglass  
Tank piping type: Pressure  
Tank piping construction: Double Walled  
Tank sacrificial anode: No  
Tank cp impressed current: No  
Tank cp shutoff: Yes  
Tank alarms: No  
Tank ball float: No  
Tank spill bucket: Yes

Name: GRAND MOBIL  
Address: 3374 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610  
Facility ID: 10601803  
Permitting Agency: Alameda County Environmental Health  
CERSID: 10601803  
Latitude: 37.8138300  
Longitude: -122.246090  
Owner type: Non-Government  
Facility type: Motor Vehicle Fueling  
Num of inuse ust: Not reported  
Num of closed ust: 0  
Num of oos ust: 0  
Epa region: 9  
Tribal lands: No  
Tank owner name: CHRISTINA PHAM  
Tank owner mailing address: 3374 GRAND AVENUE  
Tank owner mailing city: OAKLAND  
Tank owner mailing zip: 94610  
Tank owner mailing state: CA  
Tank operator name: CHRISTINA PHAM  
Tank operator mailing address: 3374 GRAND AVENUE  
Tank operator mailing city: OAKLAND  
Tank operator mailing zip: 94610  
Tank operator mailing state: CA  
Tankidnumber: Regular  
Tank status: Renewal Permit  
Tank configuration: Stand Alone Tank  
Tank closure date: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**GRAND MOBIL (Continued)**

**U004343895**

Tank installation date: 1/1/1900 12:00:00 AM  
 Tank num of compartments: 1  
 Tank contents: Regular Unleaded  
 Tank capacity gallons: 12000  
 Tank type: Single Wall  
 Tank pc construction: Fiberglass  
 Tank pwpiping construction: Fiberglass  
 Tank piping type: Pressure  
 Tank piping construction: Double Walled  
 Tank sacrificial anode: No  
 Tank cp impressed current: No  
 Tank cp shutoff: Yes  
 Tank alarms: No  
 Tank ball float: No  
 Tank spill bucket: Yes

**F63**  
**ENE**  
**1/8-1/4**  
**0.141 mi.**  
**745 ft.**

**GRAND MOBIL**  
**3374 GRAND AVE**  
**OAKLAND, CA 94610**  
**Site 10 of 16 in cluster F**

**UST FINDER 1028192510**  
**N/A**

**Relative:**  
**Lower**  
**Actual:**  
**15 ft.**

**UST FINDER:**  
 Object ID: 736741  
 Facility ID: CA10601803  
 Name: GRAND MOBIL  
 Address: 3374 GRAND AVE  
 City,State,Zip: OAKLAND, CA 94610  
 Address Match Type: PointAddress  
 Open USTs: 2  
 Closed USTs: Not reported  
 TOS USTs: Not reported  
 Population 1500ft: 3755  
 Private Wells 1500ft: 0  
 Within 100yr Floodplain: No  
 Land Use: Developed, High Intensity  
 Within SPA: Not reported  
 SPA PWS Facility ID: Not reported  
 SPA Water Type: Not reported  
 SPA Facility Type: Not reported  
 SPA HUC12: Not reported  
 Within WHPA: Not reported  
 WHPA PWS Facility ID: Not reported  
 WHPA Water Type: Not reported  
 WHPA Facility Type: Not reported  
 WHPA HUC12: Not reported  
 Facility Status: Open UST(s)  
 Date of Last Inspection: Not reported  
 EPA Region: 9  
 Tribe: Not reported  
 Coordinate Source: Geocode  
 X Coord: -122.246088983  
 Y Coord: 37.8138169920001  
 Latitude: 37.813816991548  
 Longitude: -122.246088982674

**UST FINDER:**  
 Object ID: 2273564

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**GRAND MOBIL (Continued)**

**1028192510**

Facility ID: CA10601803  
 Tank ID: CA10601803-001\_A Stand-alone Tank\_1  
 Tank Status: Open  
 Installation Date: Not reported  
 Removal Date: Not reported  
 Tank Capacity: 8000  
 Substances: Premium Unleaded  
 Tank Wall Type: Single Wall

Object ID: 2273565  
 Facility ID: CA10601803  
 Tank ID: CA10601803-002\_A Stand-alone Tank\_1  
 Tank Status: Open  
 Installation Date: Not reported  
 Removal Date: Not reported  
 Tank Capacity: 12000  
 Substances: Regular Unleaded  
 Tank Wall Type: Single Wall

**F64  
 ENE  
 1/8-1/4  
 0.141 mi.  
 745 ft.**

**GRAND MOBIL  
 3374 GRAND AVE  
 OAKLAND, CA**

**UST U003949145  
 N/A**

**Site 11 of 16 in cluster F**

**Relative:  
 Lower  
 Actual:  
 15 ft.**

ALAMEDA CO. UST:  
 Name: GRAND MOBIL  
 Address: 3374 GRAND AVE  
 City: OAKLAND  
 Facility ID: FA0321490  
 Facility Status: Active  
 Program Element: 4102  
 Description: UNDERGROUND STORAGE TANK 2 CONTAINERS  
 Inspection Date: 11/20/2024  
 Last Inspect Date: 11/09/2023  
 Closed: Not reported  
 Owner Name: CHRISTINA PHAM  
 Owner ID: OW0324597  
 Fstatus Decode: Open  
 Total Due: 0

**F65  
 ENE  
 1/8-1/4  
 0.141 mi.  
 745 ft.**

**UNION OIL SS #3443  
 3374 GRAND AVE  
 OAKLAND, CA 94610**

**CERS HAZ WASTE  
 SWEEPS UST  
 HIST UST  
 CERS TANKS  
 CA FID UST  
 CERS**

**S101624471  
 N/A**

**Site 12 of 16 in cluster F**

**Relative:  
 Lower  
 Actual:  
 15 ft.**

CERS HAZ WASTE:  
 Name: GRAND MOBIL  
 Address: 3374 GRAND AVE  
 City,State,Zip: OAKLAND, CA 94610  
 Site ID: 120348  
 CERS ID: 10601803  
 CERS Description: Hazardous Waste Generator

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNION OIL SS #3443 (Continued)**

**S101624471**

SWEEPS UST:  
Name: UNION OIL SS #3443  
Address: 3374 GRAND AVE  
City: OAKLAND  
Status: Active  
Comp Number: 31708  
Number: 9  
Board Of Equalization: 44-000051  
Referral Date: 07-01-85  
Action Date: Not reported  
Created Date: 02-29-88  
Owner Tank Id: 3443-1-1  
SWRCB Tank Id: 01-000-031708-000001  
Tank Status: A  
Capacity: 12000  
Active Date: 07-01-85  
Tank Use: M.V. FUEL  
STG: P  
Content: REG UNLEADED  
Number Of Tanks: 3

Name: UNION OIL SS #3443  
Address: 3374 GRAND AVE  
City: OAKLAND  
Status: Active  
Comp Number: 31708  
Number: 9  
Board Of Equalization: 44-000051  
Referral Date: 07-01-85  
Action Date: Not reported  
Created Date: 02-29-88  
Owner Tank Id: 3443-2-1  
SWRCB Tank Id: 01-000-031708-000002  
Tank Status: A  
Capacity: 12000  
Active Date: 07-01-85  
Tank Use: M.V. FUEL  
STG: P  
Content: REG UNLEADED  
Number Of Tanks: Not reported

Name: UNION OIL SS #3443  
Address: 3374 GRAND AVE  
City: OAKLAND  
Status: Active  
Comp Number: 31708  
Number: 9  
Board Of Equalization: 44-000051  
Referral Date: 07-01-85  
Action Date: Not reported  
Created Date: 02-29-88  
Owner Tank Id: 3443-4-1  
SWRCB Tank Id: 01-000-031708-000003  
Tank Status: A  
Capacity: 550  
Active Date: 07-01-85  
Tank Use: OIL

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNION OIL SS #3443 (Continued)**

**S101624471**

STG: W  
Content: WASTE OIL  
Number Of Tanks: Not reported

**HIST UST:**

Name: UNION OIL SS3443  
Address: 3374 GRAND AVENUE  
City,State,Zip: OAKLAND, CA 94610  
File Number: 00036483  
URL: <https://documents.geotracker.waterboards.ca.gov/ustpdfs/pdf/00036483.pdf>  
Region: Not reported  
Facility ID: Not reported  
Facility Type: Not reported  
Other Type: Not reported  
Contact Name: Not reported  
Telephone: Not reported  
Owner Name: Not reported  
Owner Address: Not reported  
Owner City,St,Zip: Not reported  
Total Tanks: Not reported  
  
Tank Num: Not reported  
Container Num: Not reported  
Year Installed: Not reported  
Tank Capacity: Not reported  
Tank Used for: Not reported  
Type of Fuel: Not reported  
Container Construction Thickness: Not reported  
Leak Detection: Not reported

[Click here for Geo Tracker PDF:](#)

**CERS TANKS:**

Name: GRAND MOBIL  
Address: 3374 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610  
Site ID: 120348  
CERS ID: 10601803  
CERS Description: Underground Storage Tank

**CA FID UST:**

Facility ID: 01002665  
Regulated By: UTNKA  
Regulated ID: 00031708  
Cortese Code: Not reported  
SIC Code: Not reported  
Facility Phone: 4158329605  
Mail To: Not reported  
Mailing Address: 3374 GRAND AVE  
Mailing Address 2: Not reported  
Mailing City,St,Zip: OAKLAND 94610  
Contact: Not reported  
Contact Phone: Not reported  
DUNs Number: Not reported  
NPDES Number: Not reported  
EPA ID: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNION OIL SS #3443 (Continued)**

**S101624471**

Comments: Not reported  
Status: Active

**CERS:**

Name: GRAND MOBIL  
Address: 3374 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610  
Site ID: 120348  
CERS ID: 10601803  
CERS Description: Chemical Storage Facilities

**Violations:**

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-12-2015  
Citation: 22 CCR 16 66266.130 - California Code of Regulations, Title 22, Chapter 16, Section(s) 66266.130  
Violation Description: Failure to properly handle, manage, label, and recycle used oil and fuel filters.  
Violation Notes: Returned to compliance on 11/12/2015. OBSERVATION: One black metal 55-gallon open top drum containing drained used oil filters missing accumulation start date on label. CORRECTIVE ACTION: Accumulation start date was entered at time of inspection.  
Violation Division: Alameda County Environmental Health  
Violation Program: HW  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-04-2019  
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)  
Violation Description: Failure to properly label hazardous waste accumulation containers and portable tanks with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.  
Violation Notes: Returned to compliance on 11/04/2019. The used oil tank was observed without the accumulation start date. Corrected on site. Ensure that the accumulation start date is on the tank.  
Violation Division: Alameda County Environmental Health  
Violation Program: HW  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-09-2017  
Citation: 23 CCR 16 2665 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2665  
Violation Description: Failure to comply with one or more of the following: Failure to install or maintain a liquid-tight spill bucket. Have a minimum capacity of five gallons. Have a functional drain valve or other method for the removal of liquid from the spill bucket/spill container. Be resistant to galvanic corrosion.  
Violation Notes: Returned to compliance on 11/13/2017. OBSERVATION: The Regular Unleaded direct bury spill container failed when tested. All spill containers shall have a minimum capacity of five gallons and be

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNION OIL SS #3443 (Continued)**

**S101624471**

capable of containing a spill or overfill until it is detected or cleaned up. CORRECTIVE ACTION: Immediately contact a properly licensed, trained, and certified contractor to repair or replace the spill container under permit and inspection of the CUPA. Since the spill container is a direct bury, red tag 0019 was affixed to prevent fuel input.

Violation Division: Alameda County Environmental Health  
Violation Program: UST  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-04-2019  
Citation: HSC 6.5 25160.2 - California Health and Safety Code, Chapter 6.5, Section(s) 25160.2

Violation Description: Failure of a generator of hazardous waste that meets the conditions to be transported on a consolidated manifest to comply with one or more of the required consolidated manifesting procedures and retain copies of receipts for three years.

Violation Notes: Returned to compliance on 11/20/2019. Owner/Operator failed to comply with one or more consolidated manifesting requirements. Manifests for the paper filters were not maintained onsite. Provide used oil filter manifests to ACDEH within 30 days. Continue to maintain the manifests and have three years of manifests onsite.

Violation Division: Alameda County Environmental Health  
Violation Program: HW  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-04-2019  
Citation: 22 CCR 12 66262.40(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.40(a)

Violation Description: Failure to keep a copy of each properly signed manifest for at least three years from the date the waste was accepted by the initial transporter. The manifest signed at the time the waste was accepted for transport shall be kept until receiving a signed copy from the designated facility which received the waste.

Violation Notes: Returned to compliance on 11/20/2019. Uniform Hazardous Waste Manifests for the paper used oil filters were not available at the time of inspection. Locate a copy of all manifests for the paper used oil filters and submit copies to the CUPA.

Violation Division: Alameda County Environmental Health  
Violation Program: HW  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-18-2014  
Citation: HSC 6.7 Multiple Sections - California Health and Safety Code, Chapter 6.7, Section(s) Multiple Sections

Violation Description: UST Program - Administration/Documentation - General

Violation Notes: Returned to compliance on 11/21/2014. Input UST program documentation in CERS.

Violation Division: Oakland City Fire Department  
Violation Program: UST  
Violation Source: CERS,

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNION OIL SS #3443 (Continued)**

**S101624471**

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-09-2017  
Citation: 23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)  
Violation Description: Failure to have current UST Monitoring Plan available on site.  
Violation Notes: Returned to compliance on 12/11/2017. OBSERVATION: An approved copy of the Monitoring Plan was not found on site. The UST Monitoring Site Plan that is part of the Monitoring Plan does not include the UST piping, the UDC monitoring and does not have the north orientation. An approved copy of this plan shall be retained on site at all times.  
CORRECTIVE ACTION: Immediately complete the UST Monitoring Site Plan, resubmit to CERS and maintain a copy on site.  
Violation Division: Alameda County Environmental Health  
Violation Program: UST  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-18-2014  
Citation: 23 CCR 16 2715(f) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(f)  
Violation Description: Failure to comply with one or more of the following: provide training to facility employee(s) responsible for proper operation and maintenance every 12 months and/or train new employee(s) who are responsible for proper operation and maintenance within 30-days of hire and/or to have at least one employee present during operating hours that has been trained in the proper operation and maintenance of the UST system.  
Violation Notes: Returned to compliance on 12/12/2014. Expired staff training.  
Violation Division: Oakland City Fire Department  
Violation Program: UST  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-20-2023  
Citation: 23 CCR 16 2641(j) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2641(j)  
Violation Description: Failure of the leak detection equipment to be installed, calibrated, operated, and/or maintained properly.  
Violation Notes: Returned to compliance on 11/20/2023. Owner/Operator did not properly install, calibrate, operate and/or maintain leak detection equipment. The floats and chains in dispensers 3/4 and 5/6 did not function properly. Properly install, calibrate, operate and/or maintain leak detection equipment. The floats and chains in dispensers 3/4 and 5/6 were cleaned and retested. All floats and chains passed testing.  
Violation Division: Alameda County Environmental Health  
Violation Program: UST  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-09-2017  
Citation: 23 CCR 16 2641(j) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2641(j)  
Violation Description: Failure of the leak detection equipment to be installed, calibrated,

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

UNION OIL SS #3443 (Continued)

S101624471

Violation Notes: operated, and/or maintained properly.  
Returned to compliance on 11/09/2017. OBSERVATION: The Bravo ball float and chain mechanism failed when tested in UDC 7/8. CORRECTED ON SITE. The technician removed debris from the Bravo ball float and chain mechanism and retested it with passing results.

Violation Division: Alameda County Environmental Health  
Violation Program: UST  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-02-2020  
Citation: 23 CCR 16 2641(h) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2641(h)

Violation Description: Failure to have an approved UST Monitoring Plan.  
Violation Notes: Returned to compliance on 11/02/2020. Facility does not have an approved Monitoring Plan. The new facility submittal of 10/30/20 did not have the CFO or CFR letters so the submittal was not approved. Update CFO letter and upload both CFO and CFR letters to CERS in their respective locations. CFO and CFR letter uploaded during inspection. Corrected on-site.

Violation Division: Alameda County Environmental Health  
Violation Program: UST  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-09-2017  
Citation: HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34

Violation Description: Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.  
Violation Notes: Returned to compliance on 12/11/2017. OBSERVATION: The Certificate of Financial Responsibility document submitted to the CUPA is incorrect. In section A of The Certificate of Financial Responsibility document, 500,000 dollars per occurrence is marked instead of 1 million dollars per occurrence. CORRECTIVE ACTION: Correct the Certificate of Financial Responsibility document Upload the required information into CERS and submit for review by the CUPA.

Violation Division: Alameda County Environmental Health  
Violation Program: UST  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-09-2022  
Citation: HSC 6.7 25291(a)(2) - California Health and Safety Code, Chapter 6.7, Section(s) 25291(a)(2)

Violation Description: Failure to maintain secondary containment (e.g., failure of secondary containment testing).  
Violation Notes: Returned to compliance on 11/09/2022. Spill bucket on the 87 failed. After replacing the gasket and tightening the fill adapter, spill bucket no longer leaked water into the tank.

Violation Division: Alameda County Environmental Health  
Violation Program: UST  
Violation Source: CERS,

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNION OIL SS #3443 (Continued)**

**S101624471**

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-12-2015  
Citation: HSC 6.7 25292.1(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25292.1(a)  
Violation Description: Failure to operate the UST system to prevent spills and/or overfills.  
Violation Notes: Returned to compliance on 11/12/2015. OBSERVATION: Covers in tank slab are not secured with bolts and only some have gaskets. CORRECTIVE ACTION: In Alameda County bolts and gaskets must be used to secure tank covers in tank slab. Covers bolted down during inspection.  
Violation Division: Alameda County Environmental Health  
Violation Program: UST  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-04-2019  
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)  
Violation Description: Failure to label stationary hazardous waste tanks as "hazardous waste" and mark with an accumulation start date.  
Violation Notes: Returned to compliance on 11/04/2019. The used oil tank was observed without an accumulation start date. Corrected on site.  
Violation Division: Alameda County Environmental Health  
Violation Program: HW  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-02-2020  
Citation: 23 CCR 16 2636(f)(4) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(4)  
Violation Description: Failure to meet one or more of the following monitoring requirements in lieu of the requirement to be tightness tested every 12 months: The monitoring system maintains all product piping outside the dispenser to be fail-safe and shut down the pump when a leak is detected. The monitoring system shuts down the pump or stops flow when a leak is detected in the under dispenser containment (UDC).  
Violation Notes: Returned to compliance on 11/02/2020. Float and chain in UDC dispenser 3/4 did not operate properly when tested. Chain adjusted and retested, it worked. Corrected onsite.  
Violation Division: Alameda County Environmental Health  
Violation Program: UST  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-04-2019  
Citation: 40 CFR 1 265.174 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.174  
Violation Description: Failure to inspect hazardous waste storage areas at least weekly and look for leaking and deteriorating containers.  
Violation Notes: Returned to compliance on 11/27/2019. The accumulation start date was not on the tank of used oil. Ensure that the hazardous waste storage area is inspected weekly. Inspect waste storage area every week.  
Violation Division: Alameda County Environmental Health  
Violation Program: HW

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNION OIL SS #3443 (Continued)**

**S101624471**

Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 01-02-2019  
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)  
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.  
Violation Notes: Returned to compliance on 01/18/2019.  
Violation Division: Alameda County Environmental Health  
Violation Program: HMRRP  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-16-2018  
Citation: 23 CCR 16 2641(j) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2641(j)  
Violation Description: Failure of the leak detection equipment to be installed, calibrated, operated, and/or maintained properly.  
Violation Notes: Returned to compliance on 11/16/2018. Observation: The float and chains in the UDC for dispenser 7/8 premium unleaded fuel and dispenser 3/4 regular unleaded failed testing. Corrective Action: Float and Chains in UDC for dispenser 7/8 premium unleaded and dispenser 3/4 regular unleaded were cleaned and adjusted. Passed testing. Corrected on site during the inspection.  
Violation Division: Alameda County Environmental Health  
Violation Program: UST  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-12-2015  
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)  
Violation Description: Failure to establish and electronically submit an adequate emergency response plan and procedures for a release or threatened release of a hazardous material.  
Violation Notes: Returned to compliance on 12/03/2015. OBERVATION: Emergency Response/Contingency Plan requires updating of Local Unified Agency phone number to ACDEH (510) 567-6700. CORRECTIVE ACTION: Revise the Emergency Response/Contingency Plan and upload to CERS.  
Violation Division: Alameda County Environmental Health  
Violation Program: HMRRP  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-04-2019  
Citation: HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)  
Violation Description: Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNION OIL SS #3443 (Continued)**

**S101624471**

Violation Notes: Returned to compliance on 11/20/2019. The business failed to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material including familiarity with the emergency response plan or failure to document and maintain training records for a minimum of three years. Establish and electronically submit an employee training program containing provisions to ensure initial and annual training for all employees in safety procedures in the event of a release or threatened release of a hazardous material and document and maintain training records for a minimum of three years. Provide this year's training to ACDEH.

Violation Division: Alameda County Environmental Health  
Violation Program: HMRRP  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 12-22-2015  
Citation: HSC 6.95 25508(d) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(d)

Violation Description: Failure to complete and/or electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities.

Violation Notes: Returned to compliance on 12/28/2015.  
Violation Division: Alameda County Environmental Health  
Violation Program: HMRRP  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-10-2016  
Citation: 23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)

Violation Description: Failure of the line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitor at least hourly. Be capable of detecting a release of 3.0 gallons per hour at 10 p.s.i.g. Restrict or shut off the flow of product through the piping when a leak is detected.

Violation Notes: Returned to compliance on 11/10/2016. OBSERVATION: Line leak detector on Regular turbine failed functional testing. CORRECTIVE ACTION: MLLD on Regular turbine was replaced and retested at time of inspection. CORRECTED AT THE TIME OF INSPECTION.

Violation Division: Alameda County Environmental Health  
Violation Program: UST  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-12-2015  
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)

Violation Description: Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.

Violation Notes: Returned to compliance on 11/12/2015. OBSERVATION: One black metal 55-gallon open top drum containing drained used oil filters missing

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNION OIL SS #3443 (Continued)**

**S101624471**

accumulation start date on label. CORRECTIVE ACTION: Accumulation start date was entered at time of inspection.

Violation Division: Alameda County Environmental Health  
Violation Program: HW  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-02-2020  
Citation: HSC 6.7 25292.2(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25292.2(a)  
Violation Description: Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.  
Violation Notes: Returned to compliance on 11/02/2020. Financial responsibility documents have not been submitted to the CUPA. Current financial responsibility documents are required to be submitted annually. Corrected on site. CFR and CFO letters submitted during inspection.

Violation Division: Alameda County Environmental Health  
Violation Program: UST  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-12-2015  
Citation: 40 CFR 1 265.173 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.173  
Violation Description: Failure to properly close hazardous waste containers when not in active use.  
Violation Notes: Returned to compliance on 12/30/2015. OBSERVATION: On metal 5-gallon open-top drum painted black containing drained used oil filters cover is not secure. CORRECTIVE ACTION: Covers for containers holding hazardous waste must be closed and secured when not adding or removing the contents.

Violation Division: Alameda County Environmental Health  
Violation Program: HW  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-30-2021  
Citation: 23 CCR 16 2641(j) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2641(j)  
Violation Description: Failure of the leak detection equipment to be installed, calibrated, operated, and/or maintained properly.  
Violation Notes: Returned to compliance on 11/30/2021. Owner/Operator did not properly install, calibrate, operate and/or maintain leak detection equipment. Float and chains in dispenser 5/6 did not function. Properly install, calibrate, operate and/or maintain leak detection equipment. Technician cleaned and retested the float and chain in dispenser 5/6. All passed. Corrected during inspection.

Violation Division: Alameda County Environmental Health  
Violation Program: UST  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-04-2019

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNION OIL SS #3443 (Continued)**

**S101624471**

Citation: HSC 6.5 25123.3(h)(1) - California Health and Safety Code, Chapter 6.5, Section(s) 25123.3(h)(1)

Violation Description: Failure to send hazardous waste offsite for treatment, storage, or disposal within 180 days (or 270 days if waste is transported over 200 miles) for a generator who generates less than 1000 kilogram per month if all of the following conditions are met: (1) The quantity of hazardous waste accumulated onsite never exceeds 6,000 kilograms. (2) The generator complies with the requirements of 40 Code of Federal Regulations section 262.34(d), (e) and (f). (3) The generator does not hold acutely hazardous waste or extremely hazardous waste in an amount greater than one kilogram for more than 90 days.

Violation Notes: Returned to compliance on 11/20/2019. Owner/Operator is a small quantity generator and failed to send hazardous waste offsite for treatment, storage, or disposal within 180 days. Used oil bills of lading were available for December 2018 and July 26, 2019 but nothing in between. You are required to dispose of hazardous waste every 180 as a small quantity generator. Provide a bill of lading for the time period between December 2018 and July 2019. Ensure that waste is picked up at least every 180 days.

Violation Division: Alameda County Environmental Health  
Violation Program: HW  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-12-2015

Citation: HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)

Violation Description: Failure to submit an complete and accurate application for a permit to operate an underground storage tank, or for renewal of the permit.

Violation Notes: Returned to compliance on 12/28/2015. OBSERVATION: Errors in the 2015 CERS submittal in the Operating Permit Application-Tank Information. CORRECTIVE ACTION: Corrected CERS forms will be emailed to the Environmental Contact to make the corrections to CERS.

Violation Division: Alameda County Environmental Health  
Violation Program: UST  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-04-2019

Citation: 23 CCR 16 2715(c)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(c)(2)

Violation Description: Failure to have at least one facility employee present during operating hours that has been trained in the proper operation and maintenance of the UST system by a designated operator (DO).

Violation Notes: Returned to compliance on 11/20/2019. Owner/Operator failed to have at least one employee present during operating hours that has been trained in the proper operation and maintenance of the UST system by a designated operator (DO). Only Bao has been trained on the DO. There are at least three people who work at the fueling facility. Ensure that at least one employee is present during operating hours that has been trained in the proper operation and maintenance of the UST system by a designated operator (DO). Send a copy of the DO training records to ACDEH.

Violation Division: Alameda County Environmental Health  
Violation Program: UST

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNION OIL SS #3443 (Continued)**

**S101624471**

Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-09-2022  
Citation: HSC 6.95 25508.1(a)-(f) - California Health and Safety Code, Chapter 6.95, Section(s) 25508.1(a)-(f)

Violation Description: Failure to electronically update business plan within 30 days of any one of the following events: A 100 percent or more increase in the quantity of a previously disclosed material. Any handling of a previously undisclosed hazardous materials at or above reportable quantities. A change of business address, business ownership, or business name. A substantial change in the handler's operations that requires modification to any portion of the business plan.

Violation Notes: Returned to compliance on 11/09/2022. The business failed to update business plan within 30 days when one of the following occurs: a 100 percent or more increase in the quantity of a previously disclosed material; any handling of a previously undisclosed hazardous material; a change of business address, business ownership, or business name; or a substantial change in the handler's operations that requires modification to any portion of the business plan. CERS needs to be updated to include: 2x55 gallons used oil filters 55-gallon waste antifreeze 150-gallon new motor oil 250-gallon used oil tank

Violation Division: Alameda County Environmental Health  
Violation Program: HMRRP  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-04-2019  
Citation: 23 CCR 16 2712 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712

Violation Description: Failure to comply with any of the applicable requirements of the permit issued for the operation of the UST system.

Violation Notes: Returned to compliance on 11/27/2019. Owner/Operator did not comply with all operating permit requirements. Daily log of the Veeder Root has not been performed. Complete the UST Equipment Monitoring Log and send completed November list to ACDEH. Continue to look at Veeder Root and log it daily.

Violation Division: Alameda County Environmental Health  
Violation Program: UST  
Violation Source: CERS,

Site ID: 120348  
Site Name: GRAND MOBIL  
Violation Date: 11-12-2015  
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)

Violation Description: Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.

Violation Notes: Returned to compliance on 12/24/2015. OBSERVATION: Errors in Chemical Inventory submitted to CERS. CORRECTIVE ACTION: Corrections will be emailed to the lead user. Submit corrected Chemical Inventories to CERS.

Violation Division: Alameda County Environmental Health  
Violation Program: HMRRP

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNION OIL SS #3443 (Continued)**

**S101624471**

Violation Source: CERS,

Evaluation:

Eval General Type: Compliance Evaluation Inspection

Eval Date: 11-04-2019

Violations Found: Yes

Eval Type: Routine done by local agency

Eval Notes: CHRISTINA PHAM OWNS BUSINESS. OPERATES A GAS STATION AND A REPAIR SHOP. THEY HAVE A HAZ WASTE TANK THAT IS EMPTIED BETWEEN 2 AND 3 TIMES A YEAR SO THEY ARE STILL SMALL QUANTITY GENERATOR. TRAINING WAS PERFORMED PREVIOUSLY BY THE DESIGNATED OPERATOR BUT HAS NOT BEEN COMPLETED FOR THIS YEAR FOR HMBP OR HAZ WASTE GENERATOR.

Eval Division: Alameda County Environmental Health

Eval Program: HMRRP

Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection

Eval Date: 11-04-2019

Violations Found: Yes

Eval Type: Routine done by local agency

Eval Notes: ZANE NIMMO OF AFFORDA TEST PERFORMS AMC AT THIS SINGLE-WALL FACILITY. VR#A28446 EXP. 10/2/21; CA SERVICE TECH ICC #8883064, EXP. 6/1/21; VMI#2072 EXP. 12/19/20. FACILITY RECENTLY SWOTCHED FROM ECO CHEK TO AFFORDA TEST FOR TESTING AND DESIGNATED OPERATOR INSPECTIONS. DO TRAINING HAS NOT YET BEEN PERFORMED FOR EVERYONE WHO OPERATES THE GAS STATION OR FOR HMBP AND HAZ WASTE.

Eval Division: Alameda County Environmental Health

Eval Program: UST

Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection

Eval Date: 11-09-2022

Violations Found: Yes

Eval Type: Routine done by local agency

Eval Notes: ACDEH inspector arrived on site at 3374 Grand Ave Oakland, Grand Mobil, to oversee inspection of the Annual Monitoring Certification. Testing conducted by Zane Nimmo of Afforda Test: ICC 8883064, exp 5/26/23 Veeder Root A28446, exp 10/5/23 Vaporless 2072, exp 1/28/23 OPW exp 3/10/24 Site is a single walled UST system with 87 and 91 gasoline grades. UDCs are stand alone with float-chain assembly and 208 sensors within the 87 and 91 sumps. Float-chain assembly on UDC 2/4 as well as UDC 7 failed initial testing, passed after a second test. The spill bucket on the 87-grade failed initial testing. After replacing the gasket and tightening the fill adapter, the spill bucket passed the second test attempt.

Eval Division: Alameda County Environmental Health

Eval Program: UST

Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection

Eval Date: 11-12-2015

Violations Found: Yes

Eval Type: Routine done by local agency

Eval Notes: GRAND 76 3374 Grand Ave Oakland, CA 94610 CERS ID 10601803 Initial Hazardous Material Business Plan (HMBP) inspection conducted by Alameda County Department of Environmental Health (ACDEH) on November 12, 2015. Consent to inspect was given by and the completed

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

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EPA ID Number

**UNION OIL SS #3443 (Continued)**

**S101624471**

inspection report was reviewed with Christina Pham, owner.

Eval Division: Alameda County Environmental Health  
Eval Program: HMRRP  
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection  
Eval Date: 11-16-2018  
Violations Found: Yes  
Eval Type: Routine done by local agency  
Eval Notes: On site at Grand 76 located at 3374 Grand Ave. Oakland for the Annual Monitoring Certification and spill bucket testing. Met with Nik Zagorov ICC Certified California UST Service Technician expires 5/8/19 Veeder Root Certified Technician expires 12/8/18 VMI Leak Detector Tester expires 2/26/20 VMI Leak Detector certified on 6/14/17.

Eval Division: Alameda County Environmental Health  
Eval Program: UST  
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection  
Eval Date: 11-30-2021  
Violations Found: Yes  
Eval Type: Routine done by local agency  
Eval Notes: On site at Grand Mobil located at 3374 Grand Ave. Oakland for the Annual Monitoring Certification and Spill Bucket testing. Met with David Winkler of Afforda Test. All certifications are on file with ACDEH.

Eval Division: Alameda County Environmental Health  
Eval Program: UST  
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection  
Eval Date: 11-02-2020  
Violations Found: Yes  
Eval Type: Routine done by local agency  
Eval Notes: ANNUAL MONITORING CERTIFICATION PERFORMED BY AFFORDA TEST AT THIS SINGLE-WALL FACILITY. CSLD RECORDS KEPT ALONG WITH THE DO REPORTS. TWO MCHANICAL LEAK DETECTORS TESTED. TANK GUAGES TESTED TO ENSURE PROPER READOUTS FOR CSLD. SECONDARY CONTAINMENT PERFORMED 8/7/2019. UST OPERATING PERMIT EXPIRES 11/12/20. ACDEH TO ISSUE PERMIT AS SOON AS POSSIBLE.

Eval Division: Alameda County Environmental Health  
Eval Program: UST  
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection  
Eval Date: 11-12-2015  
Violations Found: Yes  
Eval Type: Routine done by local agency  
Eval Notes: GRAND 76 3374 Grand Ave Oakland, CA 94610 Initial Underground Storage Tank (UST) inspection conducted by Alameda County Department of Environmental Health (ACDEH) on November 12, 2015. Nik Zagorov of ECO-CHEK is the service technician conducting the monitoring equipment certification and spill container testing. Consent to inspect was given by and the completed inspection report was reviewed with Christina Pham, owner. There are two 12,000 gallon single walled fiberglass underground storage tank (one Regular Unleaded and one

Map ID  
Direction  
Distance  
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MAP FINDINGS

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Database(s)

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UNION OIL SS #3443 (Continued)

S101624471

Premium Unleaded gasoline). There are questions as to whether the tanks are double wall or single wall. The tanks are being monitored with CSLD as single wall. However the owner purchased the tanks as double wall.

Eval Division: Alameda County Environmental Health  
Eval Program: UST  
Eval Source: CERS,

Eval General Type: Other/Unknown  
Eval Date: 12-22-2015  
Violations Found: Yes  
Eval Type: Other, not routine, done by local agency  
Eval Notes: HMBP NOV LETTER  
Eval Division: Alameda County Environmental Health  
Eval Program: HMRRP  
Eval Source: CERS,

Eval General Type: Other/Unknown  
Eval Date: 08-12-2016  
Violations Found: No  
Eval Type: Other, not routine, done by local agency  
Eval Notes: GRAND 76 3374 Grand Ave Oakland, 94610 Onsite to witness testing of secondary containment components of the underground storage tank systems. Testing conducted by Nik Zagorov. Consent to inspect was given by and the completed inspection report was reviewed Hoang Pham. Testing of the following components: Accelerated Lake Test of turbine/piping sumps, Under dispenser containment. Pressure test of product piping secondary. Premium product piping secondary failure. Leak at Premium piping at dispenser 1/2. All secondary components passed except for Premium product piping secondary.

Eval Division: Alameda County Environmental Health  
Eval Program: UST  
Eval Source: CERS,

Eval General Type: Other/Unknown  
Eval Date: 10-22-2021  
Violations Found: No  
Eval Type: Other, not routine, done by local agency  
Eval Notes: On site at Grand Mobil located at 3374 Grand Ave Oakland for the Overfill Prevention inspection. All systems passed testing. Met with Felix Ramirez of Afforda-Test. All Certifications on file with ACDEH.

Eval Division: Alameda County Environmental Health  
Eval Program: UST  
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection  
Eval Date: 11-04-2019  
Violations Found: Yes  
Eval Type: Routine done by local agency  
Eval Notes: Not reported  
Eval Division: Alameda County Environmental Health  
Eval Program: HW  
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection  
Eval Date: 11-09-2017  
Violations Found: Yes

Map ID  
Direction  
Distance  
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MAP FINDINGS

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Database(s)

EDR ID Number  
EPA ID Number

UNION OIL SS #3443 (Continued)

S101624471

Eval Type: Routine done by local agency  
Eval Notes: ALAMEDA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH (ACDEH) ON SITE FOR ANNUAL MONITORING CERTIFICATION. THE TECHNICIAN WAS NIK ZAGOROV OF ECO-CHEK COMPLIANCE WHO POSSESSES THE CALIFORNIA UST ICC SERVICE TECHNICIAN CERTIFICATION THAT EXPIRES 5-8-19, THE VEEDER ROOT CERTIFICATION THAT EXPIRES 12-8-18 AND THE VMI LEAK DETECTOR CERTIFICATION THAT EXPIRES 3-10-18. ALL VIOLATIONS NOTED IN THE INSPECTION REPORT SHALL BE CORRECTED BY DECEMBER 9, 2017 AND ANY VERIFICATION DOCUMENTATION SUBMITTED WITHIN THE SAME TIME FRAME. RED TAG 0019 WAS AFFIXED TO THE REGULAR UNLEADED SPILL CONTAINER TO PREVENT FUEL INPUT.

Eval Division: Alameda County Environmental Health  
Eval Program: UST  
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection  
Eval Date: 11-09-2022  
Violations Found: No  
Eval Type: Routine done by local agency  
Eval Notes: ACDEH inspector arrived on site at 3374 Grand Ave Oakland, Grand Mobil, for the Hazardous Materials Business Plan inspection. Facility owner Christina Pham assisted with the inspection. Facility is a gas station that also runs an auto repair shop in garage. The facility utilizes a 150-gallon tank storing new motor oil. The following hazardous waste was observed above threshold quantities: -250 gallon used oil tank -2x55 gallon drum used oil filter -55-gallon waste antifreeze Waste streams include used oil, used oil filters, antifreeze and oily rags. Facility utilizes a 250-gallon single wall tank for used oil. The tank is encased in a secondary metal containment housing that provides visual access to any overflow or leak. The tank is equipped with a pump, which is utilized during the transport of used oil, from the 20-gallon carboy observed on site, into the used oil tank. The tank satisfies overfill through use of a gauge that... [TRUNCATED: Refer to full Inspection Report]

Eval Division: Alameda County Environmental Health  
Eval Program: HW  
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection  
Eval Date: 11-10-2016  
Violations Found: Yes  
Eval Type: Routine done by local agency  
Eval Notes: ANNUAL UST INSPECTION GRAND 76 3374 GRAND AVENUE OAKLAND Annual underground storage tank inspection conducted by Alameda County Department of Environmental Health on November 10, 2016. The annual monitoring equipment certification and spill container testing was conducted at this time by Nik Zagorov. Consent for the inspection and the inspection report was reviewed with Hoang Pham, manager MINOR VIOLATION: OBSERVATION: Line leak detector on Regular turbine failed functional testing. CORRECTIVE ACTION: MLLD on Regular turbine was replaced and retested at time of inspection. CORRECTED AT THE TIME OF INSPECTION. Regular piping sump sensor passed functional testing. This sensor was replaced because of suspect wiring. NEXT CERS SUBMITTAL DUE ON OR BEFORE DECEMBER 28, 2016. RETURNED TO COMPLIANCE.

Eval Division: Alameda County Environmental Health  
Eval Program: UST  
Eval Source: CERS,

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNION OIL SS #3443 (Continued)**

**S101624471**

Eval General Type: Compliance Evaluation Inspection  
Eval Date: 11-18-2014  
Violations Found: Yes  
Eval Type: Routine done by local agency  
Eval Notes: Not reported  
Eval Division: Oakland City Fire Department  
Eval Program: UST  
Eval Source: CERS,

Eval General Type: Other/Unknown  
Eval Date: 01-02-2019  
Violations Found: No  
Eval Type: Other, not routine, done by local agency  
Eval Notes: GENERATE NOV LTR/ADDING VIOLATION IN EC  
Eval Division: Alameda County Environmental Health  
Eval Program: HMRRP  
Eval Source: CERS,

Eval General Type: Other/Unknown  
Eval Date: 01-02-2019  
Violations Found: Yes  
Eval Type: Other, not routine, done by local agency  
Eval Notes: Not reported  
Eval Division: Alameda County Environmental Health  
Eval Program: HMRRP  
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection  
Eval Date: 11-09-2022  
Violations Found: Yes  
Eval Type: Routine done by local agency  
Eval Notes: ACDEH inspector arrived on site at 3374 Grand Ave Oakland, Grand Mobil, for the Hazardous Materials Business Plan inspection. Facility owner Christina Pham assisted with the inspection. Facility is a gas station that also runs an auto repair shop in garage. The facility utilizes a 150-gallon tank storing new motor oil. The following hazardous waste was observed above threshold quantities: -250 gallon used oil tank -2x55 gallon drum used oil filter -55-gallon waste antifreeze  
Eval Division: Alameda County Environmental Health  
Eval Program: HMRRP  
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection  
Eval Date: 11-12-2015  
Violations Found: Yes  
Eval Type: Routine done by local agency  
Eval Notes: GRAND 76 3374 Grand Ave Oakland, CA 94610 CAL000330848 Initial Hazardous Waste Generator (HWG) inspection conducted by Alameda County Department of Environmental Health (ACDEH) on November 12, 2015. Consent to inspect was given by and the completed inspection report was reviewed with Christina Pham, owner.  
Eval Division: Alameda County Environmental Health  
Eval Program: HW  
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNION OIL SS #3443 (Continued)**

**S101624471**

Eval Date: 11-20-2023  
Violations Found: Yes  
Eval Type: Routine done by local agency  
Eval Notes: On site at Grand Mobil located at 3374 Grand Ave. Oakland for the AMC and Spill Bucket testing. Met with David Winkler of Eco-Chek/ Afforda Test. ICC Certification expires 1/30/24. Veeder- Root Certification expires 2/7/24. VMI Certification expires 11/8/25.  
Eval Division: Alameda County Environmental Health  
Eval Program: UST  
Eval Source: CERS,

Enforcement Action:  
Site ID: 120348  
Site Name: GRAND MOBIL  
Site Address: 3374 GRAND AVE  
Site City: OAKLAND  
Site Zip: 94610  
Enf Action Date: 12-22-2015  
Enf Action Type: Notice of Violation (Unified Program)  
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection  
Enf Action Notes: Not reported  
Enf Action Division: Alameda County Environmental Health  
Enf Action Program: HMRRP  
Enf Action Source: CERS,

Coordinates:  
Site ID: 120348  
Facility Name: GRAND MOBIL  
Env Int Type Code: HWG  
Program ID: 10601803  
Coord Name: Not reported  
Ref Point Type Desc: Center of a facility or station.,  
Latitude: 37.813830  
Longitude: -122.246090

Affiliation:  
Affiliation Type Desc: Document Preparer  
Entity Name: CHRISTINA PHAM  
Entity Title: Not reported  
Affiliation Address: Not reported  
Affiliation City: Not reported  
Affiliation State: Not reported  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: ,  
  
Affiliation Type Desc: Environmental Contact  
Entity Name: CHRISTINA PHAM  
Entity Title: Not reported  
Affiliation Address: 3374 GRAND AVENUE  
Affiliation City: OAKLAND  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: 94610  
Affiliation Phone: ,

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNION OIL SS #3443 (Continued)**

**S101624471**

Affiliation Type Desc: Identification Signer  
Entity Name: CHRISTINA PHAM  
Entity Title: CEO/President  
Affiliation Address: Not reported  
Affiliation City: Not reported  
Affiliation State: Not reported  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: ,

Affiliation Type Desc: Property Owner  
Entity Name: GRAND-MANDANA GAS STATION, INC.  
Entity Title: Not reported  
Affiliation Address: 3374 Grand Ave  
Affiliation City: Oakland  
Affiliation State: CA  
Affiliation Country: United States  
Affiliation Zip: 94610  
Affiliation Phone: (510) 472-6988,

Affiliation Type Desc: UST Tank Owner  
Entity Name: CHRISTINA PHAM  
Entity Title: Not reported  
Affiliation Address: 3374 GRAND AVENUE  
Affiliation City: OAKLAND  
Affiliation State: CA  
Affiliation Country: United States  
Affiliation Zip: 94610  
Affiliation Phone: (510) 472-6988,

Affiliation Type Desc: Legal Owner  
Entity Name: CHRISTINA PHAM  
Entity Title: Not reported  
Affiliation Address: 3374 GRAND AVENUE  
Affiliation City: OAKLAND  
Affiliation State: CA  
Affiliation Country: United States  
Affiliation Zip: 94610  
Affiliation Phone: (510) 472-6988,

Affiliation Type Desc: UST Tank Operator  
Entity Name: CHRISTINA PHAM  
Entity Title: Not reported  
Affiliation Address: 3374 GRAND AVENUE  
Affiliation City: OAKLAND  
Affiliation State: CA  
Affiliation Country: United States  
Affiliation Zip: 94610  
Affiliation Phone: (510) 472-6988,

Affiliation Type Desc: Facility Mailing Address  
Entity Name: Mailing Address  
Entity Title: Not reported  
Affiliation Address: 3374 GRAND AVENUE  
Affiliation City: OAKLAND  
Affiliation State: CA  
Affiliation Country: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNION OIL SS #3443 (Continued)**

**S101624471**

Affiliation Zip: 94610  
Affiliation Phone: ,

Affiliation Type Desc: Parent Corporation  
Entity Name: GRAND MOBIL  
Entity Title: Not reported  
Affiliation Address: Not reported  
Affiliation City: Not reported  
Affiliation State: Not reported  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: ,

Affiliation Type Desc: UST Permit Applicant  
Entity Name: CHRISTINA PHAM  
Entity Title: CFO  
Affiliation Address: Not reported  
Affiliation City: Not reported  
Affiliation State: Not reported  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: (510) 472-6988,

Affiliation Type Desc: UST Property Owner Name  
Entity Name: CHRISTINA PHAM  
Entity Title: Not reported  
Affiliation Address: 3374 GRAND AVENUE  
Affiliation City: OAKLAND  
Affiliation State: CA  
Affiliation Country: United States  
Affiliation Zip: 94610  
Affiliation Phone: (510) 472-6988,

Affiliation Type Desc: CUPA District  
Entity Name: Alameda County Env Health  
Entity Title: Not reported  
Affiliation Address: 1131 Harbor Parkway, Suite 240  
Affiliation City: Alameda  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: 94502-6577  
Affiliation Phone: (510) 567-6700,

Affiliation Type Desc: Operator  
Entity Name: GRAND-MANDANA GAS STATION, INC.  
Entity Title: Not reported  
Affiliation Address: Not reported  
Affiliation City: Not reported  
Affiliation State: Not reported  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: (510) 472-6988,

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s) EDR ID Number  
EPA ID Number

**F66** TOSCO CORPORATION #30499  
**ENE** 3374 GRAND AVE  
**1/8-1/4** OAKLAND, CA 94610  
**0.141 mi.**  
**745 ft.** Site 13 of 16 in cluster F

**UST** U004345070  
N/A

**Relative:**  
**Lower**  
**Actual:**  
**15 ft.**

UST:  
Name: TOSCO CORPORATION #30499  
Address: 3374 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610  
Facility ID: 210  
Permitting Agency: OAKLAND, CITY OF  
CERSID: Not reported  
Latitude: 37.81373  
Longitude: -122.24652  
Owner type: Not reported  
Facility type: Not reported  
Num of inuse ust: Not reported  
Num of closed ust: Not reported  
Num of oos ust: Not reported  
Epa region: Not reported  
Tribal lands: Not reported  
Tank owner name: Not reported  
Tank owner mailing address: Not reported  
Tank owner mailing city: Not reported  
Tank owner mailing zip: Not reported  
Tank owner mailing state: Not reported  
Tank operator name: Not reported  
Tank operator mailing address: Not reported  
Tank operator mailing city: Not reported  
Tank operator mailing zip: Not reported  
Tank operator mailing state: Not reported  
Tankidnumber: Not reported  
Tank status: Not reported  
Tank configuration: Not reported  
Tank closure date: Not reported  
Tank installation date: Not reported  
Tank num of compartments: Not reported  
Tank contents: Not reported  
Tank capacity gallons: Not reported  
Tank type: Not reported  
Tank pc construction: Not reported  
Tank pwpiping construction: Not reported  
Tank piping type: Not reported  
Tank piping construction: Not reported  
Tank sacrificial anode: Not reported  
Tank cp impressed current: Not reported  
Tank cp shutoff: Not reported  
Tank alarms: Not reported  
Tank ball float: Not reported  
Tank spill bucket: Not reported

MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Site

Database(s)

EDR ID Number  
EPA ID Number

**F67**      **UNION OIL SS# 3443**  
**ENE**      **3374 GRAND AVE**  
**1/8-1/4**    **OAKLAND, CA 94610**  
**0.141 mi.**  
**745 ft.**    **Site 14 of 16 in cluster F**

**HIST UST**    **U001599365**  
**N/A**

**Relative:**    HIST UST:  
**Lower**      Name:                      UNION OIL SS# 3443  
**Actual:**      Address:                    3374 GRAND AVE  
**15 ft.**        City,State,Zip:            OAKLAND, CA 94610  
                   File Number:              Not reported  
                   URL:                        Not reported  
                   Region:                    STATE  
                   Facility ID:                00000060705  
                   Facility Type:             Gas Station  
                   Other Type:               Not reported  
                   Contact Name:            LARRY E. BASLEE  
                   Telephone:                4158329605  
                   Owner Name:              UNION OIL CO.  
                   Owner Address:            1 CALIFORNIA ST., SUITE 2700  
                   Owner City,St,Zip:      SAN FRANCISCO, CA 94111  
                   Total Tanks:              0001  
  
                   Tank Num:                001  
                   Container Num:            3443-10-1  
                   Year Installed:            1967  
                   Tank Capacity:            00000000  
                   Tank Used for:            WASTE  
                   Type of Fuel:             Not reported  
                   Container Construction Thickness: 6  
                   Leak Detection:            Visual

**F68**      **UNION OIL SS #3443**  
**ENE**      **3374 GRAND AVE**  
**1/8-1/4**    **OAKLAND, CA 94610**  
**0.141 mi.**  
**745 ft.**    **Site 15 of 16 in cluster F**

**HIST UST**    **U001599362**  
**N/A**

**Relative:**    HIST UST:  
**Lower**      Name:                      UNION OIL SS #3443  
**Actual:**      Address:                    3374 GRAND AVE  
**15 ft.**        City,State,Zip:            OAKLAND, CA 94610  
                   File Number:              Not reported  
                   URL:                        Not reported  
                   Region:                    STATE  
                   Facility ID:                00000031708  
                   Facility Type:             Gas Station  
                   Other Type:               Not reported  
                   Contact Name:            LARRY E. BASLEE INC.  
                   Telephone:                4158329605  
                   Owner Name:              UNION OIL CO.  
                   Owner Address:            1 CALIFORNIA ST. SUITE 2700  
                   Owner City,St,Zip:      SAN FRANCISCO, CA 94111  
                   Total Tanks:              0003  
  
                   Tank Num:                001  
                   Container Num:            3443-1-1  
                   Year Installed:            1982  
                   Tank Capacity:            00012000  
                   Tank Used for:            PRODUCT

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**UNION OIL SS #3443 (Continued)**

**U001599362**

Type of Fuel: UNLEADED  
 Container Construction Thickness: Not reported  
 Leak Detection: Stock Inventor, 10

Tank Num: 002  
 Container Num: 3443-2-1  
 Year Installed: 1982  
 Tank Capacity: 00012000  
 Tank Used for: PRODUCT  
 Type of Fuel: PREMIUM  
 Container Construction Thickness: Not reported  
 Leak Detection: Stock Inventor, 10

Tank Num: 003  
 Container Num: 3443-4-1  
 Year Installed: Not reported  
 Tank Capacity: 00000550  
 Tank Used for: WASTE  
 Type of Fuel: WASTE OIL  
 Container Construction Thickness: Not reported  
 Leak Detection: Stock Inventor

**F69**  
**ENE**  
**1/8-1/4**  
**0.141 mi.**  
**745 ft.**

**GRAND MANDANA GAS STATION INC**  
**3374 GRAND AVE**  
**OAKLAND, CA 94610**  
**Site 16 of 16 in cluster F**

**RCRA NonGen / NLR 1024819774**  
**CAL000330848**

**Relative:**  
**Lower**  
**Actual:**  
**15 ft.**

RCRA Listings:  
 Date Form Received by Agency: 20080320  
 Handler Name: Grand Mandana Gas Station Inc  
 Handler Address: 3374 Grand Ave  
 Handler City,State,Zip: OAKLAND, CA 94610-2737  
 EPA ID: CAL000330848  
 Contact Name: CHRISTINA PHAM  
 Contact Address: 7749 LISA COURT  
 Contact City,State,Zip: DUBLIN, CA 94568-0000  
 Contact Telephone: 510-472-6988  
 Contact Fax: 510-763-1282  
 Contact Email: GRAND76AUTOCARE@GMAIL.COM  
 Contact Title: Not reported  
 EPA Region: 09  
 Land Type: Not reported  
 Federal Waste Generator Description: Not a generator, verified  
 Non-Notifier: Not reported  
 Biennial Report Cycle: Not reported  
 Accessibility: Not reported  
 Active Site Indicator: Handler Activities  
 State District Owner: Not reported  
 State District: Not reported  
 Mailing Address: 3374 GRAND AVE  
 Mailing City,State,Zip: OAKLAND, CA 94610-2737  
 Owner Name: Christina Pham  
 Owner Type: Other  
 Operator Name: Christina Pham  
 Operator Type: Other  
 Short-Term Generator Activity: No  
 Importer Activity: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**GRAND MANDANA GAS STATION INC (Continued)**

**1024819774**

Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20180905
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name: CHRISTINA PHAM	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	7749 LISA COURT
Owner/Operator City,State,Zip:	DUBLIN, CA 94568-0000
Owner/Operator Telephone:	510-472-6988
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name: CHRISTINA PHAM	
Legal Status:	Other
Date Became Current:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**GRAND MANDANA GAS STATION INC (Continued)**

**1024819774**

Date Ended Current: Not reported  
Owner/Operator Address: 3374 GRAND AVE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610-2737  
Owner/Operator Telephone: 510-472-6988  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20080320  
Handler Name: GRAND MANDANA GAS STATION INC  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**I70  
NE  
1/8-1/4  
0.144 mi.  
758 ft.**

**COLBY KATZ  
515 VALLE VISTA AVENUE  
OAKLAND, CA 94610**

**RCRA NonGen / NLR 1027212598  
CAC003177103**

**Site 4 of 4 in cluster I**

**Relative:  
Higher  
Actual:  
56 ft.**

RCRA Listings:  
Date Form Received by Agency: 20220519  
Handler Name: Colby Katz  
Handler Address: 515 Valle Vista Avenue  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003177103  
Contact Name: COLBY KATZ  
Contact Address: 515 VALLE VISTA AVENUE  
Contact City,State,Zip: OAKLAND, CA 94610  
Contact Telephone: 831-345-4647  
Contact Fax: Not reported  
Contact Email: GISELLE.ESPIRITU@SYNERGYCOMPANIES.ORG  
Contact Title: Not reported  
EPA Region: 09  
Land Type: Not reported  
Federal Waste Generator Description: Not a generator, verified  
Non-Notifier: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**COLBY KATZ (Continued)**

**1027212598**

Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	515 VALLE VISTA AVENUE
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Colby Katz
Owner Type:	Other
Operator Name:	Colby Katz
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20220523
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:	
Owner/Operator Indicator:	Owner
Owner/Operator Name: COLBY KATZ	
Legal Status:	Other

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**COLBY KATZ (Continued)**

**1027212598**

Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 515 VALLE VISTA AVENUE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 831-345-4647  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator  
Owner/Operator Name: COLBY KATZ  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 515 VALLE VISTA AVENUE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 831-345-4647  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20220519  
Handler Name: COLBY KATZ  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**J71**  
**SW**  
**1/8-1/4**  
**0.147 mi.**  
**778 ft.**

**TONY CELAYA**  
**394 EUCLID AVENUE**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**    **1028886261**  
**CAC003247020**

**Site 4 of 5 in cluster J**

**Relative:**  
**Higher**  
**Actual:**  
**58 ft.**

RCRA Listings:	
Date Form Received by Agency:	20230815
Handler Name:	Tony Celaya
Handler Address:	394 Euclid Avenue
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003247020
Contact Name:	TONY CELAYA
Contact Address:	394 EUCLID AVENUE
Contact City,State,Zip:	OAKLAND, CA 94610
Contact Telephone:	510-593-5998
Contact Fax:	Not reported
Contact Email:	GISELLE.ESPIRITU@SYNERGYCOMPANIES.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	394 EUCLID AVENUE
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Tony Celaya
Owner Type:	Other
Operator Name:	Tony Celaya
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**TONY CELAYA (Continued)**

**1028886261**

Human Exposure Controls Indicator: N/A  
Groundwater Controls Indicator: N/A  
Significant Non-Complier Universe: No  
Unaddressed Significant Non-Complier Universe: No  
Addressed Significant Non-Complier Universe: No  
Significant Non-Complier With a Compliance Schedule Universe: No  
Financial Assurance Required: Not reported  
Handler Date of Last Change: 20230815  
Recognized Trader-Importer: No  
Recognized Trader-Exporter: No  
Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Owner  
Owner/Operator Name: TONY CELAYA  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 394 EUCLID AVENUE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-593-5998  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator  
Owner/Operator Name: TONY CELAYA  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 394 EUCLID AVENUE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-593-5998  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20230815  
Handler Name: TONY CELAYA  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**TONY CELAYA (Continued)**

**1028886261**

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
 NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**J72**  
**SSW**  
**1/8-1/4**  
**0.149 mi.**  
**788 ft.**

**RUTH CASSER**  
**436 LAGUNITAS AVENUE**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1028897797**  
**CAC003259409**

**Site 5 of 5 in cluster J**

**Relative:**  
**Lower**  
**Actual:**  
**47 ft.**

RCRA Listings:

Date Form Received by Agency: 20231103  
 Handler Name: Ruth Casser  
 Handler Address: 436 Lagunitas Avenue  
 Handler City,State,Zip: OAKLAND, CA 94610  
 EPA ID: CAC003259409  
 Contact Name: RUTH CASSER  
 Contact Address: 436 LAGUNITAS AVENUE #1  
 Contact City,State,Zip: OAKLAND, CA 94610  
 Contact Telephone: 510-388-3450  
 Contact Fax: Not reported  
 Contact Email: MELISA@ENV-REM.COM  
 Contact Title: Not reported  
 EPA Region: 09  
 Land Type: Not reported  
 Federal Waste Generator Description: Not a generator, verified  
 Non-Notifier: Not reported  
 Biennial Report Cycle: Not reported  
 Accessibility: Not reported  
 Active Site Indicator: Not reported  
 State District Owner: Not reported  
 State District: Not reported  
 Mailing Address: 436 LAGUNITAS AVENUE #1  
 Mailing City,State,Zip: OAKLAND, CA 94610  
 Owner Name: Ruth Casser  
 Owner Type: Other  
 Operator Name: Ruth Casser  
 Operator Type: Other  
 Short-Term Generator Activity: No  
 Importer Activity: No  
 Mixed Waste Generator: No  
 Transporter Activity: No  
 Transfer Facility Activity: No  
 Recycler Activity with Storage: No  
 Small Quantity On-Site Burner Exemption: No  
 Smelting Melting and Refining Furnace Exemption: No  
 Underground Injection Control: No  
 Off-Site Waste Receipt: No  
 Universal Waste Indicator: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**RUTH CASSER (Continued)**

**1028897797**

Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20231103
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name: RUTH CASSER	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	436 LAGUNITAS AVENUE #1
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-388-3450
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name: RUTH CASSER	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	436 LAGUNITAS AVENUE #1
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-388-3450
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**RUTH CASSER (Continued)**

**1028897797**

Historic Generators:

Receive Date: 20231103  
Handler Name: RUTH CASSER  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

H73  
SSE  
1/8-1/4  
0.152 mi.  
801 ft.

**SHELL**  
**UNK GRAND AVE & LAKESHORE DR**  
**OAKLAND, CA 94610**

**Alameda County CS S110376293**  
**N/A**

**Site 5 of 5 in cluster H**

**Relative:**

Alameda County CS:

**Lower**

Name: SHELL  
Address: UNK GRAND AVE & LAKESHORE DR  
City,State,Zip: OAKLAND, CA 94610  
Status: Leak Confirmation  
Record Id: RO0003056  
PE: 5602  
Facility Status: Leak Confirmation  
Latitude: 37.810777973  
Longitude: -122.24741427

**Actual:**  
**17 ft.**

Name: SHELL  
Address: UNK GRAND AVE & LAKESHORE DR  
City,State,Zip: OAKLAND, CA 94610  
Status: 11  
Record Id: RO0003056  
PE: 5602  
Facility Status: Not reported  
Latitude: 37.810777973  
Longitude: -122.24741427

Name: SHELL  
Address: UNK GRAND AVE & LAKESHORE DR  
City,State,Zip: OAKLAND, CA 94610  
Status: Pollution Characterization

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**SHELL (Continued)**

**S110376293**

Record Id: RO0003056  
 PE: 5602  
 Facility Status: Pollution Charaterization  
 Latitude: 37.810777973  
 Longitude: -122.24741427

**K74**  
**ESE**  
**1/8-1/4**  
**0.159 mi.**  
**839 ft.**

**JILL BROADHURST**  
**485 WICKSON AVENUE #1**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1026800356**  
**CAC003112238**

**Site 1 of 5 in cluster K**

**Relative:**  
**Lower**  
**Actual:**  
**40 ft.**

RCRA Listings:	20210329
Date Form Received by Agency:	Jill Broadhurst
Handler Name:	485 Wickson Avenue #1
Handler Address:	OAKLAND, CA 94610
Handler City,State,Zip:	CAC003112238
EPA ID:	JILL BROADHURST
Contact Name:	485 WICKSON AVENUE #1
Contact Address:	OAKLAND, CA 94610
Contact City,State,Zip:	925-388-6150
Contact Telephone:	Not reported
Contact Fax:	MELISA@ENV-REM.COM
Contact Email:	Not reported
Contact Title:	09
EPA Region:	Not reported
Land Type:	Not a generator, verified
Federal Waste Generator Description:	Not reported
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	485 WICKSON AVENUE #1
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Jill Broadhurst
Owner Type:	Other
Operator Name:	Jill Broadhurst
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**JILL BROADHURST (Continued)**

**1026800356**

2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20210415
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name: JILL BROADHURST	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	485 WICKSON AVENUE #1
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	925-388-6150
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name: JILL BROADHURST	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	485 WICKSON AVENUE #1
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	925-388-6150
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20210329
Handler Name: JILL BROADHURST	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**JILL BROADHURST (Continued)**

**1026800356**

Recognized Trader Exporter: No  
 Spent Lead Acid Battery Importer: No  
 Spent Lead Acid Battery Exporter: No  
 Current Record: Yes  
 Non Storage Recycler Activity: No  
 Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
 NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

L75  
 SSE  
 1/8-1/4  
 0.159 mi.  
 841 ft.

**CUSHMAN AND WAKEFIELD U.S., INC. C/O BANK OF AMERI**  
**496 LAKE PARK AVENUE**  
**OAKLAND, CA 94610**  
 Site 1 of 3 in cluster L

RCRA NonGen / NLR 1027682266  
 CAC003224109

Relative:  
 Lower  
 Actual:  
 17 ft.

RCRA Listings:  
 Date Form Received by Agency: 20230323  
 Handler Name: Cushman And Wakefield U.S., Inc. C/O Bank Of America, Na  
 Handler Address: 496 Lake Park Avenue  
 Handler City,State,Zip: OAKLAND, CA 94610  
 EPA ID: CAC003224109  
 Contact Name: ODIN ANSARI  
 Contact Address: 540 WEST MADISON STREET  
 Contact City,State,Zip: CHICAGO, IL 60661  
 Contact Telephone: 925-963-4867  
 Contact Fax: Not reported  
 Contact Email: CW\_EHS\_BOA@CUSHWAKE.COM  
 Contact Title: Not reported  
 EPA Region: 09  
 Land Type: Not reported  
 Federal Waste Generator Description: Not a generator, verified  
 Non-Notifier: Not reported  
 Biennial Report Cycle: Not reported  
 Accessibility: Not reported  
 Active Site Indicator: Not reported  
 State District Owner: Not reported  
 State District: Not reported  
 Mailing Address: 540 WEST MADISON STREET  
 Mailing City,State,Zip: CHICAGO, IL 60661  
 Owner Name: Cushman & Wakefield Us Inc C/O Boa  
 Owner Type: Other  
 Operator Name: Odin Ansari  
 Operator Type: Other  
 Short-Term Generator Activity: No  
 Importer Activity: No  
 Mixed Waste Generator: No  
 Transporter Activity: No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CUSHMAN AND WAKEFIELD U.S., INC. C/O BANK OF AMERICA, NA (Continued)**

**1027682266**

Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20230323
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

**Handler - Owner Operator:**

Owner/Operator Indicator:	Owner
Owner/Operator Name:	CUSHMAN & WAKEFIELD US INC C/O BOA
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	540 WEST MADISON STREET
Owner/Operator City,State,Zip:	CHICAGO, IL 60661
Owner/Operator Telephone:	925-963-4867
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	ODIN ANSARI
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	540 WEST MADISON STREET

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CUSHMAN AND WAKEFIELD U.S., INC. C/O BANK OF AMERICA, NA (Continued)**

**1027682266**

Owner/Operator City,State,Zip: CHICAGO, IL 60661  
Owner/Operator Telephone: 925-963-4867  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20230323  
Handler Name: CUSHMAN AND WAKEFIELD U.S., INC. C/O BANK OF AMERICA, NA  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**M76**  
**West**  
**1/8-1/4**  
**0.159 mi.**  
**842 ft.**

**SANFORD MA**  
**353 EUCLID AVENUE #109**  
**OAKLAND, CA 94610**  
**Site 1 of 3 in cluster M**

**RCRA NonGen / NLR** **1028896606**  
**CAC003258128**

**Relative:**  
**Higher**  
**Actual:**  
**86 ft.**

RCRA Listings:  
Date Form Received by Agency: 20231025  
Handler Name: Sanford Ma  
Handler Address: 353 Euclid Avenue #109  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003258128  
Contact Name: SANFORD MA  
Contact Address: 353 EUCLID AVENUE #109  
Contact City,State,Zip: OAKLAND, CA 94610  
Contact Telephone: 510-418-9299  
Contact Fax: Not reported  
Contact Email: GISELLE.ESPIRITU@SYNERGYCOMPANIES.COM  
Contact Title: Not reported  
EPA Region: 09  
Land Type: Not reported  
Federal Waste Generator Description: Not a generator, verified  
Non-Notifier: Not reported  
Biennial Report Cycle: Not reported  
Accessibility: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**SANFORD MA (Continued)**

**1028896606**

Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	353 EUCLID AVENUE #109
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Sanford Ma
Owner Type:	Other
Operator Name:	Sanford Ma
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20231025
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	SANFORD MA
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SANFORD MA (Continued)**

**1028896606**

Owner/Operator Address: 353 EUCLID AVENUE #109  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-418-9299  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator  
Owner/Operator Name: SANFORD MA  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 353 EUCLID AVENUE #109  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-418-9299  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:  
Receive Date: 20231025  
Handler Name: SANFORD MA  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:  
NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:  
Violations: No Violations Found

Evaluation Action Summary:  
Evaluations: No Evaluations Found

77  
NNW  
1/8-1/4  
0.162 mi.  
853 ft.

**KIRSTEN HOWE**  
**481 JEAN STREET**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR 1027685206**  
**CAC003227277**

**Relative:**  
**Higher**  
**Actual:**  
**99 ft.**

RCRA Listings:  
Date Form Received by Agency: 20230412  
Handler Name: Kirsten Howe  
Handler Address: 481 Jean Street  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003227277

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**KIRSTEN HOWE (Continued)**

**1027685206**

Contact Name:	KIRSTEN HOWE
Contact Address:	481 JEAN STREET
Contact City,State,Zip:	OAKLAND, CA 94610
Contact Telephone:	510-390-6900
Contact Fax:	Not reported
Contact Email:	MELISA@ENV-REM.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	481 JEAN STREET
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Kirsten Howe
Owner Type:	Other
Operator Name:	Kirsten Howe
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20230412
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**KIRSTEN HOWE (Continued)**

**1027685206**

Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Owner  
Owner/Operator Name: KIRSTEN HOWE  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 481 JEAN STREET  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-390-6900  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator  
Owner/Operator Name: KIRSTEN HOWE  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 481 JEAN STREET  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-390-6900  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20230412  
Handler Name: KIRSTEN HOWE  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**N78**  
**NE**  
**1/8-1/4**  
**0.164 mi.**  
**864 ft.**

**TAYMUREE FOREIGN AUTO CENTER**  
**3509 GRAND**  
**OAKLAND, CA 94610**

**UST FINDER RELEASE**    **1029114929**  
**N/A**

**Site 1 of 5 in cluster N**

**Relative:**  
**Lower**  
**Actual:**  
**13 ft.**

**UST FINDER RELEASE:**

Object ID: 41748  
Facility ID: Not reported  
Lust ID: CAT0600101339  
Name: TAYMUREE FOREIGN AUTO CENTER  
Address: 3509 GRAND  
City,State,Zip: OAKLAND, CA 94610  
Address Match Type: PointAddress  
Reported Date: Not reported  
Status: No Further Action  
Substance: Not reported  
Population within 1500ft: 4130  
Domestic Wells within 1500ft: 0  
Land Use: Developed, Medium Intensity  
Within SPA: No  
SPA PWS Facility ID: Not reported  
SPA Water Type: Not reported  
SPA Facility Type: Not reported  
SPA HUC12: Not reported  
Within WHPA: No  
WHPA PWS Facility ID: Not reported  
WHPA Water Type: Not reported  
WHPA Facility Type: Not reported  
WHPA HUC12: Not reported  
Within 100yr Floodplain: No  
Tribe: Not reported  
EPA Region: 9  
NFA Letter 1: Not reported  
NFA Letter 2: Not reported  
NFA Letter 3: Not reported  
NFA Letter 4: Not reported  
Closed With Residual Contaminate: Not reported  
Coordinate Source: Geocode  
X Coord: -122.24611  
Y Coord: 37.8145400000001  
Latitude: 37.81454  
Longitude: -122.24611

**N79**  
**NE**  
**1/8-1/4**  
**0.164 mi.**  
**864 ft.**

**TAYMUREE FOREIGN AUTO CENTER**  
**3509 GRAND**  
**OAKLAND, CA 94610**

**LUST**    **U003111753**  
**Alameda County CS**    **N/A**  
**Cortese**  
**HIST CORTESE**  
**CERS**

**Site 2 of 5 in cluster N**

**Relative:**  
**Lower**  
**Actual:**  
**13 ft.**

**LUST:**

Name: TAYMUREE FOREIGN AUTO CENTER  
Address: 3509 GRAND  
City,State,Zip: OAKLAND, CA 94610  
Lead Agency: ALAMEDA COUNTY LOP  
Case Type: LUST Cleanup Site  
Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0600101339](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600101339)  
Global Id: T0600101339  
Latitude: 37.8146259  
Longitude: -122.246424

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**TAYMUREE FOREIGN AUTO CENTER (Continued)**

**U003111753**

Status: Completed - Case Closed  
Status Date: 08/29/1994  
Case Worker: Not reported  
RB Case Number: 01-1450  
Local Agency: Not reported  
File Location: All Files are on GeoTracker or in the Local Agency Database  
Local Case Number: RO0000810  
Potential Media Affect: Soil  
Potential Contaminants of Concern: Gasoline  
EPA Region: 9  
Coordinate Source: Google Geocode  
Cuf Case: YES  
Quantity Released Gallons: 0  
Begin Date: 02/23/1990  
Leak Reported Date: 02/23/1990  
How Discovered: Other Means  
How Discovered Description: Not reported  
Discharge Source: Not reported  
Discharge Cause: Not reported  
Stop Method: Other Means  
Stop Description: Not reported  
No Further Action Date: 08/29/1994  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Not reported  
CA Enviroscreen 3 Score: 16-20%  
CA Enviroscreen 4 Score: 25-30%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Not reported

**LUST:**

Global Id: T0600101339  
Contact Type: Regional Board Caseworker  
Contact Name: Regional Water Board  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY ST SUITE 1400  
City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

**LUST:**

Global Id: T0600101339  
Action Type: REMEDIATION  
Date: 09/09/9999  
Action: Not reported

Global Id: T0600101339  
Action Type: ENFORCEMENT  
Date: 08/29/1994  
Action: Closure/No Further Action Letter

Global Id: T0600101339  
Action Type: Other  
Date: 02/23/1990  
Action: Leak Reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**TAYMUREE FOREIGN AUTO CENTER (Continued)**

**U003111753**

LUST:

Global Id: T0600101339  
Status: Open - Case Begin Date  
Status Date: 02/23/1990

Global Id: T0600101339  
Status: Completed - Case Closed  
Status Date: 08/29/1994

Alameda County CS:

Name: TAYMUREE FOREIGN AUTO CENTER  
Address: 3509 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610  
Status: Case Closed  
Record Id: RO0000810  
PE: 5602  
Facility Status: Case Closed  
Latitude: 37.814986993  
Longitude: -122.24575511

CORTESE:

Name: TAYMUREE FOREIGN AUTO CENTER  
Address: 3509 GRAND  
City,State,Zip: OAKLAND, CA 94610  
Region: CORTESE  
Envirostor Id: Not reported  
Global ID: T0600101339  
Site/Facility Type: LUST CLEANUP SITE  
Cleanup Status: COMPLETED - CASE CLOSED  
Status Date: Not reported  
Site Code: Not reported  
Latitude: Not reported  
Longitude: Not reported  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: active  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported  
File Name: Active Open

HIST CORTESE:

edr\_fname: TAYMUREE FOREIGN AUTO CEN  
edr\_fadd1: 3509 GRAND  
City,State,Zip: OAKLAND, CA 94610  
Region: CORTESE  
Facility County Code: 1  
Reg By: LTNKA  
Reg Id: 01-1450

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**TAYMUREE FOREIGN AUTO CENTER (Continued)**

**U003111753**

**CERS:**

Name: TAYMUREE FOREIGN AUTO CENTER  
 Address: 3509 GRAND  
 City,State,Zip: OAKLAND, CA 94610  
 Site ID: 765496  
 CERS ID: T0600101339  
 CERS Description: Leaking Underground Storage Tank Cleanup Site

**Affiliation:**

Affiliation Type Desc: Regional Board Caseworker  
 Entity Name: Regional Water Board - SAN FRANCISCO BAY RWQCB (REGION 2)  
 Entity Title: Not reported  
 Affiliation Address: 1515 CLAY ST SUITE 1400  
 Affiliation City: OAKLAND  
 Affiliation State: CA  
 Affiliation Country: Not reported  
 Affiliation Zip: Not reported  
 Affiliation Phone: ,

**N80  
 NE  
 1/8-1/4  
 0.164 mi.  
 864 ft.**

**YOUNG'S AUTOMOTIVE  
 3509 GRAND AVE  
 OAKLAND, CA 94612  
 Site 3 of 5 in cluster N**

**RCRA NonGen / NLR 1026721253  
 CAL000204795**

**Relative:  
 Lower  
 Actual:  
 13 ft.**

**RCRA Listings:**  
 Date Form Received by Agency: 20000612  
 Handler Name: Young'S Automotive  
 Handler Address: 3509 Grand Ave  
 Handler City,State,Zip: OAKLAND, CA 94612-0000  
 EPA ID: CAL000204795  
 Contact Name: YOUNG LEE/OWNER  
 Contact Address: 3509 GRAND AVE  
 Contact City,State,Zip: OAKLAND, CA 94610-0000  
 Contact Telephone: 510-303-4848  
 Contact Fax: Not reported  
 Contact Email: CAR.DOCTOR@SBCGLOBAL.NET  
 Contact Title: Not reported  
 EPA Region: 09  
 Land Type: Not reported  
 Federal Waste Generator Description: Not a generator, verified  
 Non-Notifier: Not reported  
 Biennial Report Cycle: Not reported  
 Accessibility: Not reported  
 Active Site Indicator: Not reported  
 State District Owner: Not reported  
 State District: Not reported  
 Mailing Address: 3509 GRAND AVE  
 Mailing City,State,Zip: OAKLAND, CA 94612-0000  
 Owner Name: Young Lee  
 Owner Type: Other  
 Operator Name: Young Lee/Owner  
 Operator Type: Other  
 Short-Term Generator Activity: No  
 Importer Activity: No  
 Mixed Waste Generator: No  
 Transporter Activity: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**YOUNG'S AUTOMOTIVE (Continued)**

**1026721253**

Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20201218
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name: YOUNG LEE	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	2552 MCLAREN LN
Owner/Operator City,State,Zip:	SAN RAMON, CA 94582
Owner/Operator Telephone:	510-303-4848
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name: YOUNG LEE/OWNER	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	3509 GRAND AVE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**YOUNG'S AUTOMOTIVE (Continued)**

**1026721253**

Owner/Operator City,State,Zip: OAKLAND, CA 94610-0000  
Owner/Operator Telephone: 510-303-4848  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20000612  
Handler Name: YOUNG'S AUTOMOTIVE  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: Not reported  
Recognized Trader Exporter: Not reported  
Spent Lead Acid Battery Importer: Not reported  
Spent Lead Acid Battery Exporter: Not reported  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**N81**  
**NE**  
**1/8-1/4**  
**0.164 mi.**  
**864 ft.**

**TAYMUREE FOREIGN AUTO CENTER**  
**3509 GRAND AVE**  
**OAKLAND, CA 94610**  
**Site 4 of 5 in cluster N**

**LUST** **S105134899**  
**SWEEPS UST** **N/A**  
**HWTS**

**Relative:**  
**Lower**  
**Actual:**  
**13 ft.**

LUST REG 2:  
Region: 2  
Facility Id: 01-1450  
Facility Status: Case Closed  
Case Number: 429  
How Discovered: Tank Closure  
Leak Cause: Structure Failure  
Leak Source: Tank  
Date Leak Confirmed: Not reported  
Oversight Program: LUST  
Prelim. Site Assessment Workplan Submitted: 4/19/1990  
Preliminary Site Assessment Began: 3/26/1991  
Pollution Characterization Began: Not reported  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

SWEEPS UST:

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**TAYMUREE FOREIGN AUTO CENTER (Continued)**

**S105134899**

Name: TAYMUREE FOREIGN AUTO CENTER  
Address: 3509 GRAND AVE  
City: OAKLAND  
Status: Not reported  
Comp Number: 4590  
Number: Not reported  
Board Of Equalization: 44-032226  
Referral Date: Not reported  
Action Date: Not reported  
Created Date: Not reported  
Owner Tank Id: Not reported  
SWRCB Tank Id: 01-000-004590-000001  
Tank Status: Not reported  
Capacity: 360  
Active Date: Not reported  
Tank Use: EMPTY  
STG: WASTE  
Content: WASTE OIL  
Number Of Tanks: 2

Name: TAYMUREE FOREIGN AUTO CENTER  
Address: 3509 GRAND AVE  
City: OAKLAND  
Status: Not reported  
Comp Number: 4590  
Number: Not reported  
Board Of Equalization: 44-032226  
Referral Date: Not reported  
Action Date: Not reported  
Created Date: Not reported  
Owner Tank Id: Not reported  
SWRCB Tank Id: 01-000-004590-000002  
Tank Status: Not reported  
Capacity: 700  
Active Date: Not reported  
Tank Use: M.V. FUEL  
STG: PRODUCT  
Content: REG UNLEADED  
Number Of Tanks: Not reported

**HWTS:**

Name: TAYMUREE FOREIGN AUTO CENTER  
Address: 3509 GRAND AVE  
Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94612  
EPA ID: CAL000015663  
Inactive Date: 06/30/1998  
Create Date: 11/14/1989  
Last Act Date: Not reported  
Mailing Name: Not reported  
Mailing Address: 3509 GRAND AVE  
Mailing Address 2: Not reported  
Mailing City,State,Zip: OAKLAND, CA 946102011  
Owner Name: GHULAM TAYMUREE  
Owner Address: Not reported  
Owner Address 2: Not reported  
Owner City,State,Zip: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**TAYMUREE FOREIGN AUTO CENTER (Continued)**

**S105134899**

Owner Phone: Not reported  
 Owner Fax: Not reported  
 Contact Name: Not reported  
 Contact Address: INACT PER 98VQ FINAL NOTICE  
 Contact Address 2: Not reported  
 City,State,Zip: Not reported  
 Contact Phone: Not reported  
 Contact Fax: Not reported  
 Facility Status: Inactive  
 Facility Type: PERMANENT  
 Category: STATE  
 Latitude: 37.811535  
 Longitude: -122.266711

**N82**  
**NE**  
**1/8-1/4**  
**0.164 mi.**  
**864 ft.**

**YOUNG'S AUTOMOTIVE**  
**3509 GRAND AVE**  
**OAKLAND, CA 94612**  
**Site 5 of 5 in cluster N**

**RCRA-SQG 1000303654**  
**FINDS CAD982356974**  
**ECHO**  
**Notify 65**

**Relative:**  
**Lower**  
**Actual:**  
**13 ft.**

RCRA Listings:  
 Date Form Received by Agency: 19960901  
 Handler Name: Taymuree Foreign Auto Ctr  
 Handler Address: Grand Ave  
 Handler City,State,Zip: OAKLAND, CA 94610  
 EPA ID: CAD982356974  
 Contact Name: Not reported  
 Contact Address: Not reported  
 Contact City,State,Zip: Not reported  
 Contact Telephone: Not reported  
 Contact Fax: Not reported  
 Contact Email: Not reported  
 Contact Title: Not reported  
 EPA Region: 09  
 Land Type: Not reported  
 Federal Waste Generator Description: Small Quantity Generator  
 Non-Notifier: Not reported  
 Biennial Report Cycle: Not reported  
 Accessibility: Not reported  
 Active Site Indicator: Handler Activities  
 State District Owner: Ca  
 State District: 2  
 Mailing Address: GRAND AVE  
 Mailing City,State,Zip: OAKLAND, CA 94610  
 Owner Name: Gs Taymuree  
 Owner Type: Private  
 Operator Name: Not Required  
 Operator Type: Private  
 Short-Term Generator Activity: No  
 Importer Activity: No  
 Mixed Waste Generator: No  
 Transporter Activity: No  
 Transfer Facility Activity: No  
 Recycler Activity with Storage: No  
 Small Quantity On-Site Burner Exemption: No  
 Smelting Melting and Refining Furnace Exemption: No  
 Underground Injection Control: No  
 Off-Site Waste Receipt: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**YOUNG'S AUTOMOTIVE (Continued)**

**1000303654**

Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20000915
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name: GS TAYMUREE	
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	NOT REQUIRED
Owner/Operator City,State,Zip:	NOT REQUIRED, ME 99999
Owner/Operator Telephone:	415-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name: NOT REQUIRED	
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	NOT REQUIRED
Owner/Operator City,State,Zip:	NOT REQUIRED, ME 99999
Owner/Operator Telephone:	415-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**YOUNG'S AUTOMOTIVE (Continued)**

**1000303654**

Historic Generators:

Receive Date: 19960901  
Handler Name: TAYMUREE FOREIGN AUTO CTR  
Federal Waste Generator Description: Small Quantity Generator  
State District Owner: Ca  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Codes: No NAICS Codes Found

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

FINDS:

Registry ID: 110002800390

[Click Here for FRS Facility Detail Report:](#)

Environmental Interest/Information System:

The California Environmental Protection Agency (CalEPA) has recently implemented a new data warehouse system (nSite). This data warehouse combines and merges facility and site information from five different systems managed within CalEPA. The five systems are: California Environmental Reporting System (CERS), EnviroStor, GeoTracker, California Integrated Water Quality System (CIWQS), and Toxic Release Inventory (TRI).

The Resource Conservation and Recovery Act Information System (RCRAInfo) is EPA's comprehensive information system in support of the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. It tracks many types of information about generators, transporters, treaters, storers, and disposers of hazardous waste.

Registry ID: 110070903578

[Click Here for FRS Facility Detail Report:](#)

Environmental Interest/Information System:

The Resource Conservation and Recovery Act Information System (RCRAInfo) is EPA's comprehensive information system in support of the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. It tracks many types of information about generators, transporters, treaters, storers, and disposers of hazardous waste.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**YOUNG'S AUTOMOTIVE (Continued)**

**1000303654**

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

**ECHO:**

Envid: 1000303654  
Registry ID: 110002800390  
DFR URL: <http://echo.epa.gov/detailed-facility-report?fid=110002800390>  
Name: TAYMUREE FOREIGN AUTO CTR  
Address: 3509 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610

**NOTIFY 65:**

Name: TAYMUREE FOREIGN AUTO CENTER  
Address: 3509 GRAND AVENUE  
City,State,Zip: OAKLAND, CA 92626  
Date Reported: Not reported  
Staff Initials: Not reported  
Board File Number: Not reported  
Facility Type: Not reported  
Discharge Date: Not reported  
Issue Date: Not reported  
Incident Description: Not reported  
Global ID: Not reported  
Status: Not reported

**83  
NW  
1/8-1/4  
0.165 mi.  
871 ft.**

**J AND R ASSOCIATES  
281 MACARTHUR BLVD  
OAKLAND, CA 94610**

**RCRA NonGen / NLR 1025855835  
CAC003036120**

**Relative:  
Higher  
Actual:  
120 ft.**

RCRA Listings:  
Date Form Received by Agency: 20190927  
Handler Name: J And R Associates  
Handler Address: 281 Macarthur Blvd  
Handler City,State,Zip: OAKLAND, CA 94610-3165  
EPA ID: CAC003036120  
Contact Name: JORGE MIRANDA  
Contact Address: 281 MACARTHUR BLVD  
Contact City,State,Zip: OAKLAND, CA 94610-3165  
Contact Telephone: 650-444-8143  
Contact Fax: Not reported  
Contact Email: MARIAE@PWSEI.COM  
Contact Title: Not reported  
EPA Region: 09  
Land Type: Not reported  
Federal Waste Generator Description: Not a generator, verified  
Non-Notifier: Not reported  
Biennial Report Cycle: Not reported  
Accessibility: Not reported  
Active Site Indicator: Not reported  
State District Owner: Not reported  
State District: Not reported  
Mailing Address: 281 MACARTHUR BLVD  
Mailing City,State,Zip: OAKLAND, CA 94610-3165  
Owner Name: Jorge Miranda  
Owner Type: Other

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**J AND R ASSOCIATES (Continued)**

**1025855835**

Operator Name:	Jorge Miranda
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20191004
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name: JORGE MIRANDA	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	281 MACARTHUR BLVD
Owner/Operator City,State,Zip:	OAKLAND, CA 94610-3165
Owner/Operator Telephone:	650-444-8143
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**J AND R ASSOCIATES (Continued)**

**1025855835**

Owner/Operator Indicator: Operator  
Owner/Operator Name: JORGE MIRANDA  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 281 MACARTHUR BLVD  
Owner/Operator City,State,Zip: OAKLAND, CA 94610-3165  
Owner/Operator Telephone: 650-444-8143  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20190927  
Handler Name: J AND R ASSOCIATES  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**M84**  
**West**  
**1/8-1/4**  
**0.170 mi.**  
**898 ft.**

**ARNOLD BLUSTEIN**  
**397 PALM AVENUE**  
**OAKLAND, CA 94610**  
**Site 2 of 3 in cluster M**

**RCRA NonGen / NLR** **1027525982**  
**CAC003218583**

**Relative:**  
**Higher**  
**Actual:**  
**94 ft.**

RCRA Listings:  
Date Form Received by Agency: 20230220  
Handler Name: Arnold Blustein  
Handler Address: 397 Palm Avenue  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003218583  
Contact Name: ARNOLD BLUSTEIN  
Contact Address: 397 PALM AVENUE  
Contact City,State,Zip: OAKLAND, CA 94610  
Contact Telephone: 510-352-2425  
Contact Fax: Not reported  
Contact Email: MELISA@ENV-REM.COM  
Contact Title: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**ARNOLD BLUSTEIN (Continued)**

**1027525982**

EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	397 PALM AVENUE
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Arnold Blustein
Owner Type:	Other
Operator Name:	Arnold Blustein
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20230220
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**ARNOLD BLUSTEIN (Continued)**

**1027525982**

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	ARNOLD BLUSTEIN
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	397 PALM AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-352-2425
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	ARNOLD BLUSTEIN
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	397 PALM AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-352-2425
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20230220
Handler Name:	ARNOLD BLUSTEIN
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
-------------	---------------------

Evaluation Action Summary:

Evaluations:	No Evaluations Found
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Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**O85**  
**SSW**  
**1/8-1/4**  
**0.171 mi.**  
**904 ft.**

**MYND PROPERTY MANAGEMENT**  
**449 LAGUNITAS AVE**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1025848549**  
**CAC003028601**

**Site 1 of 6 in cluster O**

**Relative:**  
**Lower**

**Actual:**  
**45 ft.**

RCRA Listings:	20190809
Date Form Received by Agency:	Mynd Property Management
Handler Name:	449 Lagunitas Ave
Handler Address:	OAKLAND, CA 94610-3507
Handler City,State,Zip:	CAC003028601
EPA ID:	CHRISTOPHER BOLEI
Contact Name:	449 LAGUNITAS AVE
Contact Address:	OAKLAND, CA 94610-3507
Contact City,State,Zip:	415-299-8286
Contact Telephone:	Not reported
Contact Fax:	CHERILYNIBARRA@ALLIANCE-ENVIRO.COM
Contact Email:	Not reported
Contact Title:	09
EPA Region:	Not reported
Land Type:	Not a generator, verified
Federal Waste Generator Description:	Not reported
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	1611 TLEGRAPH AVENUE
Mailing City,State,Zip:	OAKLAND, CA 94612
Owner Name:	Mynd Property Management
Owner Type:	Other
Operator Name:	Christopher Bolei
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MYND PROPERTY MANAGEMENT (Continued)**

**1025848549**

Human Exposure Controls Indicator: N/A  
Groundwater Controls Indicator: N/A  
Significant Non-Complier Universe: No  
Unaddressed Significant Non-Complier Universe: No  
Addressed Significant Non-Complier Universe: No  
Significant Non-Complier With a Compliance Schedule Universe: No  
Financial Assurance Required: Not reported  
Handler Date of Last Change: 20190910  
Recognized Trader-Importer: No  
Recognized Trader-Exporter: No  
Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Operator  
Owner/Operator Name: CHRISTOPHER BOLEI  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 449 LAGUNITAS AVE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610-3507  
Owner/Operator Telephone: 415-299-8286  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner  
Owner/Operator Name: MYND PROPERTY MANAGEMENT  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 1611 TLEGRAPH AVENUE  
Owner/Operator City,State,Zip: OAKLAND, CA 94612  
Owner/Operator Telephone: 415-299-8286  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20190809  
Handler Name: MYND PROPERTY MANAGEMENT  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**MYND PROPERTY MANAGEMENT (Continued)**

**1025848549**

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
 NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**86**  
**East**  
**1/8-1/4**  
**0.172 mi.**  
**907 ft.**

**BERGER ENTERPRISES**  
**743 WARFIELD AVENUE**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1026816502**  
**CAC003129224**

**Relative:**  
**Higher**  
**Actual:**  
**57 ft.**

RCRA Listings:

Date Form Received by Agency: 20210714  
 Handler Name: Berger Enterprises  
 Handler Address: 743 Warfield Avenue  
 Handler City,State,Zip: OAKLAND, CA 94610  
 EPA ID: CAC003129224  
 Contact Name: BERGER ENTERPRISES  
 Contact Address: 743 WARFIELD AVENUE  
 Contact City,State,Zip: OAKLAND, CA 94610  
 Contact Telephone: 510-984-6178  
 Contact Fax: Not reported  
 Contact Email: ALONDRA.DIAZ@SYNERGYCOMPANIES.ORG  
 Contact Title: Not reported  
 EPA Region: 09  
 Land Type: Not reported  
 Federal Waste Generator Description: Not a generator, verified  
 Non-Notifier: Not reported  
 Biennial Report Cycle: Not reported  
 Accessibility: Not reported  
 Active Site Indicator: Not reported  
 State District Owner: Not reported  
 State District: Not reported  
 Mailing Address: 743 WARFIELD AVENUE  
 Mailing City,State,Zip: OAKLAND, CA 94610  
 Owner Name: Berger Enterprises  
 Owner Type: Other  
 Operator Name: Berger Enterprises  
 Operator Type: Other  
 Short-Term Generator Activity: No  
 Importer Activity: No  
 Mixed Waste Generator: No  
 Transporter Activity: No  
 Transfer Facility Activity: No  
 Recycler Activity with Storage: No  
 Small Quantity On-Site Burner Exemption: No  
 Smelting Melting and Refining Furnace Exemption: No  
 Underground Injection Control: No  
 Off-Site Waste Receipt: No  
 Universal Waste Indicator: No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BERGER ENTERPRISES (Continued)**

**1026816502**

Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20210714
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name: BERGER ENTERPRISES	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	743 WARFIELD AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-984-6178
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name: BERGER ENTERPRISES	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	743 WARFIELD AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-984-6178
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BERGER ENTERPRISES (Continued)**

**1026816502**

Historic Generators:

Receive Date: 20210714  
Handler Name: BERGER ENTERPRISES  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**K87**  
**ESE**  
**1/8-1/4**  
**0.172 mi.**  
**910 ft.**

**SUZI GOLDMACHER**  
**737 WARFIELD AVENUE**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1026709720**  
**CAC003097821**

**Site 2 of 5 in cluster K**

**Relative:**  
**Higher**  
**Actual:**  
**50 ft.**

RCRA Listings:

Date Form Received by Agency: 20201218  
Handler Name: Suzi Goldmacher  
Handler Address: 737 Warfield Avenue  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003097821  
Contact Name: SUZI GOLDMACHER  
Contact Address: 737 WARFIELD AVENUE  
Contact City,State,Zip: OAKLAND, CA 94610  
Contact Telephone: 510-459-4477  
Contact Fax: Not reported  
Contact Email: NICOLE@ENV-REM.COM  
Contact Title: Not reported  
EPA Region: 09  
Land Type: Not reported  
Federal Waste Generator Description: Not a generator, verified  
Non-Notifier: Not reported  
Biennial Report Cycle: Not reported  
Accessibility: Not reported  
Active Site Indicator: Not reported  
State District Owner: Not reported  
State District: Not reported  
Mailing Address: 737 WARFIELD AVENUE  
Mailing City,State,Zip: OAKLAND, CA 94610  
Owner Name: Suzi Goldmacher

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**SUZI GOLDMACHER (Continued)**

**1026709720**

Owner Type:	Other
Operator Name:	Suzi Goldmacher
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20201218
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	SUZI GOLDMACHER
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	737 WARFIELD AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-459-4477
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SUZI GOLDMACHER (Continued)**

**1026709720**

Owner/Operator Indicator: Operator  
Owner/Operator Name: SUZI GOLDMACHER  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 737 WARFIELD AVENUE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-459-4477  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20201218  
Handler Name: SUZI GOLDMACHER  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**L88**  
**SE**  
**1/8-1/4**  
**0.174 mi.**  
**921 ft.**

**500 LAKE PARK APARTMENTS**  
**500 LAKE PARK AVENUE**  
**OAKLAND, CA 94610**  
**Site 2 of 3 in cluster L**

**CPS-SLIC S125952670**  
**N/A**

**Relative:**  
**Lower**

CPS-SLIC:  
Name: 500 LAKE PARK APARTMENTS  
Address: 500 LAKE PARK AVENUE  
City,State,Zip: OAKLAND, CA 94610  
Region: STATE  
**Facility Status: Open - Site Assessment**  
Status Date: 02/10/2020  
Global Id: T10000013846  
Lead Agency: ALAMEDA COUNTY LOP  
Lead Agency Case Number: RO0003405  
Latitude: 37.81055  
Longitude: -122.24702  
Case Type: Cleanup Program Site

**Actual:**  
**18 ft.**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**500 LAKE PARK APARTMENTS (Continued)**

**S125952670**

Case Worker: DY  
Local Agency: ALAMEDA COUNTY LOP  
RB Case Number: Not reported  
File Location: All Files are on GeoTracker or in the Local Agency Database  
Potential Media Affected: Soil  
Potential Contaminants of Concern: Lead  
EPA Region: 9  
Coordinate Source: Not reported  
Cuf Case: NO  
Quantity Released Gallons: Not reported  
Begin Date: 12/10/2019  
Leak Reported Date: Not reported  
How Discovered: Not reported  
How Discovered Description: Not reported  
Discharge Source: Not reported  
Discharge Cause: Not reported  
Stop Method: Not reported  
Stop Description: Not reported  
No Further Action Date: Not reported  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Not reported  
CA EnviroScreen 3 Score: 16-20%  
CA EnviroScreen 4 Score: 15-20%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Alameda County Department of Environmental Health (ACDEH) has been providing regulatory environmental oversight for the investigation and cleanup activities associated with Cleanup Site Program Case No. RO0003405 since December 2019 subsequent to referral by the City of Oakland Planning and Building Department and a property transaction. To redevelop the Site, environmental investigations are required to evaluate impacts to the subsurface from historic land use and develop corrective actions to reduce potential risk to construction workers, the surrounding community, and occupants of the new development. Subsurface investigations have been conducted to evaluate historical operations at the Site including but not limited to residential dwellings and various commercial configurations such as churches and restaurants. Results of these subsurface investigations has identified chemicals of concern (COCs) in environmental media (soil). To address this contamination prior to development, proposed corrective actions include the hazardous material survey and abatement of the existing onsite building and hardscape; demolition of existing Site buildings and above ground infrastructure; remediation and off-Site disposal of impacted soil at a permitted disposal facility or capping and consolidation under site hardscape. Proposed redevelopment of the Site includes a 6-story 53-residential unit building with commercial and parking on the ground floor, additional parking and open scape on floor 2 and residential units on the upper four floors The half-acre Site is currently occupied by Vegan Mob, a restaurant located at 500 Lake Park Avenue. The Site is in the Grand Lake Neighborhood, a mixed commercial and residential area, and near Interstate 580, City of Oakland parks (East Shore and Splash Pad) are located adjacent to the Site in northeast tip of Lake Merritt. The Site operated as residential use until approximately 1957 when the former building was demolished, and the current-day

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**500 LAKE PARK APARTMENTS (Continued)**

**S125952670**

restaurant building was constructed along Lake Park Avenue. The northeast portion of the Site, located along Cheney Avenue, contained residential buildings and a church until 1968. Since then this portion of the Site has been used as a parking lot for the restaurant. No industrial activities are known to have occurred on the Site. Environmental investigations were conducted in 2018 to assess the type and extent of contamination in fill, soil, and groundwater at the Site from historic land uses and aerial deposition from vehicle exhaust from Interstate 580. Lead has been detected in soil above applicable regulatory agency screening levels for residential land use in the portion of the Site located along Lake Shore Avenue. Diesel and motor oil range total petroleum hydrocarbons (TPH-d and TPH-mo), acetone, and methyl ethyl ketone has also been detected in soil at concentrations that do not exceed applicable regulatory screening levels. TPH-d has been detected in groundwater at concentration below applicable regulatory screening levels. Additional subsurface investigations will be conducted (Q2020) to assess the extent of elevated lead in soil. Soil samples will also be analyzed for asbestos and polychlorinated biphenyls (PCBs), constituents typically associated with building materials and demolition before the 1980s. Sampling results from this subsurface investigation will guide corrective actions to address the elevated lead during Site construction.

[Click here to access the California GeoTracker records for this facility:](#)

**L89  
 SE  
 1/8-1/4  
 0.174 mi.  
 921 ft.**

**MAXGEN ENERGY SERVICES  
 500 LAKE PARK AVE  
 OAKLAND, CA 94610  
 Site 3 of 3 in cluster L**

**RCRA NonGen / NLR 1026044316  
 CAC003083113**

**Relative:  
 Lower  
 Actual:  
 18 ft.**

RCRA Listings:	
Date Form Received by Agency:	20200113
Handler Name:	Maxgen Energy Services
Handler Address:	500 Lake Park Ave
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003050630
Contact Name:	ADAM LEDERMAN
Contact Address:	1690 SCENIC AVE
Contact City,State,Zip:	COSTA MESA, CA 92626
Contact Telephone:	714-460-3103
Contact Fax:	Not reported
Contact Email:	ALEDERMAN@MAXGEN.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	1690 SCENIC AVE
Mailing City,State,Zip:	COSTA MESA, CA 92626
Owner Name:	Oakland Kenyon
Owner Type:	Other

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**MAXGEN ENERGY SERVICES (Continued)**

**1026044316**

Operator Name:	Adam Lederman
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20200210
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	OAKLAND KENYON
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	250 FRANK H. OGAWA PLAZA
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-238-3961
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MAXGEN ENERGY SERVICES (Continued)**

**1026044316**

Owner/Operator Indicator: Operator  
Owner/Operator Name: ADAM LEDERMAN  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 1690 SCENIC AVE  
Owner/Operator City,State,Zip: COSTA MESA, CA 92626  
Owner/Operator Telephone: 714-460-3103  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20200113  
Handler Name: MAXGEN ENERGY SERVICES  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Code: 236220  
NAICS Description: COMMERCIAL AND INSTITUTIONAL BUILDING CONSTRUCTION

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**M90**  
**West**  
**1/8-1/4**  
**0.179 mi.**  
**944 ft.**

**MAXWELL & KATE ERNST**  
**388 PALM AVE.**  
**OAKLAND, CA 94610**  
**Site 3 of 3 in cluster M**

**RCRA NonGen / NLR** **1026470330**  
**CAC003075852**

**Relative:**  
**Higher**  
**Actual:**  
**87 ft.**

RCRA Listings:  
Date Form Received by Agency: 20200722  
Handler Name: Maxwell & Kate Ernst  
Handler Address: 388 Palm Ave.  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003075852  
Contact Name: MAXWELL & KATE ERNST  
Contact Address: 388 PALM AVE.  
Contact City,State,Zip: OAKLAND, CA 94610  
Contact Telephone: 816-850-8448  
Contact Fax: Not reported  
Contact Email: GISELLE.ESPIRITU@SYNERGYCOMPANIES.ORG  
Contact Title: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**MAXWELL & KATE ERNST (Continued)**

**1026470330**

EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	388 PALM AVE.
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Maxwell & Kate Ernst
Owner Type:	Other
Operator Name:	Maxwell & Kate Ernst
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20200814
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MAXWELL & KATE ERNST (Continued)**

**1026470330**

Handler - Owner Operator:

Owner/Operator Indicator: Owner  
Owner/Operator Name: MAXWELL & KATE ERNST  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 388 PALM AVE.  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 816-850-8448  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator  
Owner/Operator Name: MAXWELL & KATE ERNST  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 388 PALM AVE.  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 816-850-8448  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20200722  
Handler Name: MAXWELL & KATE ERNST  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**O91**  
**South**  
**1/8-1/4**  
**0.181 mi.**  
**954 ft.**

**HAN, AGNES**  
**626 GRAND AVENUE**  
**OAKLAND, CA 94610**  
**Site 2 of 6 in cluster O**

**RCRA NonGen / NLR**    **1026044788**  
**CAC003051126**

**Relative:**  
**Lower**  
**Actual:**  
**24 ft.**

RCRA Listings:	20200115
Date Form Received by Agency:	
Handler Name:	Han, Agnes
Handler Address:	626 Grand Avenue
Handler City,State,Zip:	OAKLAND, CA 94610-2667
EPA ID:	CAC003051126
Contact Name:	HAN, AGNES
Contact Address:	626 GRAND AVENUE
Contact City,State,Zip:	OAKLAND, CA 94610-2667
Contact Telephone:	510-388-2396
Contact Fax:	510-651-7702
Contact Email:	MICKIEL@PWSEI.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	626 GRAND AVENUE
Mailing City,State,Zip:	OAKLAND, CA 94610-2667
Owner Name:	Han, Agnes
Owner Type:	Other
Operator Name:	Han, Agnes
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HAN, AGNES (Continued)**

**1026044788**

Human Exposure Controls Indicator: N/A  
Groundwater Controls Indicator: N/A  
Significant Non-Complier Universe: No  
Unaddressed Significant Non-Complier Universe: No  
Addressed Significant Non-Complier Universe: No  
Significant Non-Complier With a Compliance Schedule Universe: No  
Financial Assurance Required: Not reported  
Handler Date of Last Change: 20200210  
Recognized Trader-Importer: No  
Recognized Trader-Exporter: No  
Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Operator  
Owner/Operator Name: HAN, AGNES  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 626 GRAND AVENUE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610-2667  
Owner/Operator Telephone: 510-388-2396  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner  
Owner/Operator Name: HAN, AGNES  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 626 GRAND AVENUE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610-2667  
Owner/Operator Telephone: 510-388-2396  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20200115  
Handler Name: HAN, AGNES  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**HAN, AGNES (Continued)**

**1026044788**

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
 NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**O92**  
**South**  
**1/8-1/4**  
**0.181 mi.**  
**954 ft.**

**HAN, AGNES**  
**626 GRAND AVENUE**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1025858968**  
**CAC003039498**

**Site 3 of 6 in cluster O**

**Relative:**  
**Lower**  
**Actual:**  
**24 ft.**

RCRA Listings:  
 Date Form Received by Agency: 20191018  
 Handler Name: Han, Agnes  
 Handler Address: 626 Grand Avenue  
 Handler City,State,Zip: OAKLAND, CA 94610  
 EPA ID: CAC003039498  
 Contact Name: HAN, AGNES  
 Contact Address: 626 GRAND AVENUE  
 Contact City,State,Zip: OAKLAND, CA 94610  
 Contact Telephone: 510-388-2396  
 Contact Fax: 510-651-7702  
 Contact Email: MICKIEL@PWSEI.COM  
 Contact Title: Not reported  
 EPA Region: 09  
 Land Type: Not reported  
 Federal Waste Generator Description: Not a generator, verified  
 Non-Notifier: Not reported  
 Biennial Report Cycle: Not reported  
 Accessibility: Not reported  
 Active Site Indicator: Not reported  
 State District Owner: Not reported  
 State District: Not reported  
 Mailing Address: 626 GRAND AVENUE  
 Mailing City,State,Zip: OAKLAND, CA 94610  
 Owner Name: Han, Agnes  
 Owner Type: Other  
 Operator Name: Han, Agnes  
 Operator Type: Other  
 Short-Term Generator Activity: No  
 Importer Activity: No  
 Mixed Waste Generator: No  
 Transporter Activity: No  
 Transfer Facility Activity: No  
 Recycler Activity with Storage: No  
 Small Quantity On-Site Burner Exemption: No  
 Smelting Melting and Refining Furnace Exemption: No  
 Underground Injection Control: No  
 Off-Site Waste Receipt: No  
 Universal Waste Indicator: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**HAN, AGNES (Continued)**

**1025858968**

Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20191021
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name: HAN, AGNES	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	626 GRAND AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-388-2396
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name: HAN, AGNES	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	626 GRAND AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-388-2396
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HAN, AGNES (Continued)**

**1025858968**

Historic Generators:

Receive Date: 20191018  
Handler Name: HAN, AGNES  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**K93**  
**ESE**  
**1/8-1/4**  
**0.191 mi.**  
**1008 ft.**

**MAUREEN LAWLOR**  
**507 WICKSON AVENUE #105**  
**OAKLAND, CA 94610**  
**Site 3 of 5 in cluster K**

**RCRA NonGen / NLR** **1026812428**  
**CAC003124944**

**Relative:**  
**Higher**  
**Actual:**  
**50 ft.**

RCRA Listings:

Date Form Received by Agency: 20210616  
Handler Name: Maureen Lawlor  
Handler Address: 507 Wickson Avenue #105  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003124944  
Contact Name: MAUREEN LAWLOR  
Contact Address: 4426 EVANS AVE.  
Contact City,State,Zip: OAKLAND, CA 94602  
Contact Telephone: 510-520-2263  
Contact Fax: Not reported  
Contact Email: GISELLE.ESPIRITU@SYNERGYCOMPANIES.ORG  
Contact Title: Not reported  
EPA Region: 09  
Land Type: Not reported  
Federal Waste Generator Description: Not a generator, verified  
Non-Notifier: Not reported  
Biennial Report Cycle: Not reported  
Accessibility: Not reported  
Active Site Indicator: Not reported  
State District Owner: Not reported  
State District: Not reported  
Mailing Address: 4426 EVANS AVE.  
Mailing City,State,Zip: OAKLAND, CA 94602  
Owner Name: Maureen Lawlor

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**MAUREEN LAWLOR (Continued)**

**1026812428**

Owner Type:	Other
Operator Name:	Maureen Lawlor
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20210618
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	MAUREEN LAWLOR
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	4426 EVANS AVE.
Owner/Operator City,State,Zip:	OAKLAND, CA 94602
Owner/Operator Telephone:	510-520-2263
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MAUREEN LAWLOR (Continued)**

**1026812428**

Owner/Operator Indicator: Operator  
Owner/Operator Name: MAUREEN LAWLOR  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 4426 EVANS AVE.  
Owner/Operator City,State,Zip: OAKLAND, CA 94602  
Owner/Operator Telephone: 510-520-2263  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20210616  
Handler Name: MAUREEN LAWLOR  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**K94**  
**ESE**  
**1/8-1/4**  
**0.191 mi.**  
**1008 ft.**

**JAMES ROSS**  
**507 WICKSON AVENUE #304**  
**OAKLAND, CA 94610**  
**Site 4 of 5 in cluster K**

**RCRA NonGen / NLR** **1027068789**  
**CAC003140131**

**Relative:**  
**Higher**  
**Actual:**  
**50 ft.**

RCRA Listings:  
Date Form Received by Agency: 20210922  
Handler Name: James Ross  
Handler Address: 507 Wickson Avenue #304  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003140131  
Contact Name: JAMES ROSS  
Contact Address: 507 WICKSON AVENUE #304  
Contact City,State,Zip: OAKLAND, CA 94610  
Contact Telephone: 510-759-3210  
Contact Fax: Not reported  
Contact Email: GISELLE.ESPIRITU@SYNERGYCOMPANIES.ORG  
Contact Title: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**JAMES ROSS (Continued)**

**1027068789**

EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	507 WICKSON AVENUE #304
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	James Ross
Owner Type:	Other
Operator Name:	James Ross
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20210922
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**JAMES ROSS (Continued)**

**1027068789**

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	JAMES ROSS
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	507 WICKSON AVENUE #304
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-759-3210
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	JAMES ROSS
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	507 WICKSON AVENUE #304
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-759-3210
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20210922
Handler Name:	JAMES ROSS
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
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Evaluation Action Summary:

Evaluations:	No Evaluations Found
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Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CATHARINE SCHULTZ & RICHARD JARATT (Continued)**

**1025832647**

Human Exposure Controls Indicator: N/A  
Groundwater Controls Indicator: N/A  
Significant Non-Complier Universe: No  
Unaddressed Significant Non-Complier Universe: No  
Addressed Significant Non-Complier Universe: No  
Significant Non-Complier With a Compliance Schedule Universe: No  
Financial Assurance Required: Not reported  
Handler Date of Last Change: 20190627  
Recognized Trader-Importer: No  
Recognized Trader-Exporter: No  
Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Owner  
Owner/Operator Name: CATHARINE SCHULTZ & RICHARD JARATT  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 507 WICKSON AVENUE #101  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-502-3235  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator  
Owner/Operator Name: CATHARINE SCHULTZ & RICHARD JARATT  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 507 WICKSON AVENUE #101  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-502-3235  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20190426  
Handler Name: CATHARINE SCHULTZ & RICHARD JARATT  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CATHARINE SCHULTZ & RICHARD JARATT (Continued)**

**1025832647**

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**P96**  
**SSW**  
**1/8-1/4**  
**0.192 mi.**  
**1016 ft.**

**LINDA HOLLAND**  
**408 EUCLID AVE**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1026053291**  
**CAC003060190**

**Site 1 of 9 in cluster P**

**Relative:**  
**Lower**  
**Actual:**  
**43 ft.**

RCRA Listings:

Date Form Received by Agency: 20200316  
Handler Name: Linda Holland  
Handler Address: 408 Euclid Ave  
Handler City,State,Zip: OAKLAND, CA 94610-3524  
EPA ID: CAC003060190  
Contact Name: LINDA HOLLAND  
Contact Address: 408 EUCLID AVE  
Contact City,State,Zip: OAKLAND, CA 94610-3524  
Contact Telephone: 831-915-3525  
Contact Fax: Not reported  
Contact Email: KATRINA.STALLWORTH@SYNERGYCOMPANIES.ORG  
Contact Title: Not reported  
EPA Region: 09  
Land Type: Not reported  
Federal Waste Generator Description: Not a generator, verified  
Non-Notifier: Not reported  
Biennial Report Cycle: Not reported  
Accessibility: Not reported  
Active Site Indicator: Not reported  
State District Owner: Not reported  
State District: Not reported  
Mailing Address: 408 EUCLID AVE  
Mailing City,State,Zip: OAKLAND, CA 94610-3524  
Owner Name: Linda Holland  
Owner Type: Other  
Operator Name: Linda Holland  
Operator Type: Other  
Short-Term Generator Activity: No  
Importer Activity: No  
Mixed Waste Generator: No  
Transporter Activity: No  
Transfer Facility Activity: No  
Recycler Activity with Storage: No  
Small Quantity On-Site Burner Exemption: No  
Smelting Melting and Refining Furnace Exemption: No  
Underground Injection Control: No  
Off-Site Waste Receipt: No  
Universal Waste Indicator: No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**LINDA HOLLAND (Continued)**

**1026053291**

Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20200320
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name: LINDA HOLLAND	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	408 EUCLID AVE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610-3524
Owner/Operator Telephone:	831-915-3525
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name: LINDA HOLLAND	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	408 EUCLID AVE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610-3524
Owner/Operator Telephone:	831-915-3525
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**LINDA HOLLAND (Continued)**

**1026053291**

Historic Generators:

Receive Date: 20200316  
Handler Name: LINDA HOLLAND  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**Q97**  
**NE**  
**1/8-1/4**  
**0.198 mi.**  
**1048 ft.**

**DAVID JOHNSON**  
**558 VALLE VISTA AVENUE**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR** **1027068939**  
**CAC003140293**

**Site 1 of 2 in cluster Q**

**Relative:**  
**Lower**  
**Actual:**  
**37 ft.**

RCRA Listings:

Date Form Received by Agency: 20210923  
Handler Name: David Johnson  
Handler Address: 558 Valle Vista Avenue  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003140293  
Contact Name: DAVID JOHNSON  
Contact Address: 558 VALLE VISTA AVENUE  
Contact City,State,Zip: OAKLAND, CA 94610  
Contact Telephone: 858-735-0323  
Contact Fax: Not reported  
Contact Email: GISELLE.ESPIRITU@SYNERGYCOMPANIES.ORG  
Contact Title: Not reported  
EPA Region: 09  
Land Type: Not reported  
Federal Waste Generator Description: Not a generator, verified  
Non-Notifier: Not reported  
Biennial Report Cycle: Not reported  
Accessibility: Not reported  
Active Site Indicator: Not reported  
State District Owner: Not reported  
State District: Not reported  
Mailing Address: 558 VALLE VISTA AVENUE  
Mailing City,State,Zip: OAKLAND, CA 94610  
Owner Name: David Johnson

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

DAVID JOHNSON (Continued)

1027068939

Owner Type:	Other
Operator Name:	David Johnson
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20210923
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	DAVID JOHNSON
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	558 VALLE VISTA AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	858-735-0323
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**DAVID JOHNSON (Continued)**

**1027068939**

Owner/Operator Indicator: Operator  
Owner/Operator Name: DAVID JOHNSON  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 558 VALLE VISTA AVENUE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 858-735-0323  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20210923  
Handler Name: DAVID JOHNSON  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**O98**  
**SSW**  
**1/8-1/4**  
**0.200 mi.**  
**1055 ft.**

**RYAN YU**  
**427 LAGUNITAS AVE, #103**  
**OAKLAND, CA 94610**  
**Site 4 of 6 in cluster O**

**RCRA NonGen / NLR** **1026809980**  
**CAC003122380**

**Relative:**  
**Lower**

RCRA Listings:

**Actual:**  
**44 ft.**

Date Form Received by Agency: 20210601  
Handler Name: Ryan Yu  
Handler Address: 427 Lagunitas Ave, #103  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003122380  
Contact Name: RYAN YU  
Contact Address: 507 CARMEL AVE  
Contact City,State,Zip: ALBANY, CA 94706  
Contact Telephone: 510-332-7916  
Contact Fax: Not reported  
Contact Email: ERIKAM@CVECORP.COM  
Contact Title: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**RYAN YU (Continued)**

**1026809980**

EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	507 CARMEL AVE
Mailing City,State,Zip:	ALBANY, CA 94706
Owner Name:	Ryan Yu
Owner Type:	Other
Operator Name:	Ryan Yu
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20210604
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**RYAN YU (Continued)**

**1026809980**

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	RYAN YU
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	507 CARMEL AVE
Owner/Operator City,State,Zip:	ALBANY, CA 94706
Owner/Operator Telephone:	510-332-7916
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	RYAN YU
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	507 CARMEL AVE
Owner/Operator City,State,Zip:	ALBANY, CA 94706
Owner/Operator Telephone:	510-332-7916
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20210601
Handler Name:	RYAN YU
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
-------------	---------------------

Evaluation Action Summary:

Evaluations:	No Evaluations Found
--------------	----------------------

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s) EDR ID Number  
EPA ID Number

R99  
WNW  
1/8-1/4  
0.203 mi.  
1070 ft.

PRIVATE RESIDENCE  
PRIVATE RESIDENCE  
OAKLAND, CA 94618

LUST S110653939  
N/A

Site 1 of 8 in cluster R

Relative:  
Higher  
Actual:  
103 ft.

LUST:

Name: PRIVATE RESIDENCE  
Address: PRIVATE RESIDENCE  
City,State,Zip: OAKLAND, CA 94618  
Lead Agency: OAKLAND, CITY OF  
Case Type: LUST Cleanup Site  
Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T10000005350](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000005350)  
Global Id: T10000005350  
Latitude: 37.849043  
Longitude: -122.240389  
Status: Completed - Case Closed  
Status Date: 09/13/2012  
Case Worker: Not reported  
RB Case Number: Not reported  
Local Agency: Not reported  
File Location: Not reported  
Local Case Number: Not reported  
Potential Media Affect: Not reported  
Potential Contaminants of Concern: Not reported  
EPA Region: 9  
Coordinate Source: Google Geocode  
Cuf Case: YES  
Quantity Released Gallons: Not reported  
Begin Date: 07/12/2012  
Leak Reported Date: 07/12/2012  
How Discovered: Not reported  
How Discovered Description: Not reported  
Discharge Source: Tank  
Discharge Cause: Unknown  
Stop Method: Not reported  
Stop Description: Not reported  
No Further Action Date: 09/13/2012  
CA Water Watershed Name: Bay Bridges - Berkeley (203.30)  
Dwr Groundwater Subbasin Name: Not reported  
Disadvantaged Community: Not reported  
CA Enviroscreen 3 Score: 6-10%  
CA Enviroscreen 4 Score: 1-5% (lowest scores)  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Not reported

LUST:

Global Id: T10000005350  
Action Type: Other  
Date: 07/12/2012  
Action: Leak Reported

Global Id: T10000005350  
Action Type: Other  
Date: 07/12/2012  
Action: Leak Began

Global Id: T10000005350

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIVATE RESIDENCE (Continued)**

**S110653939**

Action Type: Other  
Date: 07/12/2012  
Action: Leak Discovery

LUST:

Global Id: T10000005350  
Status: Open - Case Begin Date  
Status Date: 07/12/2012

Global Id: T10000005350  
Status: Completed - Case Closed  
Status Date: 09/13/2012

Name: PRIVATE RESIDENCE  
Address: PRIVATE RESIDENCE  
City,State,Zip: OAKLAND, CA 94612  
Lead Agency: ALAMEDA COUNTY LOP  
Case Type: LUST Cleanup Site  
Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0600114301](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600114301)  
Global Id: T0600114301  
Latitude: 37.814775  
Longitude: -122.267673  
Status: Completed - Case Closed  
Status Date: 05/20/2009  
Case Worker: PK  
RB Case Number: NA  
Local Agency: ALAMEDA COUNTY LOP  
File Location: All Files are on GeoTracker or in the Local Agency Database  
Local Case Number: RO0002518  
Potential Media Affect: Other Groundwater (uses other than drinking water)  
Potential Contaminants of Concern: Gasoline  
EPA Region: 9  
Coordinate Source: Google Geocode  
Cuf Case: YES  
Quantity Released Gallons: 0  
Begin Date: 09/09/1999  
Leak Reported Date: 01/24/2003  
How Discovered: Tank Closure  
How Discovered Description: Not reported  
Discharge Source: Not reported  
Discharge Cause: Not reported  
Stop Method: Close and Remove Tank  
Stop Description: Not reported  
No Further Action Date: 05/20/2009  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Not reported  
CA Enviroscreen 3 Score: 71-75%  
CA Enviroscreen 4 Score: 80-85%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Not reported

LUST:

Global Id: T0600114301

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIVATE RESIDENCE (Continued)**

**S110653939**

Contact Type: Local Agency Caseworker - Primary Caseworker  
Contact Name: PARESH KHATRI  
Organization Name: ALAMEDA COUNTY LOP  
Address: 1131 HARBOR BAY PARKWAY  
City: ALAMEDA  
Email: paresh.khatri@acgov.org  
Phone Number: 5107772478

Global Id: T0600114301  
Contact Type: Regional Board Caseworker  
Contact Name: Regional Water Board  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY ST SUITE 1400  
City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

**LUST:**

Global Id: T0600114301  
Action Type: ENFORCEMENT  
Date: 02/25/2003  
Action: Notice of Responsibility - #0

Global Id: T0600114301  
Action Type: Other  
Date: 09/09/1999  
Action: Leak Began

Global Id: T0600114301  
Action Type: REMEDIATION  
Date: 09/09/1999  
Action: Not reported

Global Id: T0600114301  
Action Type: ENFORCEMENT  
Date: 05/20/2009  
Action: Closure/No Further Action Letter - #20090520

Global Id: T0600114301  
Action Type: ENFORCEMENT  
Date: 03/06/2009  
Action: Technical Correspondence / Assistance / Other - #20090306

Global Id: T0600114301  
Action Type: Other  
Date: 01/24/2003  
Action: Leak Reported

Global Id: T0600114301  
Action Type: Other  
Date: 01/07/2003  
Action: Leak Discovery

Global Id: T0600114301  
Action Type: Other  
Date: 01/07/2003  
Action: Leak Stopped

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

PRIVATE RESIDENCE (Continued)

S110653939

LUST:

Global Id: T0600114301  
Status: Open - Case Begin Date  
Status Date: 09/09/1999

Global Id: T0600114301  
Status: Open - Site Assessment  
Status Date: 01/24/2003

Global Id: T0600114301  
Status: Open - Site Assessment  
Status Date: 04/21/2003

Global Id: T0600114301  
Status: Open - Site Assessment  
Status Date: 07/08/2003

Global Id: T0600114301  
Status: Open - Site Assessment  
Status Date: 12/17/2003

Global Id: T0600114301  
Status: Open - Verification Monitoring  
Status Date: 03/16/2005

Global Id: T0600114301  
Status: Completed - Case Closed  
Status Date: 05/20/2009

Name: PRIVATE RESIDENCE  
Address: PRIVATE RESIDENCE  
City,State,Zip: OAKLAND, CA 94610  
Lead Agency: ALAMEDA COUNTY LOP  
Case Type: LUST Cleanup Site  
Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T10000006106](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000006106)  
Global Id: T10000006106  
Latitude: 37.8105241971593  
Longitude: -122.231867825149  
Status: Completed - Case Closed  
Status Date: 06/14/2019  
Case Worker: MD  
RB Case Number: Not reported  
Local Agency: ALAMEDA COUNTY LOP  
File Location: All Files are on GeoTracker or in the Local Agency Database  
Local Case Number: RO0003143  
Potential Media Affect: Soil, Soil Vapor  
Potential Contaminants of Concern: Benzene, Gasoline, Heating Oil / Fuel Oil  
EPA Region: 9  
Coordinate Source: Google Map Move  
Cuf Case: YES  
Quantity Released Gallons: Not reported  
Begin Date: 12/16/2013  
Leak Reported Date: 01/14/2014  
How Discovered: Not reported  
How Discovered Description: TANK REMOVAL  
Discharge Source: Tank

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIVATE RESIDENCE (Continued)**

**S110653939**

Discharge Cause: Unknown  
Stop Method: Close and Remove Tank  
Stop Description: REMOVED UST  
No Further Action Date: 06/14/2019  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Not reported  
CA EnviroScreen 3 Score: 6-10%  
CA EnviroScreen 4 Score: 5-10%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Not all historic documents for the fuel leak case may be available on GeoTracker. A complete case file for this site is located on the Alameda County Environmental Health website at: <http://www.acgov.org/MAPS/DEH/InspectionResults/>. At the time of closure of LUST Case No. RO0003143; T1000006106 the Site is a single family residential home located at 811 Paramount Road in Trestle Glen, a historic residential district in Oakland, California. An approximately 350-gallon underground storage tank (USST) was removed from the site on December 16, 2013. The tank was found to be in poor condition with at least one visible hole. Soil discoloration and petroleum hydrocarbon odors were observed in the stockpiled soil and soil underlying the tank. Soil samples collected from the tank pit contained up to 9,290 ppm of total petroleum hydrocarbons (C10-C28). The tank pit was overexcavated to a depth of approximately 12 feet bgs to remove petroleum hydrocarbon contaminated soils. Following the overexcavation, two soil samples were collected from the bottom of the excavation at a depth of approximately 12 feet bgs. The soil sample from the western end of the tank pit contained 3,960 ppm of TPH (C10-C28). Soil vapor sampling has indicated elevated Total Petroleum Hydrocarbons as gasoline (TPHg) and benzene at the UST location, which is reported to have been a heating oil UST. Additionally 1,1,2-Trichloroethane was detected in soil vapor at concentrations two orders of magnitude above the San Francisco Bay Regional Board's Environmental Screening Levels (ESLs). The soil vapor sampling locations are within 5 feet of the residential home. Subsequent investigations indicated the chlorinated compounds were due to the use of batch certified Summa canisters. Investigation activities occurred between 2013 to 2018 and investigated hydrocarbon contamination in soil, soil gas, indoor air, and outdoor air at the subject site. Soil bores (SB1 through SB11) were installed at the site to a total depth of 36 feet bgs. Analysis for TPHd, TPHmo, and TPHg, (EPA Method 8015M) and full scan VOCs by EPA Method 8260 was conducted. Groundwater was not encountered to a depth of 36 feet bgs; consequently, a groundwater sample was not collected. Soil vapor was measured in two soil vapor wells (SG5.5 and SG-13) at depths 5.5 feet bgs and 13 feet bgs respectively. These samples were analyzed for TPHg, TPHd, and full scan VOCs using EPA analysis method TO-15 and TO-17. Subslab soil vapor was measured from samples SSG1, SSG1-d, and SSG2 and was analyzed using EPA analysis method TO-15 and TO-17. Indoor air samples were collected from the crawl space (IA-1), a basement room (IA-2), and the first floor living room (IA-3), using EPA analysis method TO-15 and TO-17. Ambient air samples were also taken from sample OA-1 using EPA analysis method TO-15 and TO-17. Remedial excavation was conducted in August 2018. Soil confirmation samples (EB-16, EE-13, ES-12) were taken from the base and sidewalls

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

PRIVATE RESIDENCE (Continued)

S110653939

of the remedial excavation. These samples were analyzed for TPHd, TPHmo, TPHg, and full scan VOCs. This LUST case was evaluated for closure consistent with the State Water Resource Control Board's Low-Threat Underground Storage Tank Closure Policy (LTCP) for petroleum related contaminants. ACDEH determined that the site met all the LTCP General Criteria and Media Specific Criteria and therefore poses a low risk to human health and safety and the environment. The determination was based on receptors and environmental conditions identified at and in the vicinity of the site at the time of closure and reasonably anticipated near-term future scenarios. While the site met all General and Media-Specific Criteria, the case was required to remain open due to the documentation of naphthalene vapor intrusion to the basement and upper floor in the living room. Ultimately, the identification of a storm drain preferential pathway and a data cable conduit between floors was determined to be the mechanism of vapor intrusion. Remedial overexcavation of the residual source in the vicinity of soil bore SB7 was conducted to a depth of 13 to 16 feet bgs, and all elevated concentrations of petroleum hydrocarbons in soil were removed from the site and disposed of offsite at the Keller Canyon Landfill. Limited residual contamination in the vicinity of SB4 remains beneath the site but is not expected to significantly affect vapor intrusion to the structure.

LUST:

Global Id: T10000006106  
Contact Type: Local Agency Caseworker - Primary Caseworker  
Contact Name: MARK DETTERMAN  
Organization Name: ALAMEDA COUNTY LOP  
Address: 1131 HARBOR BAY PARKWAY  
City: ALAMEDA  
Email: mark.detterman@acgov.org  
Phone Number: 5105676876

Global Id: T10000006106  
Contact Type: Regional Board Caseworker  
Contact Name: Regional Water Board  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY ST SUITE 1400  
City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

LUST:

Global Id: T10000006106  
Action Type: ENFORCEMENT  
Date: 08/01/2014  
Action: Email Correspondence - #2014-08-01

Global Id: T10000006106  
Action Type: ENFORCEMENT  
Date: 07/12/2016  
Action: Staff Letter - #20160712

Global Id: T10000006106  
Action Type: ENFORCEMENT  
Date: 01/20/2016

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIVATE RESIDENCE (Continued)**

**S110653939**

Action: Staff Letter - #20160120

Global Id: T10000006106  
Action Type: Other  
Date: 01/14/2014  
Action: Leak Reported

Global Id: T10000006106  
Action Type: ENFORCEMENT  
Date: 04/13/2015  
Action: Email Correspondence - #2015-04-13

Global Id: T10000006106  
Action Type: ENFORCEMENT  
Date: 12/15/2014  
Action: Technical Correspondence / Assistance / Other - #2014-12-15

Global Id: T10000006106  
Action Type: ENFORCEMENT  
Date: 03/10/2016  
Action: Staff Letter - #20160310

Global Id: T10000006106  
Action Type: ENFORCEMENT  
Date: 09/28/2017  
Action: Staff Letter

Global Id: T10000006106  
Action Type: ENFORCEMENT  
Date: 10/01/2019  
Action: Closure/No Further Action Letter

Global Id: T10000006106  
Action Type: RESPONSE  
Date: 08/03/2015  
Action: Request for Closure - Regulator Responded

Global Id: T10000006106  
Action Type: RESPONSE  
Date: 03/16/2015  
Action: Soil and Water Investigation Workplan - Regulator Responded

Global Id: T10000006106  
Action Type: RESPONSE  
Date: 03/25/2016  
Action: Soil Vapor Intrusion Investigation Workplan - Regulator Responded

Global Id: T10000006106  
Action Type: RESPONSE  
Date: 10/16/2015  
Action: Soil Vapor Intrusion Investigation Workplan - Regulator Responded

Global Id: T10000006106  
Action Type: RESPONSE  
Date: 12/04/2015  
Action: Soil Vapor Intrusion Investigation Report - Regulator Responded

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIVATE RESIDENCE (Continued)**

**S110653939**

Global Id: T1000006106  
Action Type: RESPONSE  
Date: 05/20/2016  
Action: Soil Vapor Intrusion Investigation Workplan - Regulator Responded

Global Id: T1000006106  
Action Type: RESPONSE  
Date: 09/23/2016  
Action: Request for Closure - Regulator Responded

Global Id: T1000006106  
Action Type: RESPONSE  
Date: 08/10/2018  
Action: Request for Closure - Regulator Responded

Global Id: T1000006106  
Action Type: RESPONSE  
Date: 09/28/2017  
Action: Site Investigation Workplan - Regulator Responded

Global Id: T1000006106  
Action Type: RESPONSE  
Date: 01/29/2018  
Action: Interim Remedial Action Plan - Regulator Responded

Global Id: T1000006106  
Action Type: RESPONSE  
Date: 04/03/2018  
Action: Interim Remedial Action Plan - Regulator Responded

Global Id: T1000006106  
Action Type: RESPONSE  
Date: 04/07/2017  
Action: Soil and Water Investigation Workplan - Regulator Responded

Global Id: T1000006106  
Action Type: ENFORCEMENT  
Date: 12/10/2013  
Action: Site Visit / Inspection / Sampling - #12/10/2013

Global Id: T1000006106  
Action Type: ENFORCEMENT  
Date: 09/02/2014  
Action: Notice of Responsibility - #09/02/2014

Global Id: T1000006106  
Action Type: ENFORCEMENT  
Date: 11/22/2016  
Action: Staff Letter - #20161122

Global Id: T1000006106  
Action Type: ENFORCEMENT  
Date: 02/10/2017  
Action: Staff Letter

Global Id: T1000006106  
Action Type: ENFORCEMENT

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIVATE RESIDENCE (Continued)**

**S110653939**

Date: 10/24/2018  
Action: Staff Letter

Global Id: T1000006106  
Action Type: ENFORCEMENT  
Date: 01/30/2018  
Action: Staff Letter

Global Id: T1000006106  
Action Type: RESPONSE  
Date: 12/16/2016  
Action: Email Correspondence

Global Id: T1000006106  
Action Type: RESPONSE  
Date: 05/24/2019  
Action: Well Destruction Report

Global Id: T1000006106  
Action Type: RESPONSE  
Date: 10/19/2018  
Action: Other Report / Document

Global Id: T1000006106  
Action Type: ENFORCEMENT  
Date: 05/30/2017  
Action: Staff Letter

Global Id: T1000006106  
Action Type: ENFORCEMENT  
Date: 09/10/2015  
Action: Staff Letter - #20150910

Global Id: T1000006106  
Action Type: ENFORCEMENT  
Date: 09/19/2017  
Action: Meeting

Global Id: T1000006106  
Action Type: ENFORCEMENT  
Date: 03/27/2018  
Action: Staff Letter

Global Id: T1000006106  
Action Type: ENFORCEMENT  
Date: 10/24/2018  
Action: Fact Sheets - Public Participation

Global Id: T1000006106  
Action Type: ENFORCEMENT  
Date: 09/19/2018  
Action: Staff Letter

Global Id: T1000006106  
Action Type: ENFORCEMENT  
Date: 11/15/2017  
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIVATE RESIDENCE (Continued)**

**S110653939**

Global Id: T1000006106  
Action Type: Other  
Date: 12/16/2013  
Action: Leak Stopped

Global Id: T1000006106  
Action Type: RESPONSE  
Date: 10/17/2017  
Action: Site Assessment Report

Global Id: T1000006106  
Action Type: RESPONSE  
Date: 08/04/2017  
Action: Site Assessment Report

Global Id: T1000006106  
Action Type: ENFORCEMENT  
Date: 12/16/2014  
Action: Email Correspondence - #2014-12-16

Global Id: T1000006106  
Action Type: ENFORCEMENT  
Date: 08/13/2014  
Action: Notice of Responsibility - #08/13/2014

Global Id: T1000006106  
Action Type: ENFORCEMENT  
Date: 03/15/2019  
Action: Staff Letter

Global Id: T1000006106  
Action Type: ENFORCEMENT  
Date: 11/15/2017  
Action: Staff Letter

Global Id: T1000006106  
Action Type: Other  
Date: 12/10/2013  
Action: Leak Discovery

Global Id: T1000006106  
Action Type: RESPONSE  
Date: 01/14/2014  
Action: Tank Removal Report / UST Sampling Report

**LUST:**

Global Id: T1000006106  
Status: Open - Case Begin Date  
Status Date: 12/16/2013

Global Id: T1000006106  
Status: Open - Site Assessment  
Status Date: 08/06/2014

Global Id: T1000006106  
Status: Open - Assessment & Interim Remedial Action  
Status Date: 11/15/2017

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIVATE RESIDENCE (Continued)**

**S110653939**

Global Id: T10000006106  
Status: Open - Eligible for Closure  
Status Date: 09/19/2018

Global Id: T10000006106  
Status: Completed - Case Closed  
Status Date: 06/14/2019

**R100  
WNW  
1/8-1/4  
0.203 mi.  
1070 ft.**

**PRIVATE RESIDENCE  
PRIVATE RESIDENCE  
OAKLAND, CA 94610**

**LUST S110653931  
N/A**

**Site 2 of 8 in cluster R**

**Relative:  
Higher**

**LUST:**

**Actual:  
103 ft.**

Name: PRIVATE RESIDENCE  
Address: PRIVATE RESIDENCE  
City,State,Zip: OAKLAND, CA 94610  
Lead Agency: ALAMEDA COUNTY LOP  
Case Type: LUST Cleanup Site  
Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0600101769](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600101769)  
Global Id: T0600101769  
Latitude: 37.814012  
Longitude: -122.253144  
Status: Completed - Case Closed  
Status Date: 05/06/1994  
Case Worker: Not reported  
RB Case Number: 01-1908  
Local Agency: Not reported  
File Location: All Files are on GeoTracker or in the Local Agency Database  
Local Case Number: RO0000688  
Potential Media Affect: Soil  
Potential Contaminants of Concern: Heating Oil / Fuel Oil  
EPA Region: 9  
Coordinate Source: Google Geocode  
Cuf Case: NO  
Quantity Released Gallons: 0  
Begin Date: 11/16/1993  
Leak Reported Date: 11/16/1993  
How Discovered: Other Means  
How Discovered Description: Not reported  
Discharge Source: Not reported  
Discharge Cause: Not reported  
Stop Method: Other Means  
Stop Description: Not reported  
No Further Action Date: 05/06/1994  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Not reported  
CA Enviroscreen 3 Score: 31-35%  
CA Enviroscreen 4 Score: 50-55%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Not reported

LUST:

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIVATE RESIDENCE (Continued)**

**S110653931**

Global Id: T0600101769  
Contact Type: Regional Board Caseworker  
Contact Name: Regional Water Board  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY ST SUITE 1400  
City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

**LUST:**

Global Id: T0600101769  
Action Type: Other  
Date: 11/16/1993  
Action: Leak Reported

Global Id: T0600101769  
Action Type: REMEDIATION  
Date: 09/09/9999  
Action: Excavation

**LUST:**

Global Id: T0600101769  
Status: Open - Case Begin Date  
Status Date: 11/16/1993

Global Id: T0600101769  
Status: Completed - Case Closed  
Status Date: 05/06/1994

**R101 RESIDENCE**  
**WNW 299 EUCLID AVE**  
**1/8-1/4 OAKLAND, CA 94610**  
**0.203 mi.**  
**1072 ft. Site 3 of 8 in cluster R**

**LUST S100855042**  
**Alameda County CS N/A**  
**SWEEPS UST**  
**HIST CORTESE**

**Relative:** LUST REG 2:  
**Higher** Region: 2  
Facility Id: 01-1908  
**Actual:** Facility Status: Case Closed  
**103 ft.** Case Number: 4468  
How Discovered: Tank Closure  
Leak Cause: UNK  
Leak Source: UNK  
Date Leak Confirmed: 1/24/1994  
Oversight Program: LUST  
Prelim. Site Assesment Wokplan Submitted: Not reported  
Preliminary Site Assesment Began: Not reported  
Pollution Characterization Began: Not reported  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

Alameda County CS:  
Name: RESIDENCE  
Address: 299 EUCLID AVE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**RESIDENCE (Continued)**

**S100855042**

City,State,Zip: OAKLAND, CA 94610  
Status: Case Closed  
Record Id: RO0000688  
PE: 5602  
Facility Status: Case Closed  
Latitude: 37.814042598  
Longitude: -122.25269551

**SWEEPS UST:**

Name: JOSEPH SMITH  
Address: 299 EUCLID AVE  
City: OAKLAND  
Status: Not reported  
Comp Number: 9245  
Number: Not reported  
Board Of Equalization: Not reported  
Referral Date: Not reported  
Action Date: Not reported  
Created Date: Not reported  
Owner Tank Id: Not reported  
SWRCB Tank Id: 01-000-009245-000001  
Tank Status: Not reported  
Capacity: 250  
Active Date: Not reported  
Tank Use: PETROLEUM  
STG: PRODUCT  
Content: HOME HEATING  
Number Of Tanks: 1

**HIST CORTESE:**

edr\_fname: RESIDENCE  
edr\_fadd1: 299 EUCLID  
City,State,Zip: OAKLAND, CA 94610  
Region: CORTESE  
Facility County Code: 1  
Reg By: LTNKA  
Reg Id: 01-1908

**O102**  
**South**  
**1/8-1/4**  
**0.204 mi.**  
**1078 ft.**

**YOUNG'S ONE HOUR DRY CLEANERS**  
**600 GRAND AVE**  
**OAKLAND, CA 94610**  
**Site 5 of 6 in cluster O**

**CHMIRS S111075477**  
**DRYCLEANERS N/A**

**Relative:**  
**Lower**

**CHMIRS:**  
Name: Not reported  
Address: 600 GRAND AVE  
City,State,Zip: OAKLAND, CA 94801  
OES Incident Number: 1-0948  
OES notification: 02/16/2011  
OES Date: Not reported  
OES Time: Not reported  
**Date Completed: Not reported**  
Property Use: Not reported  
Agency Id Number: Not reported  
Agency Incident Number: Not reported  
Time Notified: Not reported

**Actual:**  
**26 ft.**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**YOUNG'S ONE HOUR DRY CLEANERS (Continued)**

**S111075477**

Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agency Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA DOT PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	Yes
Waterway:	Lake Merritt
Spill Site:	Residence
Cleanup By:	Responsible Party
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Gal(s)
Other:	Not reported
Date/Time:	2100
Year:	2011
Agency:	City of Oakland Public Works
Incident Date:	2/16/2011
Admin Agency:	City of Oakland Fire Department
Amount:	Not reported
Contained:	Yes
Site Type:	Lake Merritt
E Date:	Not reported
Substance:	Sewage
Quantity Released:	300
Unknown:	Not reported
Substance #2:	Not reported
Substance #3:	Not reported
Evacuations:	Not reported
Number of Injuries:	Not reported
Number of Fatalities:	Not reported
#1 Pipeline:	Not reported
#2 Pipeline:	Not reported
#3 Pipeline:	Not reported
#1 Vessel >= 300 Tons:	Not reported
#2 Vessel >= 300 Tons:	Not reported
#3 Vessel >= 300 Tons:	Not reported
Evacs:	Not reported
Injuries:	Not reported
Fatals:	Not reported
Comments:	Not reported
Description:	A sewer main overflowed due to a blockage of

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**YOUNG'S ONE HOUR DRY CLEANERS (Continued)**

**S111075477**

grease.

**DRYCLEANERS:**

Name: YOUNG'S ONE HOUR DRY CLEANERS  
Address: 600 GRAND AVE  
City,State,Zip: OAKLAND, CA 946103548  
EPA Id: CAL000355559  
NAICS Code: 81232  
NAICS Description: Drycleaning and Laundry Services (except Coin-Operated)  
SIC Code: 7211  
SIC Description: Power Laundries, Family and Commercial  
Create Date: 08/06/2010  
Facility Active: No  
Inactive Date: 06/30/2015  
Facility Addr2: Not reported  
Owner Name: YOUNG KI NHO  
Owner Address: 600 GRAND AVE  
Owner Address 2: Not reported  
Owner Telephone: 5104520328  
Contact Name: YOUNG KI NHO  
Contact Address: 600 GRAND AVE  
Contact Address 2: Not reported  
Contact Telephone: 5104520328  
Contact Fax: 0  
Mailing Name: Not reported  
Mailing Address 1: 600 GRAND AVE  
Mailing Address 2: Not reported  
Mailing City: OAKLAND  
Mailing State: CA  
Mailing Zip: 946103548  
Owner Fax: 0  
Region Code: 2  
Latitude: 37.809461  
Longitude: -122.249633

**DRYCLEAN BAY AREA DIST:**

Facility ID: 5364  
Name: YOUNG'S ONE HOUR MARTINIZING  
Address: 600 GRAND AVE STE 100  
City,State,Zip: OAKLAND, CA 94610-3557  
NAICS Code: 812320  
Facility Status: Permit Voided Due to NSF  
Device Name: Natura 40lb Petroleum Closed Loop Machine[NAT40P]  
Drum Capacity: 40  
Device Status: Registered  
Facility Permit Expiration Date: 2018-02-01 00:00:00  
Name: Petroleum or Hydrocarbon Solvent, High Flash Point  
Annual Usage: 50

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

<b>O103</b>	<b>YOUNG'S ONE HOUR MARTINIZING</b>	<b>RCRA-SQG</b>	<b>1000441028</b>
<b>South</b>	<b>600 GRAND AVE #100</b>	<b>FINDS</b>	<b>CAD981375330</b>
<b>1/8-1/4</b>	<b>OAKLAND, CA 94610</b>	<b>ECHO</b>	
<b>0.204 mi.</b>			
<b>1078 ft.</b>	<b>Site 6 of 6 in cluster O</b>		

**Relative:**  
**Lower**  
**Actual:**  
**26 ft.**

RCRA Listings:		19960901
Date Form Received by Agency:		19960901
Handler Name:	Andy'S One Hr Martinizing	
Handler Address:	600 Grand Ave #100	
Handler City,State,Zip:	OAKLAND, CA 94610	
EPA ID:	CAD981375330	
Contact Name:	Not reported	
Contact Address:	Not reported	
Contact City,State,Zip:	Not reported	
Contact Telephone:	Not reported	
Contact Fax:	Not reported	
Contact Email:	Not reported	
Contact Title:	Not reported	
EPA Region:	09	
Land Type:	Not reported	
Federal Waste Generator Description:	Small Quantity Generator	
Non-Notifier:	Not reported	
Biennial Report Cycle:	Not reported	
Accessibility:	Not reported	
Active Site Indicator:	Handler Activities	
State District Owner:	Ca	
State District:	2	
Mailing Address:	600 GRAND AVE #100	
Mailing City,State,Zip:	OAKLAND, CA 94610	
Owner Name:	Not reported	
Owner Type:	Not reported	
Operator Name:	Not Required	
Operator Type:	Private	
Short-Term Generator Activity:	No	
Importer Activity:	No	
Mixed Waste Generator:	No	
Transporter Activity:	No	
Transfer Facility Activity:	No	
Recycler Activity with Storage:	No	
Small Quantity On-Site Burner Exemption:	No	
Smelting Melting and Refining Furnace Exemption:	No	
Underground Injection Control:	No	
Off-Site Waste Receipt:	No	
Universal Waste Indicator:	No	
Universal Waste Destination Facility:	No	
Federal Universal Waste:	No	
Active Site State-Reg Handler:	---	
Federal Facility Indicator:	Not reported	
Hazardous Secondary Material Indicator:	NN	
Sub-Part K Indicator:	Not reported	
2018 GPRC Permit Baseline:	Not on the Baseline	
2018 GPRC Renewals Baseline:	Not on the Baseline	
202 GPRC Corrective Action Baseline:	No	
Subject to Corrective Action Universe:	No	
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No	
Corrective Action Priority Ranking:	No NCAPS ranking	
Environmental Control Indicator:	No	
Institutional Control Indicator:	No	

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**YOUNG'S ONE HOUR MARTINIZING (Continued)**

**1000441028**

Human Exposure Controls Indicator: N/A  
Groundwater Controls Indicator: N/A  
Significant Non-Complier Universe: No  
Unaddressed Significant Non-Complier Universe: No  
Addressed Significant Non-Complier Universe: No  
Significant Non-Complier With a Compliance Schedule Universe: No  
Financial Assurance Required: Not reported  
Handler Date of Last Change: 20020627  
Recognized Trader-Importer: No  
Recognized Trader-Exporter: No  
Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: Not reported  
Manifest Broker: Not reported  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Operator  
Owner/Operator Name: NOT REQUIRED  
Legal Status: Private  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: NOT REQUIRED  
Owner/Operator City,State,Zip: NOT REQUIRED, ME 99999  
Owner/Operator Telephone: 415-555-1212  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner  
Owner/Operator Name: FLOYD ANDERSON  
Legal Status: Private  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: NOT REQUIRED  
Owner/Operator City,State,Zip: NOT REQUIRED, ME 99999  
Owner/Operator Telephone: 415-555-1212  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 19960901  
Handler Name: ANDY'S ONE HR MARTINIZING  
Federal Waste Generator Description: Small Quantity Generator  
State District Owner: Ca  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**YOUNG'S ONE HOUR MARTINIZING (Continued)**

**1000441028**

Receive Date: 19860129  
Handler Name: ANDY'S ONE HR MARTINIZING  
Federal Waste Generator Description: Large Quantity Generator  
State District Owner: Ca  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: No  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Code: 81232  
NAICS Description: DRYCLEANING AND LAUNDRY SERVICES (EXCEPT COIN-OPERATED)

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

FINDS:

Registry ID: 110002685513

[Click Here for FRS Facility Detail Report:](#)

Environmental Interest/Information System:

THE EMISSION INVENTORY SYSTEM (EIS) MAINTAINS AN INVENTORY OF LARGE STATIONARY SOURCES AND VOLUNTARILY-REPORTED SMALLER SOURCES OF AIR POINT POLLUTANT EMITTERS. IT CONTAINS INFORMATION ABOUT FACILITY SITES AND THEIR PHYSICAL LOCATION, EMISSIONS UNITS, EMISSIONS PROCESSES, RELEASE POINTS, CONTROL APPROACHES, AND REGULATIONS. FACILITY INVENTORY DATA ARE KEPT SEPARATE FROM THE EMISSIONS DATA AND HAVE STABLE IDENTIFIERS TO IMPROVE CONTINUITY FROM YEAR TO YEAR AND TO HELP IDENTIFY DUPLICATE OR MISSING FACILITIES

The Resource Conservation and Recovery Act Information System (RCRAInfo) is EPA's comprehensive information system in support of the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. It tracks many types of information about generators, transporters, treaters, storers, and disposers of hazardous waste.

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: 1000441028  
Registry ID: 110002685513  
DFR URL: <http://echo.epa.gov/detailed-facility-report?fid=110002685513>  
Name: YOUNG'S ONE HOUR MARTINIZING  
Address: 600 GRAND AVE #100  
City,State,Zip: OAKLAND, CA 94610

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**S104**      **MONTEREY BAY COLORS DBA COLORS ON PARADE**      **RCRA NonGen / NLR**      **1024853220**  
**ENE**      **810 WALKER AVE APT 1**           **CAL000412784**  
**1/8-1/4**      **OAKLAND, CA 94610**  
**0.206 mi.**  
**1087 ft.**      **Site 1 of 2 in cluster S**

**Relative:**  
**Higher**  
**Actual:**  
**66 ft.**

RCRA Listings:	20151201
Date Form Received by Agency:	Monterey Bay Colors DbA Colors On Parade
Handler Name:	810 Walker Ave Apt 1
Handler Address:	OAKLAND, CA 94610-2017
Handler City,State,Zip:	CAL000412784
EPA ID:	DANIEL FLEISCHMANN
Contact Name:	810 WALKER AVE APT 1
Contact Address:	OAKLAND, CA 94610
Contact City,State,Zip:	831-901-6330
Contact Telephone:	Not reported
Contact Fax:	DAN.FLEISCHMANN@COLORSONPARADE.COM
Contact Email:	Not reported
Contact Title:	09
EPA Region:	Not reported
Land Type:	Not a generator, verified
Federal Waste Generator Description:	Not reported
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	810 WALKER AVE APT 1
Mailing City,State,Zip:	OAKLAND, CA 94610-2017
Owner Name:	Monterey Bay Colors
Owner Type:	Other
Operator Name:	Daniel Fleischmann
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MONTEREY BAY COLORS DBA COLORS ON PARADE (Continued)**

**1024853220**

Human Exposure Controls Indicator: N/A  
Groundwater Controls Indicator: N/A  
Significant Non-Complier Universe: No  
Unaddressed Significant Non-Complier Universe: No  
Addressed Significant Non-Complier Universe: No  
Significant Non-Complier With a Compliance Schedule Universe: No  
Financial Assurance Required: Not reported  
Handler Date of Last Change: 20180906  
Recognized Trader-Importer: No  
Recognized Trader-Exporter: No  
Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Owner  
Owner/Operator Name: MONTEREY BAY COLORS  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 810 WALKER AVE APT 1  
Owner/Operator City,State,Zip: OAKLAND, CA 94610-2017  
Owner/Operator Telephone: 831-901-6330  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator  
Owner/Operator Name: DANIEL FLEISCHMANN  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 810 WALKER AVE APT 1  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 831-901-6330  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20151201  
Handler Name: MONTEREY BAY COLORS DBA COLORS ON PARADE  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MONTEREY BAY COLORS DBA COLORS ON PARADE (Continued)**

**1024853220**

List of NAICS Codes and Descriptions:

NAICS Code: 811121  
NAICS Description: AUTOMOTIVE BODY, PAINT, AND INTERIOR REPAIR AND MAINTENANCE

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**R105**  
**WNW**  
**1/8-1/4**  
**0.208 mi.**  
**1099 ft.**

**DANIEL PIVNICK**  
**293 EUCLID AVENUE #5**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1027460832**  
**CAC003199306**

**Site 4 of 8 in cluster R**

**Relative:**  
**Higher**  
**Actual:**  
**105 ft.**

RCRA Listings:

Date Form Received by Agency: 20221013  
Handler Name: Daniel Pivnick  
Handler Address: 293 Euclid Avenue #5  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003199306  
Contact Name: DANIEL PIVNICK  
Contact Address: PO BOX 71705  
Contact City,State,Zip: OAKLAND, CA 94612  
Contact Telephone: 510-813-1902  
Contact Fax: Not reported  
Contact Email: GISELLE.ESPIRITU@SYNERGYCOMPANIES.ORG  
Contact Title: Not reported  
EPA Region: 09  
Land Type: Not reported  
Federal Waste Generator Description: Not a generator, verified  
Non-Notifier: Not reported  
Biennial Report Cycle: Not reported  
Accessibility: Not reported  
Active Site Indicator: Not reported  
State District Owner: Not reported  
State District: Not reported  
Mailing Address: PO BOX 71705  
Mailing City,State,Zip: OAKLAND, CA 94612  
Owner Name: Daniel Pivnick  
Owner Type: Other  
Operator Name: Daniel Pivnick  
Operator Type: Other  
Short-Term Generator Activity: No  
Importer Activity: No  
Mixed Waste Generator: No  
Transporter Activity: No  
Transfer Facility Activity: No  
Recycler Activity with Storage: No  
Small Quantity On-Site Burner Exemption: No  
Smelting Melting and Refining Furnace Exemption: No  
Underground Injection Control: No  
Off-Site Waste Receipt: No  
Universal Waste Indicator: No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**DANIEL PIVNICK (Continued)**

**1027460832**

Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20221013
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name: DANIEL PIVNICK	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	PO BOX 71705
Owner/Operator City,State,Zip:	OAKLAND, CA 94612
Owner/Operator Telephone:	510-813-1902
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name: DANIEL PIVNICK	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	PO BOX 71705
Owner/Operator City,State,Zip:	OAKLAND, CA 94612
Owner/Operator Telephone:	510-813-1902
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**DANIEL PIVNICK (Continued)**

**1027460832**

Historic Generators:

Receive Date: 20221013  
Handler Name: DANIEL PIVNICK  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

R106  
WNW  
1/8-1/4  
0.208 mi.  
1099 ft.

**DANIEL PIVNICK**  
**293 EUCLID AVENUE #6**  
**OAKLAND, CA 94610**  
**Site 5 of 8 in cluster R**

**RCRA NonGen / NLR 1027082670**  
**CAC003154794**

**Relative:**  
**Higher**  
**Actual:**  
**105 ft.**

RCRA Listings:

Date Form Received by Agency: 20211230  
Handler Name: Daniel Pivnick  
Handler Address: 293 Euclid Avenue #6  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003154794  
Contact Name: DANIEL PIVNICK  
Contact Address: PO BOX 71705  
Contact City,State,Zip: OAKLAND, CA 94612  
Contact Telephone: 510-813-1902  
Contact Fax: Not reported  
Contact Email: KARINA.GARCIA@SYNERGYCOMPANIES.ORG  
Contact Title: Not reported  
EPA Region: 09  
Land Type: Not reported  
Federal Waste Generator Description: Not a generator, verified  
Non-Notifier: Not reported  
Biennial Report Cycle: Not reported  
Accessibility: Not reported  
Active Site Indicator: Not reported  
State District Owner: Not reported  
State District: Not reported  
Mailing Address: PO BOX 71705  
Mailing City,State,Zip: OAKLAND, CA 94612  
Owner Name: Daniel Pivnick

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**DANIEL PIVNICK (Continued)**

**1027082670**

Owner Type:	Other
Operator Name:	Daniel Pivnick
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20211231
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	DANIEL PIVNICK
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	PO BOX 71705
Owner/Operator City,State,Zip:	OAKLAND, CA 94612
Owner/Operator Telephone:	510-813-1902
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**DANIEL PIVNICK (Continued)**

**1027082670**

Owner/Operator Indicator:	Owner
Owner/Operator Name: DANIEL PIVNICK	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	PO BOX 71705
Owner/Operator City,State,Zip:	OAKLAND, CA 94612
Owner/Operator Telephone:	510-813-1902
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20211230
Handler Name: DANIEL PIVNICK	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
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Evaluation Action Summary:

Evaluations:	No Evaluations Found
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**T107**  
**WSW**  
**1/8-1/4**  
**0.211 mi.**  
**1114 ft.**

**BELLEVUE APARTMENTS**  
**369 BELLEVUE AVE**  
**OAKLAND, CA 94610**  
**Site 1 of 3 in cluster T**

**RCRA NonGen / NLR**    **1027700576**  
**CAL000477142**

**Relative:**  
**Higher**  
**Actual:**  
**70 ft.**

RCRA Listings:	
Date Form Received by Agency:	20230330
Handler Name:	Bellevue Apartments
Handler Address:	369 Bellevue Ave
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAL000477142
Contact Name:	KEVIN ALLAN
Contact Address:	369 BELLEVUE AVE #103
Contact City,State,Zip:	OAKLAND, CA 94610
Contact Telephone:	510-444-4180
Contact Fax:	Not reported
Contact Email:	Not reported
Contact Title:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BELLEVUE APARTMENTS (Continued)**

**1027700576**

EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	369 BELLEVUE AVE #103
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Christopher Fowler
Owner Type:	Other
Operator Name:	Kevin Allan
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20230331
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BELLEVUE APARTMENTS (Continued)**

**1027700576**

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	CHRISTOPHER FOWLER
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	14960 KARL AVE
Owner/Operator City,State,Zip:	MONTE SERENO, CA 95030
Owner/Operator Telephone:	650-888-0809
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	KEVIN ALLAN
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	369 BELLEVUE AVE #103
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-444-4180
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20230330
Handler Name:	BELLEVUE APARTMENTS
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	531110
NAICS Description:	LESSORS OF RESIDENTIAL BUILDINGS AND DWELLINGS

Facility Has Received Notices of Violations:

Violations:	No Violations Found
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Evaluation Action Summary:

Evaluations:	No Evaluations Found
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Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SHANNON MCCABE (Continued)**

**1028898314**

Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20231107
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	SHANNON MCCABE
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	359 BELLEVUE AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-922-0012
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	SHANNON MCCABE
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	359 BELLEVUE AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-922-0012
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20231107
Handler Name:	SHANNON MCCABE
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**SHANNON MCCABE (Continued)**

**1028898314**

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
 NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**Q109**  
**NE**  
**1/8-1/4**  
**0.213 mi.**  
**1127 ft.**

**STEPHANE DELEGER**  
**564 VALLE VISTA AVENUE**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1026798979**  
**CAC003110786**

**Site 2 of 2 in cluster Q**

**Relative:**  
**Lower**  
**Actual:**  
**36 ft.**

RCRA Listings:  
 Date Form Received by Agency: 20210318  
 Handler Name: Stephane Deleger  
 Handler Address: 564 Valle Vista Avenue  
 Handler City,State,Zip: OAKLAND, CA 94610  
 EPA ID: CAC003110786  
 Contact Name: STEPHANE DELEGER  
 Contact Address: 277 W 3RD STREET  
 Contact City,State,Zip: BOSTON, MA 02127  
 Contact Telephone: 415-963-1773  
 Contact Fax: Not reported  
 Contact Email: STEPHANEDELEGER@HOTMAIL.COM  
 Contact Title: Not reported  
 EPA Region: 09  
 Land Type: Not reported  
 Federal Waste Generator Description: Not a generator, verified  
 Non-Notifier: Not reported  
 Biennial Report Cycle: Not reported  
 Accessibility: Not reported  
 Active Site Indicator: Not reported  
 State District Owner: Not reported  
 State District: Not reported  
 Mailing Address: 277 W 3RD STREET  
 Mailing City,State,Zip: BOSTON, MA 02127  
 Owner Name: Stephane Deleger  
 Owner Type: Other  
 Operator Name: Stephane Deleger  
 Operator Type: Other  
 Short-Term Generator Activity: No  
 Importer Activity: No  
 Mixed Waste Generator: No  
 Transporter Activity: No  
 Transfer Facility Activity: No  
 Recycler Activity with Storage: No  
 Small Quantity On-Site Burner Exemption: No  
 Smelting Melting and Refining Furnace Exemption: No  
 Underground Injection Control: No  
 Off-Site Waste Receipt: No  
 Universal Waste Indicator: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**STEPHANE DELEGER (Continued)**

**1026798979**

Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20210322
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name: STEPHANE DELEGER	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	277 W 3RD STREET
Owner/Operator City,State,Zip:	BOSTON, MA 02127
Owner/Operator Telephone:	415-963-1773
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name: STEPHANE DELEGER	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	277 W 3RD STREET
Owner/Operator City,State,Zip:	BOSTON, MA 02127
Owner/Operator Telephone:	415-963-1773
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**STEPHANE DELEGER (Continued)**

**1026798979**

Historic Generators:

Receive Date: 20210318  
Handler Name: STEPHANE DELEGER  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**P110**  
**SW**  
**1/8-1/4**  
**0.213 mi.**  
**1127 ft.**

**MANKUEN (JENNIE) CHAN**  
**411 EUCLID AVENUE #9**  
**OAKLAND, CA 94610**  
**Site 2 of 9 in cluster P**

**RCRA NonGen / NLR** **1027465914**  
**CAC003204692**

**Relative:**  
**Lower**  
**Actual:**  
**41 ft.**

RCRA Listings:  
Date Form Received by Agency: 20221116  
Handler Name: Mankuen (Jennie) Chan  
Handler Address: 411 Euclid Avenue #9  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003204692  
Contact Name: MANKUEN (JENNIE) CHAN  
Contact Address: 411 EUCLID AVENUE #9  
Contact City,State,Zip: OAKLAND, CA 94610  
Contact Telephone: 408-480-2469  
Contact Fax: Not reported  
Contact Email: CHELSEY@ENV-REM.COM  
Contact Title: Not reported  
EPA Region: 09  
Land Type: Not reported  
Federal Waste Generator Description: Not a generator, verified  
Non-Notifier: Not reported  
Biennial Report Cycle: Not reported  
Accessibility: Not reported  
Active Site Indicator: Not reported  
State District Owner: Not reported  
State District: Not reported  
Mailing Address: 411 EUCLID AVENUE #9  
Mailing City,State,Zip: OAKLAND, CA 94610  
Owner Name: Mankuen (Jennie) Chan

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**MANKUEN (JENNIE) CHAN (Continued)**

**1027465914**

Owner Type:	Other
Operator Name:	Mankuen (Jennie) Chan
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20221116
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	MANKUEN (JENNIE) CHAN
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	411 EUCLID AVENUE #9
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	408-480-2469
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**MANKUEN (JENNIE) CHAN (Continued)**

**1027465914**

Owner/Operator Indicator:	Operator
Owner/Operator Name:	MANKUEN (JENNIE) CHAN
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	411 EUCLID AVENUE #9
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	408-480-2469
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20221116
Handler Name:	MANKUEN (JENNIE) CHAN
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
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Evaluation Action Summary:

Evaluations:	No Evaluations Found
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**P111**  
**SW**  
 1/8-1/4  
 0.213 mi.  
 1127 ft.

**BLUE SAPPHIRE HOMES**  
**411 EUCLID AVENUE #11**  
**OAKLAND, CA 94610**  
**Site 3 of 9 in cluster P**

**RCRA NonGen / NLR 1028883541**  
**CAC003244104**

**Relative:**  
**Lower**

RCRA Listings:

**Actual:**  
**41 ft.**

Date Form Received by Agency:	20230727
Handler Name:	Blue Sapphire Homes
Handler Address:	411 Euclid Avenue #11
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003244104
Contact Name:	ZANE MARKWOOD
Contact Address:	3527 MOUNT DIABLO BOULEVARD #224
Contact City,State,Zip:	LAFAYETTE, CA 94549
Contact Telephone:	925-297-9944
Contact Fax:	Not reported
Contact Email:	NICOLE@ENV-REM.COM
Contact Title:	Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**BLUE SAPPHIRE HOMES (Continued)**

**1028883541**

EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	3527 MOUNT DIABLO BOULEVARD #224
Mailing City,State,Zip:	LAFAYETTE, CA 94549
Owner Name:	Blue Sapphire Homes
Owner Type:	Other
Operator Name:	Zane Markwood
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20230728
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BLUE SAPPHIRE HOMES (Continued)**

**1028883541**

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	ZANE MARKWOOD
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	3527 MOUNT DIABLO BOULEVARD #224
Owner/Operator City,State,Zip:	LAFAYETTE, CA 94549
Owner/Operator Telephone:	925-297-9944
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	BLUE SAPPHIRE HOMES
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	3527 MOUNT DIABLO BOULEVARD #224
Owner/Operator City,State,Zip:	LAFAYETTE, CA 94549
Owner/Operator Telephone:	888-986-8660
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20230727
Handler Name:	BLUE SAPPHIRE HOMES
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
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Evaluation Action Summary:

Evaluations:	No Evaluations Found
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Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**P112**      **MANKUEN (JENNIE) CHAN**      **RCRA NonGen / NLR**      **1027527632**  
**SW**      **411 EUCLID AVENUE #12**           **CAC003220312**  
**1/8-1/4**      **OAKLAND, CA 94610**  
**0.213 mi.**  
**1127 ft.**      **Site 4 of 9 in cluster P**

**Relative:**  
**Lower**  
**Actual:**  
**41 ft.**

RCRA Listings:	20230301
Date Form Received by Agency:	Mankuen (Jennie) Chan
Handler Name:	411 Euclid Avenue #12
Handler Address:	OAKLAND, CA 94610
Handler City,State,Zip:	CAC003220312
EPA ID:	MANKUEN (JENNIE) CHAN
Contact Name:	411 EUCLID AVENUE #12
Contact Address:	OAKLAND, CA 94610
Contact City,State,Zip:	408-848-0246
Contact Telephone:	Not reported
Contact Fax:	CHELSEY@ENV-REM.COM
Contact Email:	Not reported
Contact Title:	09
EPA Region:	Not reported
Land Type:	Not a generator, verified
Federal Waste Generator Description:	Not reported
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	411 EUCLID AVENUE #12
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Mankuen (Jennie) Chan
Owner Type:	Other
Operator Name:	Mankuen (Jennie) Chan
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MANKUEN (JENNIE) CHAN (Continued)**

**1027527632**

Human Exposure Controls Indicator: N/A  
Groundwater Controls Indicator: N/A  
Significant Non-Complier Universe: No  
Unaddressed Significant Non-Complier Universe: No  
Addressed Significant Non-Complier Universe: No  
Significant Non-Complier With a Compliance Schedule Universe: No  
Financial Assurance Required: Not reported  
Handler Date of Last Change: 20230301  
Recognized Trader-Importer: No  
Recognized Trader-Exporter: No  
Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Owner  
Owner/Operator Name: MANKUEN (JENNIE) CHAN  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 411 EUCLID AVENUE #12  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 408-848-0246  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator  
Owner/Operator Name: MANKUEN (JENNIE) CHAN  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 411 EUCLID AVENUE #12  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 408-848-0246  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20230301  
Handler Name: MANKUEN (JENNIE) CHAN  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**MANKUEN (JENNIE) CHAN (Continued)**

**1027527632**

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
 NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**P113**  
**SW**  
**1/8-1/4**  
**0.213 mi.**  
**1127 ft.**

**BLUE SAPPHIRE HOMES**  
**411 EUCLID AVENUE #10**  
**OAKLAND, CA 94610**  
**Site 5 of 9 in cluster P**

**RCRA NonGen / NLR**

**1027692033**  
**CAC003234612**

**Relative:**  
**Lower**  
**Actual:**  
**41 ft.**

RCRA Listings:  
 Date Form Received by Agency: 20230529  
 Handler Name: Blue Sapphire Homes  
 Handler Address: 411 Euclid Avenue #10  
 Handler City,State,Zip: OAKLAND, CA 94610  
 EPA ID: CAC003234612  
 Contact Name: BLUE SAPPHIRE HOMES  
 Contact Address: 411 EUCLID AVENUE #10  
 Contact City,State,Zip: OAKLAND, CA 94610  
 Contact Telephone: 888-986-8660  
 Contact Fax: Not reported  
 Contact Email: CHELSEY@ENV-REM.COM  
 Contact Title: Not reported  
 EPA Region: 09  
 Land Type: Not reported  
 Federal Waste Generator Description: Not a generator, verified  
 Non-Notifier: Not reported  
 Biennial Report Cycle: Not reported  
 Accessibility: Not reported  
 Active Site Indicator: Not reported  
 State District Owner: Not reported  
 State District: Not reported  
 Mailing Address: 411 EUCLID AVENUE #10  
 Mailing City,State,Zip: OAKLAND, CA 94610  
 Owner Name: Blue Sapphire Homes  
 Owner Type: Other  
 Operator Name: Blue Sapphire Homes  
 Operator Type: Other  
 Short-Term Generator Activity: No  
 Importer Activity: No  
 Mixed Waste Generator: No  
 Transporter Activity: No  
 Transfer Facility Activity: No  
 Recycler Activity with Storage: No  
 Small Quantity On-Site Burner Exemption: No  
 Smelting Melting and Refining Furnace Exemption: No  
 Underground Injection Control: No  
 Off-Site Waste Receipt: No  
 Universal Waste Indicator: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**BLUE SAPPHIRE HOMES (Continued)**

**1027692033**

Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20230530
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name: BLUE SAPPHIRE HOMES	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	411 EUCLID AVENUE #10
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	888-986-8660
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name: BLUE SAPPHIRE HOMES	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	411 EUCLID AVENUE #10
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	888-986-8660
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BLUE SAPPHIRE HOMES (Continued)**

**1027692033**

Historic Generators:

Receive Date: 20230529  
Handler Name: BLUE SAPPHIRE HOMES  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**P114**  
**SW**  
**1/8-1/4**  
**0.213 mi.**  
**1127 ft.**

**BLUE SAPPHIRE HOMES**  
**411 EUCLID AVENUE #2**  
**OAKLAND, CA 94610**  
**Site 6 of 9 in cluster P**

**RCRA NonGen / NLR** **1027698436**  
**CAC003241428**

**Relative:**  
**Lower**  
**Actual:**  
**41 ft.**

RCRA Listings:  
Date Form Received by Agency: 20230711  
Handler Name: Blue Sapphire Homes  
Handler Address: 411 Euclid Avenue #2  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003241428  
Contact Name: ZANE MARKWOOD  
Contact Address: 3527 MOUNT DIABLO BOULEVARD #224  
Contact City,State,Zip: LAFAYETTE, CA 94549  
Contact Telephone: 925-297-9944  
Contact Fax: Not reported  
Contact Email: NICOLE@ENV-REM.COM  
Contact Title: Not reported  
EPA Region: 09  
Land Type: Not reported  
Federal Waste Generator Description: Not a generator, verified  
Non-Notifier: Not reported  
Biennial Report Cycle: Not reported  
Accessibility: Not reported  
Active Site Indicator: Not reported  
State District Owner: Not reported  
State District: Not reported  
Mailing Address: 3527 MOUNT DIABLO BOULEVARD #224  
Mailing City,State,Zip: LAFAYETTE, CA 94549  
Owner Name: Blue Sapphire Homes

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**BLUE SAPPHIRE HOMES (Continued)**

**1027698436**

Owner Type:	Other
Operator Name:	Zane Markwood
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20230716
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:	
Owner/Operator Indicator:	Owner
Owner/Operator Name:	BLUE SAPPHIRE HOMES
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	3527 MOUNT DIABLO BOULEVARD #224
Owner/Operator City,State,Zip:	LAFAYETTE, CA 94549
Owner/Operator Telephone:	888-986-8660
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BLUE SAPPHIRE HOMES (Continued)**

**1027698436**

Owner/Operator Indicator: Operator  
Owner/Operator Name: ZANE MARKWOOD  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 3527 MOUNT DIABLO BOULEVARD #224  
Owner/Operator City,State,Zip: LAFAYETTE, CA 94549  
Owner/Operator Telephone: 925-297-9944  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20230711  
Handler Name: BLUE SAPPHIRE HOMES  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**P115**  
**SW**  
**1/8-1/4**  
**0.213 mi.**  
**1127 ft.**

**MANKUEN (JENNIE) CHAN**  
**411 EUCLID AVENUE #8**  
**OAKLAND, CA 94610**  
**Site 7 of 9 in cluster P**

**RCRA NonGen / NLR** **1027513862**  
**CAC003205596**

**Relative:**  
**Lower**

RCRA Listings:

**Actual:**  
**41 ft.**

Date Form Received by Agency: 20221123  
Handler Name: Mankuen (Jennie) Chan  
Handler Address: 411 Euclid Avenue #8  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003205596  
Contact Name: MANKUEN (JENNIE) CHAN  
Contact Address: 12577 PLYMOUTH DRIVE  
Contact City,State,Zip: SARATOGA, CA 95070  
Contact Telephone: 408-480-2469  
Contact Fax: Not reported  
Contact Email: CHELSEY@ENV-REM.COM  
Contact Title: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MANKUEN (JENNIE) CHAN (Continued)**

**1027513862**

EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	12577 PLYMOUTH DRIVE
Mailing City,State,Zip:	SARATOGA, CA 95070
Owner Name:	Mankuen (Jennie) Chan
Owner Type:	Other
Operator Name:	Mankuen (Jennie) Chan
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20221123
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MANKUEN (JENNIE) CHAN (Continued)**

**1027513862**

Handler - Owner Operator:

Owner/Operator Indicator: Operator  
Owner/Operator Name: MANKUEN (JENNIE) CHAN  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 12577 PLYMOUTH DRIVE  
Owner/Operator City,State,Zip: SARATOGA, CA 95070  
Owner/Operator Telephone: 408-480-2469  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner  
Owner/Operator Name: MANKUEN (JENNIE) CHAN  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 12577 PLYMOUTH DRIVE  
Owner/Operator City,State,Zip: SARATOGA, CA 95070  
Owner/Operator Telephone: 408-480-2469  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20221123  
Handler Name: MANKUEN (JENNIE) CHAN  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found



Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BLUE SAPPHIRE HOMES (Continued)**

**1028893227**

Human Exposure Controls Indicator: N/A  
Groundwater Controls Indicator: N/A  
Significant Non-Complier Universe: No  
Unaddressed Significant Non-Complier Universe: No  
Addressed Significant Non-Complier Universe: No  
Significant Non-Complier With a Compliance Schedule Universe: No  
Financial Assurance Required: Not reported  
Handler Date of Last Change: 20231002  
Recognized Trader-Importer: No  
Recognized Trader-Exporter: No  
Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Operator  
Owner/Operator Name: BLUE SAPPHIRE HOMES  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 3527 MOUNT DIABLO BOULEVARD #224  
Owner/Operator City,State,Zip: LAFAYETTE, CA 94549  
Owner/Operator Telephone: 888-986-8660  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner  
Owner/Operator Name: BLUE SAPPHIRE HOMES  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 3527 MOUNT DIABLO BOULEVARD #224  
Owner/Operator City,State,Zip: LAFAYETTE, CA 94549  
Owner/Operator Telephone: 888-986-8660  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20231002  
Handler Name: BLUE SAPPHIRE HOMES  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

EDR ID Number  
 EPA ID Number

---

**BLUE SAPPHIRE HOMES (Continued)**

**1028893227**

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
 NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

<b>P117</b> <b>SW</b> <b>1/8-1/4</b> <b>0.213 mi.</b> <b>1127 ft.</b>	<b>BLUE SAPPHIRE HOMES</b> <b>411 EUCLID AVENUE #3</b> <b>OAKLAND, CA 94610</b>  <b>Site 9 of 9 in cluster P</b>	<b>RCRA NonGen / NLR</b>	<b>1027680424</b> <b>CAC003243449</b>
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**Relative:**  
**Lower**  
  
**Actual:**  
**41 ft.**

RCRA Listings:	
Date Form Received by Agency:	20230313
Handler Name:	Blue Sapphire Homes
Handler Address:	411 Euclid Avenue #3
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003222138
Contact Name:	BLUE SAPPHIRE HOMES
Contact Address:	411 EUCLID AVENUE #3
Contact City,State,Zip:	OAKLAND, CA 94610
Contact Telephone:	888-986-8660
Contact Fax:	Not reported
Contact Email:	CHELSEY@ENV-REM.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	411 EUCLID AVENUE #3
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Blue Sapphire Homes
Owner Type:	Other
Operator Name:	Blue Sapphire Homes
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**BLUE SAPPHIRE HOMES (Continued)**

**1027680424**

Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20230313
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name: BLUE SAPPHIRE HOMES	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	411 EUCLID AVENUE #3
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	888-986-8660
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name: BLUE SAPPHIRE HOMES	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	411 EUCLID AVENUE #3
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	888-986-8660
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**BLUE SAPPHIRE HOMES (Continued)**

**1027680424**

Historic Generators:

Receive Date:	20230313
Handler Name:	BLUE SAPPHIRE HOMES
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
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Evaluation Action Summary:

Evaluations:	No Evaluations Found
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**T118**  
**West**  
**1/8-1/4**  
**0.214 mi.**  
**1128 ft.**

**TRUST MATTERS**  
**353 BELLEVUE AVE**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1025853648**  
**CAC003033865**

**Site 3 of 3 in cluster T**

**Relative:**  
**Higher**  
**Actual:**  
**78 ft.**

RCRA Listings:

Date Form Received by Agency:	20190913
Handler Name:	Trust Matters
Handler Address:	353 Bellevue Ave
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003033865
Contact Name:	ADAM KITTREDGE
Contact Address:	4096 PIEDMONT AVE
Contact City,State,Zip:	OAKLAND, CA 94611
Contact Telephone:	925-848-4339
Contact Fax:	Not reported
Contact Email:	NICOLE@ENV-REM.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	4096 PIEDMONT AVE
Mailing City,State,Zip:	OAKLAND, CA 94611
Owner Name:	Trust Matters

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**TRUST MATTERS (Continued)**

**1025853648**

Owner Type:	Other
Operator Name:	Adam Kittredge
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20190913
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name: ADAM KITTREDGE	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	4096 PIEDMONT AVE
Owner/Operator City,State,Zip:	OAKLAND, CA 94611
Owner/Operator Telephone:	925-848-4339
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**TRUST MATTERS (Continued)**

**1025853648**

Owner/Operator Indicator: Owner  
Owner/Operator Name: TRUST MATTERS  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 4096 PIEDMONT AVE  
Owner/Operator City,State,Zip: OAKLAND, CA 94611  
Owner/Operator Telephone: 925-848-4339  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:  
Receive Date: 20190913  
Handler Name: TRUST MATTERS  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:  
NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:  
Violations: No Violations Found

Evaluation Action Summary:  
Evaluations: No Evaluations Found

**U119**  
**West**  
**1/8-1/4**  
**0.218 mi.**  
**1149 ft.**

**KYLE PARKER**  
**377 PALM AVE #107**  
**OAKLAND, CA 94610**  
**Site 1 of 3 in cluster U**

**RCRA NonGen / NLR 1025860134**  
**CAC003040770**

**Relative:**  
**Higher**  
**Actual:**  
**84 ft.**

RCRA Listings:  
Date Form Received by Agency: 20191028  
Handler Name: Kyle Parker  
Handler Address: 377 Palm Ave #107  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003040770  
Contact Name: KYLE PARKER  
Contact Address: 377 PALM AVE #107  
Contact City,State,Zip: OAKLAND, CA 94610  
Contact Telephone: 510-332-5958  
Contact Fax: Not reported  
Contact Email: HAYWARD.RECEPTIONIST@SYNERGYCOMPANIES.OR  
Contact Title: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**KYLE PARKER (Continued)**

**1025860134**

EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	377 PALM AVE #107
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Kyle Parker
Owner Type:	Other
Operator Name:	Kyle Parker
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20191108
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**KYLE PARKER (Continued)**

**1025860134**

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	KYLE PARKER
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	377 PALM AVE #107
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-332-5958
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	KYLE PARKER
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	377 PALM AVE #107
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-332-5958
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20191028
Handler Name:	KYLE PARKER
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
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Evaluation Action Summary:

Evaluations:	No Evaluations Found
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Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**U120**  
**West**  
**1/8-1/4**  
**0.218 mi.**  
**1149 ft.**

**COLLINS MANAGEMENT**  
**377 PALM AVENUE**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1026712947**  
**CAC003101219**

**Site 2 of 3 in cluster U**

**Relative:**  
**Higher**  
**Actual:**  
**84 ft.**

RCRA Listings:	20210115
Date Form Received by Agency:	Collins Management
Handler Name:	377 Palm Avenue
Handler Address:	OAKLAND, CA 94610
Handler City,State,Zip:	CAC003101219
EPA ID:	KUNAL MEHTA
Contact Name:	377 PALM AVENUE
Contact Address:	OAKLAND, CA 94610
Contact City,State,Zip:	949-636-4345
Contact Telephone:	Not reported
Contact Fax:	MARIAE@PWSEI.COM
Contact Email:	Not reported
Contact Title:	09
EPA Region:	Not reported
Land Type:	Not a generator, verified
Federal Waste Generator Description:	Not reported
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	377 PALM AVENUE
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Kunal Mehta
Owner Type:	Other
Operator Name:	Kunal Mehta
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**COLLINS MANAGEMENT (Continued)**

**1026712947**

Human Exposure Controls Indicator: N/A  
Groundwater Controls Indicator: N/A  
Significant Non-Complier Universe: No  
Unaddressed Significant Non-Complier Universe: No  
Addressed Significant Non-Complier Universe: No  
Significant Non-Complier With a Compliance Schedule Universe: No  
Financial Assurance Required: Not reported  
Handler Date of Last Change: 20210226  
Recognized Trader-Importer: No  
Recognized Trader-Exporter: No  
Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Operator  
Owner/Operator Name: KUNAL MEHTA  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 377 PALM AVENUE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 949-636-4345  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner  
Owner/Operator Name: KUNAL MEHTA  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 377 PALM AVENUE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 949-636-4345  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20210115  
Handler Name: COLLINS MANAGEMENT  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**COLLINS MANAGEMENT (Continued)**

**1026712947**

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
 NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**U121**  
**West**  
**1/8-1/4**  
**0.218 mi.**  
**1149 ft.**

**COLLINS MANAGEMENT PALM MANOR**  
**377 PALM AVENUE**  
**OAKLAND, CA 94610**  
**Site 3 of 3 in cluster U**

**RCRA NonGen / NLR**

**1026479828**  
**CAC003085758**

**Relative:**  
**Higher**  
**Actual:**  
**84 ft.**

RCRA Listings:  
 Date Form Received by Agency: 20200928  
 Handler Name: Collins Management Palm Manor  
 Handler Address: 377 Palm Avenue  
 Handler City,State,Zip: OAKLAND, CA 94610  
 EPA ID: CAC003085758  
 Contact Name: JONATHAN TESTA  
 Contact Address: 377 PALM AVENUE  
 Contact City,State,Zip: OAKLAND, CA 94610  
 Contact Telephone: 925-288-0479  
 Contact Fax: Not reported  
 Contact Email: MARIAE@PWSEI.COM  
 Contact Title: Not reported  
 EPA Region: 09  
 Land Type: Not reported  
 Federal Waste Generator Description: Not a generator, verified  
 Non-Notifier: Not reported  
 Biennial Report Cycle: Not reported  
 Accessibility: Not reported  
 Active Site Indicator: Not reported  
 State District Owner: Not reported  
 State District: Not reported  
 Mailing Address: 377 PALM AVENUE  
 Mailing City,State,Zip: OAKLAND, CA 94610  
 Owner Name: Jonathan Testa  
 Owner Type: Other  
 Operator Name: Jonathan Testa  
 Operator Type: Other  
 Short-Term Generator Activity: No  
 Importer Activity: No  
 Mixed Waste Generator: No  
 Transporter Activity: No  
 Transfer Facility Activity: No  
 Recycler Activity with Storage: No  
 Small Quantity On-Site Burner Exemption: No  
 Smelting Melting and Refining Furnace Exemption: No  
 Underground Injection Control: No  
 Off-Site Waste Receipt: No  
 Universal Waste Indicator: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**COLLINS MANAGEMENT PALM MANOR (Continued)**

**1026479828**

Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20201008
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name: JONATHAN TESTA	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	377 PALM AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	925-288-0479
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name: JONATHAN TESTA	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	377 PALM AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	925-288-0479
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**COLLINS MANAGEMENT PALM MANOR (Continued)**

**1026479828**

Historic Generators:

Receive Date: 20200928  
Handler Name: COLLINS MANAGEMENT PALM MANOR  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

V122  
North  
1/8-1/4  
0.218 mi.  
1153 ft.

**CHRIS CORNFORD**  
**325 ALTA VISTA AVE.**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1027075122**  
**CAC003146843**

**Site 1 of 3 in cluster V**

**Relative:**  
**Higher**  
**Actual:**  
**127 ft.**

RCRA Listings:

Date Form Received by Agency: 20211104  
Handler Name: Chris Cornford  
Handler Address: 325 Alta Vista Ave.  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003146843  
Contact Name: CHRIS CORNFORD  
Contact Address: 325 ALTA VISTA AVE.  
Contact City,State,Zip: OAKLAND, CA 94610  
Contact Telephone: 510-504-0779  
Contact Fax: Not reported  
Contact Email: C.A.CORNFORD@GMAIL.COM  
Contact Title: Not reported  
EPA Region: 09  
Land Type: Not reported  
Federal Waste Generator Description: Not a generator, verified  
Non-Notifier: Not reported  
Biennial Report Cycle: Not reported  
Accessibility: Not reported  
Active Site Indicator: Not reported  
State District Owner: Not reported  
State District: Not reported  
Mailing Address: 325 ALTA VISTA AVE.  
Mailing City,State,Zip: OAKLAND, CA 94610  
Owner Name: Chris Cornford

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHRIS CORNFORD (Continued)**

**1027075122**

Owner Type:	Other
Operator Name:	Chris Cornford
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20211104
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	CHRIS CORNFORD
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	325 ALTA VISTA AVE.
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-504-0779
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**CHRIS CORNFORD (Continued)**

**1027075122**

Owner/Operator Indicator:	Owner
Owner/Operator Name:	CHRIS CORNFORD
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	325 ALTA VISTA AVE.
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-504-0779
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20211104
Handler Name:	CHRIS CORNFORD
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
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Evaluation Action Summary:

Evaluations:	No Evaluations Found
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V123  
 North  
 1/8-1/4  
 0.218 mi.  
 1153 ft.

**CHRIS CORNFORD**  
**325 ALTA VISTA AVENUE**  
**OAKLAND, CA 94610**  
**Site 2 of 3 in cluster V**

**RCRA NonGen / NLR 1027083694**  
**CAC003155870**

**Relative:**  
**Higher**  
**Actual:**  
**127 ft.**

RCRA Listings:	
Date Form Received by Agency:	20220107
Handler Name:	Chris Cornford
Handler Address:	325 Alta Vista Avenue
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003155870
Contact Name:	CHRIS CORNFORD
Contact Address:	325 ALTA VISTA AVENUE
Contact City,State,Zip:	OAKLAND, CA 94610
Contact Telephone:	510-504-0779
Contact Fax:	Not reported
Contact Email:	ENVSCHEDULING@SYNERGYCOMPANIES.ORG
Contact Title:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHRIS CORNFORD (Continued)**

**1027083694**

EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	325 ALTA VISTA AVENUE
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Chris Cornford
Owner Type:	Other
Operator Name:	Chris Cornford
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20220110
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHRIS CORNFORD (Continued)**

**1027083694**

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	CHRIS CORNFORD
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	325 ALTA VISTA AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-504-0779
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	CHRIS CORNFORD
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	325 ALTA VISTA AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-504-0779
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20220107
Handler Name:	CHRIS CORNFORD
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
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Evaluation Action Summary:

Evaluations:	No Evaluations Found
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Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**R124**      **MERIDIAN MANAGEMENT GROUP**      **RCRA NonGen / NLR**      **1025860648**  
**WNW**      **365 WARWICK AVE #305**           **CAC003041310**  
**1/8-1/4**      **OAKLAND, CA 94610**  
**0.219 mi.**  
**1156 ft.**      **Site 6 of 8 in cluster R**

**Relative:**  
**Higher**  
**Actual:**  
**97 ft.**

RCRA Listings:	20191031
Date Form Received by Agency:	20191031
Handler Name:	Meridian Management Group
Handler Address:	365 Warwick Ave #305
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003041310
Contact Name:	MERIDIAN MANAGEMENT GROUP
Contact Address:	365 WARWICK AVE #305
Contact City,State,Zip:	OAKLAND, CA 94610
Contact Telephone:	415-434-9700
Contact Fax:	Not reported
Contact Email:	RUTH.DELGADILLO@SYNERGYCOMPANIES.ORG
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	365 WARWICK AVE #305
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Meridian Management Group
Owner Type:	Other
Operator Name:	Meridian Management Group
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MERIDIAN MANAGEMENT GROUP (Continued)**

**1025860648**

Human Exposure Controls Indicator: N/A  
Groundwater Controls Indicator: N/A  
Significant Non-Complier Universe: No  
Unaddressed Significant Non-Complier Universe: No  
Addressed Significant Non-Complier Universe: No  
Significant Non-Complier With a Compliance Schedule Universe: No  
Financial Assurance Required: Not reported  
Handler Date of Last Change: 20191108  
Recognized Trader-Importer: No  
Recognized Trader-Exporter: No  
Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Owner  
Owner/Operator Name: MERIDIAN MANAGEMENT GROUP  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 365 WARWICK AVE #305  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 415-434-9700  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator  
Owner/Operator Name: MERIDIAN MANAGEMENT GROUP  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 365 WARWICK AVE #305  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 415-434-9700  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20191031  
Handler Name: MERIDIAN MANAGEMENT GROUP  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**MERIDIAN MANAGEMENT GROUP (Continued)**

**1025860648**

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
 NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

R125  
 WNW  
 1/8-1/4  
 0.219 mi.  
 1156 ft.

**UNIVERSITY PRESIDENT ASSOCIATES, LP**  
**365 WARWICK AVE.**  
**OAKLAND, CA 94610**  
 Site 7 of 8 in cluster R

RCRA NonGen / NLR

**1024782112**  
**CAC003002089**

**Relative:**  
**Higher**  
**Actual:**  
**97 ft.**

RCRA Listings:  
 Date Form Received by Agency: 20190221  
 Handler Name: University President Associates, Lp  
 Handler Address: 365 Warwick Ave.  
 Handler City,State,Zip: OAKLAND, CA 94610  
 EPA ID: CAC003002089  
 Contact Name: CHRIS DRESSEL  
 Contact Address: 1145 BUSH ST.  
 Contact City,State,Zip: SAN FRANCISCO, CA 94109  
 Contact Telephone: 510-444-9700  
 Contact Fax: Not reported  
 Contact Email: CHRISD@FLYNNINV.COM  
 Contact Title: Not reported  
 EPA Region: 09  
 Land Type: Not reported  
 Federal Waste Generator Description: Not a generator, verified  
 Non-Notifier: Not reported  
 Biennial Report Cycle: Not reported  
 Accessibility: Not reported  
 Active Site Indicator: Handler Activities  
 State District Owner: Not reported  
 State District: Not reported  
 Mailing Address: 1145 BUSH ST.  
 Mailing City,State,Zip: SAN FRANCISCO, CA 94109  
 Owner Name: University President Associate  
 Owner Type: Other  
 Operator Name: Chris Dressel  
 Operator Type: Other  
 Short-Term Generator Activity: No  
 Importer Activity: No  
 Mixed Waste Generator: No  
 Transporter Activity: No  
 Transfer Facility Activity: No  
 Recycler Activity with Storage: No  
 Small Quantity On-Site Burner Exemption: No  
 Smelting Melting and Refining Furnace Exemption: No  
 Underground Injection Control: No  
 Off-Site Waste Receipt: No  
 Universal Waste Indicator: Yes

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

UNIVERSITY PRESIDENT ASSOCIATES, LP (Continued)

1024782112

Universal Waste Destination Facility: Yes  
Federal Universal Waste: No  
Active Site State-Reg Handler: ---  
Federal Facility Indicator: Not reported  
Hazardous Secondary Material Indicator: N  
Sub-Part K Indicator: Not reported  
2018 GPRA Permit Baseline: Not on the Baseline  
2018 GPRA Renewals Baseline: Not on the Baseline  
202 GPRA Corrective Action Baseline: No  
Subject to Corrective Action Universe: No  
Non-TSDFs Where RCRA CA has Been Imposed Universe: No  
Corrective Action Priority Ranking: No NCAPS ranking  
Environmental Control Indicator: No  
Institutional Control Indicator: No  
Human Exposure Controls Indicator: N/A  
Groundwater Controls Indicator: N/A  
Significant Non-Complier Universe: No  
Unaddressed Significant Non-Complier Universe: No  
Addressed Significant Non-Complier Universe: No  
Significant Non-Complier With a Compliance Schedule Universe: No  
Financial Assurance Required: Not reported  
Handler Date of Last Change: 20190222  
Recognized Trader-Importer: No  
Recognized Trader-Exporter: No  
Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Operator  
Owner/Operator Name: CHRIS DRESSEL  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 1145 BUSH ST.  
Owner/Operator City,State,Zip: SAN FRANCISCO, CA 94109  
Owner/Operator Telephone: 510-444-9700  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner  
Owner/Operator Name: UNIVERSITY PRESIDENT ASSOCIATE  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 1145 BUSH ST.  
Owner/Operator City,State,Zip: SAN FRANCISCO, CA 94109  
Owner/Operator Telephone: 510-444-9700  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**UNIVERSITY PRESIDENT ASSOCIATES, LP (Continued)**

**1024782112**

Historic Generators:

Receive Date:	20190221
Handler Name:	UNIVERSITY PRESIDENT ASSOCIATES, LP
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
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Evaluation Action Summary:

Evaluations:	No Evaluations Found
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**S126**  
**ENE**  
**1/8-1/4**  
**0.224 mi.**  
**1185 ft.**

**SCOTT BAILEY**  
**824 VERMONT ST.**  
**OAKLAND, CA 94610**  
**Site 2 of 2 in cluster S**

**RCRA NonGen / NLR**

**1027207458**  
**CAC003171648**

**Relative:**  
**Higher**  
**Actual:**  
**84 ft.**

RCRA Listings:

Date Form Received by Agency:	20220418
Handler Name:	Scott Bailey
Handler Address:	824 Vermont St.
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003171648
Contact Name:	SCOTT BAILEY
Contact Address:	2879 HUMPHREY AVE.
Contact City,State,Zip:	RICHMOND, CA 94804
Contact Telephone:	510-290-3440
Contact Fax:	Not reported
Contact Email:	WILLSONBAILEYINC@ATT.NET
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	2879 HUMPHREY AVE.
Mailing City,State,Zip:	RICHMOND, CA 94804
Owner Name:	Scott Bailey

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**SCOTT BAILEY (Continued)**

**1027207458**

Owner Type:	Other
Operator Name:	Scott Bailey
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20220418
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	SCOTT BAILEY
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	824 VERMONT ST.
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-290-3440
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SCOTT BAILEY (Continued)**

**1027207458**

Owner/Operator Indicator: Operator  
Owner/Operator Name: SCOTT BAILEY  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 2879 HUMPHREY AVE.  
Owner/Operator City,State,Zip: RICHMOND, CA 94804  
Owner/Operator Telephone: 510-290-3440  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20220418  
Handler Name: SCOTT BAILEY  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**W127**  
**ESE**  
**1/8-1/4**  
**0.224 mi.**  
**1185 ft.**

**JACK DOUGLAS**  
**724 RAND AVENUE**  
**OAKLAND, CA 94610**  
**Site 1 of 5 in cluster W**

**RCRA NonGen / NLR** **1028900156**  
**CAC003261919**

**Relative:**  
**Lower**

RCRA Listings:

**Actual:**  
**24 ft.**

Date Form Received by Agency: 20231121  
Handler Name: Jack Douglas  
Handler Address: 724 Rand Avenue  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003261919  
Contact Name: JACK DOUGLAS  
Contact Address: 724 RAND AVENUE  
Contact City,State,Zip: OAKLAND, CA 94610  
Contact Telephone: 650-867-4095  
Contact Fax: Not reported  
Contact Email: GISELLE.ESPIRITU@SYNERGYCOMPANIES.COM  
Contact Title: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**JACK DOUGLAS (Continued)**

**1028900156**

EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	724 RAND AVENUE
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Jack Douglas
Owner Type:	Other
Operator Name:	Jack Douglas
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20231122
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**JACK DOUGLAS (Continued)**

**1028900156**

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	JACK DOUGLAS
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	724 RAND AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	650-867-4095
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	JACK DOUGLAS
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	724 RAND AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	650-867-4095
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20231121
Handler Name:	JACK DOUGLAS
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
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Evaluation Action Summary:

Evaluations:	No Evaluations Found
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Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**W128**  
**ESE**  
**1/8-1/4**  
**0.227 mi.**  
**1196 ft.**

**JACK DOUGLAS**  
**722 RAND AVENUE**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1028892376**  
**CAC003253585**

**Site 2 of 5 in cluster W**

**Relative:**  
**Lower**  
**Actual:**  
**22 ft.**

RCRA Listings:	20230926
Date Form Received by Agency:	20230926
Handler Name:	Jack Douglas
Handler Address:	722 Rand Avenue
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003253585
Contact Name:	JACK DOUGLAS
Contact Address:	722 RAND AVENUE
Contact City,State,Zip:	OAKLAND, CA 94610
Contact Telephone:	989-600-8700
Contact Fax:	Not reported
Contact Email:	GISELLE.ESPIRITU@SYNERGYCOMPANIES.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	722 RAND AVENUE
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Jack Douglas
Owner Type:	Other
Operator Name:	Jack Douglas
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**JACK DOUGLAS (Continued)**

**1028892376**

Human Exposure Controls Indicator: N/A  
Groundwater Controls Indicator: N/A  
Significant Non-Complier Universe: No  
Unaddressed Significant Non-Complier Universe: No  
Addressed Significant Non-Complier Universe: No  
Significant Non-Complier With a Compliance Schedule Universe: No  
Financial Assurance Required: Not reported  
Handler Date of Last Change: 20230926  
Recognized Trader-Importer: No  
Recognized Trader-Exporter: No  
Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Operator  
Owner/Operator Name: JACK DOUGLAS  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 722 RAND AVENUE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 989-600-8700  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner  
Owner/Operator Name: JACK DOUGLAS  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 722 RAND AVENUE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 989-600-8700  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20230926  
Handler Name: JACK DOUGLAS  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**JACK DOUGLAS (Continued)**

**1028892376**

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
 NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**W129**  
**ESE**  
**1/8-1/4**  
**0.227 mi.**  
**1196 ft.**

**JENNIFER WU**  
**722 RAND AVE**  
**OAKLAND, CA 94610**  
**Site 3 of 5 in cluster W**

**RCRA NonGen / NLR**

**1026041588**  
**CAC003047725**

**Relative:**  
**Lower**  
**Actual:**  
**22 ft.**

RCRA Listings:  
 Date Form Received by Agency: 20191218  
 Handler Name: Jennifer Wu  
 Handler Address: 722 Rand Ave  
 Handler City,State,Zip: OAKLAND, CA 94610-2269  
 EPA ID: CAC003047725  
 Contact Name: JENNIFER WU  
 Contact Address: 1336 GRAND AVE  
 Contact City,State,Zip: PIEDMONT, CA 94610-1020  
 Contact Telephone: 510-610-5950  
 Contact Fax: Not reported  
 Contact Email: JENNY425578@GMAIL.COM  
 Contact Title: Not reported  
 EPA Region: 09  
 Land Type: Not reported  
 Federal Waste Generator Description: Not a generator, verified  
 Non-Notifier: Not reported  
 Biennial Report Cycle: Not reported  
 Accessibility: Not reported  
 Active Site Indicator: Not reported  
 State District Owner: Not reported  
 State District: Not reported  
 Mailing Address: 1336 GRAND AVE  
 Mailing City,State,Zip: PIEDMONT, CA 94610-1020  
 Owner Name: Jennifer Wu  
 Owner Type: Other  
 Operator Name: Jennifer Wu  
 Operator Type: Other  
 Short-Term Generator Activity: No  
 Importer Activity: No  
 Mixed Waste Generator: No  
 Transporter Activity: No  
 Transfer Facility Activity: No  
 Recycler Activity with Storage: No  
 Small Quantity On-Site Burner Exemption: No  
 Smelting Melting and Refining Furnace Exemption: No  
 Underground Injection Control: No  
 Off-Site Waste Receipt: No  
 Universal Waste Indicator: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**JENNIFER WU (Continued)**

**1026041588**

Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20200210
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name: JENNIFER WU	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	1336 GRAND AVE
Owner/Operator City,State,Zip:	PIEDMONT, CA 94610-1020
Owner/Operator Telephone:	510-610-5950
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name: JENNIFER WU	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	1336 GRAND AVE
Owner/Operator City,State,Zip:	PIEDMONT, CA 94610-1020
Owner/Operator Telephone:	510-610-5950
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**JENNIFER WU (Continued)**

**1026041588**

Historic Generators:

Receive Date: 20191218  
Handler Name: JENNIFER WU  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**W130  
ESE  
1/8-1/4  
0.227 mi.  
1196 ft.**

**WU PROPERTY  
722 RAND AVENUE  
OAKLAND, CA 94610  
Site 4 of 5 in cluster W**

**LUST S125952835  
Cortese N/A**

**Relative:  
Lower**

LUST:

**Actual:  
22 ft.**

Name: WU PROPERTY  
Address: 722 RAND AVENUE  
City,State,Zip: OAKLAND, CA 94610  
Lead Agency: ALAMEDA COUNTY LOP  
Case Type: LUST Cleanup Site  
Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T10000014217](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000014217)  
Global Id: T10000014217  
Latitude: 37.8109555715767  
Longitude: -122.245245597553  
Status: Completed - Case Closed  
Status Date: 03/31/2021  
Case Worker: NL  
RB Case Number: Not reported  
Local Agency: ALAMEDA COUNTY LOP  
File Location: All Files are on GeoTracker or in the Local Agency Database  
Local Case Number: RO0003427  
Potential Media Affect: Not reported  
Potential Contaminants of Concern: Lead, Benzene, Diesel, Naphthalene, Toluene, Waste Oil / Motor / Hydraulic / Lubricating  
EPA Region: 9  
Coordinate Source: Google Map Move  
Cuf Case: NO  
Quantity Released Gallons: Not reported  
Begin Date: 12/20/2019

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**WU PROPERTY (Continued)**

**S125952835**

Leak Reported Date: 01/21/2020  
How Discovered: Tank Closure  
How Discovered Description: Not reported  
Discharge Source: Piping, Tank  
Discharge Cause: Unknown  
Stop Method: Close and Remove Tank  
Stop Description: Not reported  
No Further Action Date: 03/31/2021  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Not reported  
CA EnviroScreen 3 Score: 16-20%  
CA EnviroScreen 4 Score: 15-20%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: A Remedial Action Completion Certification and Case Closure Letter was issued by Alameda County Department of Environmental Health (ACDEH) on March 31, 2021 for Leaking Underground Storage Tank Cleanup Case RO0003427 for the completion of investigations and remedial actions for the unauthorized releases of petroleum into the environment from underground storage tanks (USTs), piping and other appurtenant structures at the site. ACDEH's LUST case closure determination was based on information in the above case file and an analysis and low threat determination of risk to human health, safety, and the environment from residual petroleum constituents in the subsurface in accordance with the State Water Resources Control Board's Low-Threat Underground Storage Tank Closure Policy and under the current land use scenarios at and in the vicinity of the Site at the time of issuance of this letter. Risk to receptors under different land use scenarios or development configurations, and to other non-UST petroleum chemicals of concern related to historical land use were not considered in the closure determination of this LUST Case.

**LUST:**

Global Id: T10000014217  
Contact Type: Local Agency Caseworker - Primary Caseworker  
Contact Name: NOEL LINER  
Organization Name: ALAMEDA COUNTY LOP  
Address: 1131 Harbor Bay Parkway  
City: ALAMEDA  
Email: noel.liner@acgov.org  
Phone Number: 5105676876

Global Id: T10000014217  
Contact Type: Regional Board Caseworker  
Contact Name: Regional Water Board  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY ST SUITE 1400  
City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

**LUST:**

Global Id: T10000014217  
Action Type: ENFORCEMENT

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**WU PROPERTY (Continued)**

**S125952835**

Date: 09/09/2020  
Action: Email Correspondence

Global Id: T10000014217  
Action Type: ENFORCEMENT  
Date: 07/13/2020  
Action: Email Correspondence - #2020/07/13

Global Id: T10000014217  
Action Type: ENFORCEMENT  
Date: 04/29/2020  
Action: Staff Letter

Global Id: T10000014217  
Action Type: ENFORCEMENT  
Date: 03/31/2021  
Action: Closure/No Further Action Letter - #20210331

Global Id: T10000014217  
Action Type: ENFORCEMENT  
Date: 10/15/2020  
Action: Email Correspondence

Global Id: T10000014217  
Action Type: ENFORCEMENT  
Date: 12/21/2020  
Action: Staff Letter

Global Id: T10000014217  
Action Type: ENFORCEMENT  
Date: 10/01/2020  
Action: Notice of Responsibility

Global Id: T10000014217  
Action Type: Other  
Date: 01/21/2020  
Action: Leak Reported

Global Id: T10000014217  
Action Type: ENFORCEMENT  
Date: 05/18/2020  
Action: Staff Letter

Global Id: T10000014217  
Action Type: ENFORCEMENT  
Date: 09/29/2020  
Action: Staff Letter

Global Id: T10000014217  
Action Type: ENFORCEMENT  
Date: 09/28/2020  
Action: Email Correspondence

Global Id: T10000014217  
Action Type: ENFORCEMENT  
Date: 09/24/2020  
Action: Email Correspondence

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**WU PROPERTY (Continued)**

**S125952835**

Global Id:	T10000014217
Action Type:	ENFORCEMENT
Date:	12/24/2019
Action:	Unauthorized Release Form
Global Id:	T10000014217
Action Type:	RESPONSE
Date:	09/08/2020
Action:	Request for Closure - Regulator Responded
Global Id:	T10000014217
Action Type:	RESPONSE
Date:	05/06/2020
Action:	Soil and Water Investigation Workplan - Regulator Responded
Global Id:	T10000014217
Action Type:	RESPONSE
Date:	04/02/2020
Action:	Tank Removal Report / UST Sampling Report - Regulator Responded
Global Id:	T10000014217
Action Type:	RESPONSE
Date:	10/15/2020
Action:	Correspondence - Regulator Responded
Global Id:	T10000014217
Action Type:	RESPONSE
Date:	10/15/2020
Action:	Other Report / Document - Regulator Responded
Global Id:	T10000014217
Action Type:	RESPONSE
Date:	07/13/2020
Action:	Soil and Water Investigation Workplan - Addendum - Regulator Responded
Global Id:	T10000014217
Action Type:	ENFORCEMENT
Date:	04/09/2021
Action:	Closure Summary
Global Id:	T10000014217
Action Type:	RESPONSE
Date:	03/31/2021
Action:	Well Destruction Report
Global Id:	T10000014217
Action Type:	RESPONSE
Date:	02/28/2021
Action:	Other Report / Document
Global Id:	T10000014217
Action Type:	Other
Date:	12/20/2019
Action:	Leak Stopped
Global Id:	T10000014217
Action Type:	Other

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**WU PROPERTY (Continued)**

**S125952835**

Date: 12/20/2019  
Action: Leak Discovery

**LUST:**

Global Id: T10000014217  
Status: Open - Case Begin Date  
Status Date: 12/20/2019

Global Id: T10000014217  
Status: Open - Site Assessment  
Status Date: 03/24/2020

Global Id: T10000014217  
Status: Open - Eligible for Closure  
Status Date: 10/15/2020

Global Id: T10000014217  
Status: Completed - Case Closed  
Status Date: 03/31/2021

**CORTESE:**

Name: WU PROPERTY  
Address: 722 RAND AVENUE  
City,State,Zip: OAKLAND, CA 94610  
Region: CORTESE  
Envirostor Id: Not reported  
Global ID: T10000014217  
Site/Facility Type: LUST CLEANUP SITE  
Cleanup Status: COMPLETED - CASE CLOSED  
Status Date: Not reported  
Site Code: Not reported  
Latitude: Not reported  
Longitude: Not reported  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: active  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported  
File Name: Active Open



Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**JENNIFER WU (Continued)**

**1026474938**

Human Exposure Controls Indicator: N/A  
Groundwater Controls Indicator: N/A  
Significant Non-Complier Universe: No  
Unaddressed Significant Non-Complier Universe: No  
Addressed Significant Non-Complier Universe: No  
Significant Non-Complier With a Compliance Schedule Universe: No  
Financial Assurance Required: Not reported  
Handler Date of Last Change: 20200904  
Recognized Trader-Importer: No  
Recognized Trader-Exporter: No  
Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Owner  
Owner/Operator Name: JENNIFER WU  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 722 RAND AVENUE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-610-5950  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator  
Owner/Operator Name: JENNIFER WU  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 722 RAND AVENUE  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-610-5950  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20200824  
Handler Name: JENNIFER WU  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**JENNIFER WU (Continued)**

**1026474938**

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
 NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

R132  
 WNW  
 1/8-1/4  
 0.230 mi.  
 1212 ft.

**TOM CHEW**  
**396 JAYNE AVENUE**  
**OAKLAND, CA 94610**

RCRA NonGen / NLR

**1025829224**  
**CAC003008778**

Site 8 of 8 in cluster R

Relative:  
 Higher  
 Actual:  
 102 ft.

RCRA Listings:

Date Form Received by Agency:	20190404
Handler Name:	Tom Chew
Handler Address:	396 Jayne Avenue
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003008778
Contact Name:	TOM CHEW
Contact Address:	396 JAYNE AVENUE
Contact City,State,Zip:	OAKLAND, CA 94610
Contact Telephone:	510-260-3051
Contact Fax:	Not reported
Contact Email:	ALEJANDRAMALDONADO@ALLIANCE-ENVIRO.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	396 JAYNE AVENUE
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Tom Chew
Owner Type:	Other
Operator Name:	Tom Chew
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**TOM CHEW (Continued)**

**1025829224**

Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20190626
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name: TOM CHEW	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	396 JAYNE AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-260-3051
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name: TOM CHEW	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	396 JAYNE AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-260-3051
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**TOM CHEW (Continued)**

**1025829224**

Historic Generators:

Receive Date: 20190404  
Handler Name: TOM CHEW  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

X133  
SW  
1/8-1/4  
0.233 mi.  
1232 ft.

**BILL MCLETCHIE**  
**410 BELLEVUE AVENUE UNIT 210**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1024778317**  
**CAC002998262**

**Site 1 of 3 in cluster X**

**Relative:**  
**Lower**  
**Actual:**  
**41 ft.**

RCRA Listings:

Date Form Received by Agency: 20190125  
Handler Name: Bill Mcletchie  
Handler Address: 410 Bellevue Avenue Unit 210  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC002998262  
Contact Name: BILL MCLETCHIE  
Contact Address: 2909 MCCLURE STREET  
Contact City,State,Zip: OAKLAND, CA 94609  
Contact Telephone: 510-444-8780  
Contact Fax: Not reported  
Contact Email: NICOLE@ENV-REM.COM  
Contact Title: Not reported  
EPA Region: 09  
Land Type: Not reported  
Federal Waste Generator Description: Not a generator, verified  
Non-Notifier: Not reported  
Biennial Report Cycle: Not reported  
Accessibility: Not reported  
Active Site Indicator: Handler Activities  
State District Owner: Not reported  
State District: Not reported  
Mailing Address: 2909 MCCLURE STREET  
Mailing City,State,Zip: OAKLAND, CA 94609  
Owner Name: Bill Mcletchie

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**BILL MCLETCHE (Continued)**

**1024778317**

Owner Type:	Other
Operator Name:	Bill Mcletchie
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20190222
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	BILL MCLETCHE
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	2909 MCCLURE STREET
Owner/Operator City,State,Zip:	OAKLAND, CA 94609
Owner/Operator Telephone:	510-444-8780
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**BILL MCLETCHE (Continued)**

**1024778317**

Owner/Operator Indicator:	Owner
Owner/Operator Name: BILL MCLETCHE	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	2909 MCCLURE STREET
Owner/Operator City,State,Zip:	OAKLAND, CA 94609
Owner/Operator Telephone:	510-444-8780
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20190125
Handler Name: BILL MCLETCHE	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
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Evaluation Action Summary:

Evaluations:	No Evaluations Found
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V134  
 North  
 1/8-1/4  
 0.234 mi.  
 1234 ft.

**OMAR SHAH**  
**301 ALTA VISTA AVENUE**  
**OAKLAND, CA 94610**

RCRA NonGen / NLR

**1028884263**  
**CAC003244893**

**Site 3 of 3 in cluster V**

**Relative:**  
**Higher**  
**Actual:**  
**126 ft.**

RCRA Listings:

Date Form Received by Agency:	20230802
Handler Name:	Omar Shah
Handler Address:	301 Alta Vista Avenue
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003244893
Contact Name:	OMAR SHAH
Contact Address:	301 ALTA VISTA AVENUE
Contact City,State,Zip:	OAKLAND, CA 94610
Contact Telephone:	415-244-5150
Contact Fax:	Not reported
Contact Email:	GISELLE.ESPIRITU@SYNERGYCOMPANIES.COM
Contact Title:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**OMAR SHAH (Continued)**

**1028884263**

EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	301 ALTA VISTA AVENUE
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Omar Shah
Owner Type:	Other
Operator Name:	Omar Shah
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20230802
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**OMAR SHAH (Continued)**

**1028884263**

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	OMAR SHAH
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	301 ALTA VISTA AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	415-244-5150
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	OMAR SHAH
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	301 ALTA VISTA AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	415-244-5150
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20230802
Handler Name:	OMAR SHAH
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
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Evaluation Action Summary:

Evaluations:	No Evaluations Found
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Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

135  
 South  
 1/8-1/4  
 0.235 mi.  
 1241 ft.

**KAISER INDUSTRIES CORP**  
**ALAMEDA (County), CA**

**MINES MRDS 1025644059**  
**N/A**

**Relative:**  
**Lower**  
**Actual:**  
**11 ft.**

MINES MRDS:  
 Name: KAISER INDUSTRIES CORP  
 Address: Not reported  
 Deposit identification Number: 10162580  
 City, State, Zip: CALIFORNIA  
 URL: [https://mrdata.usgs.gov/mrds/show-mrds.php?dep\\_id=10162580](https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10162580)  
 MRDS Identification Number: Not reported  
 MAS/MILS Identification Number: 0060010121  
 Region: NA  
 Country: United States  
 Primary Commodities: Clay  
 Secondary Commodities: Not reported  
 Tertiary Commodities: Not reported  
 Operation Type: Surface  
 Deposit Type: Not reported  
 Production Size: Not reported  
 Development Status: Producer  
 Ore Minerals or Materials: Not reported  
 Gangue Minerals or Materials: Not reported  
 Other Minerals or Materials: Not reported  
 Ore Body Form: Not reported  
 Workings Type: Not reported  
 Mineral Deposit Model: Not reported  
 Alteration Processes: Not reported  
 Concentration Processes: Not reported  
 Previous Names: Not reported  
 Ore Controls: Not reported  
 Reporter: Western Field Operations Center (WFOC)  
 Host Rock Unit Name: Not reported  
 Host Rock Type: Not reported  
 Associated Rock Unit Name: Not reported  
 Associated Rock Type Code: Not reported  
 Structural Characteristics: Not reported  
 Tectonic Setting: Not reported  
 References: Not reported  
 First Production Year: Not reported  
 Began Before/After FPY: Not reported  
 Last Production Year: Not reported  
 Ended Before/After LPY: Not reported  
 Year Discovered: Not reported  
 Found Before/After YD: Not reported  
 Production History: Not reported  
 Discovery Information: Not reported  
 Latitude: 37.8093  
 Longitude: -122.24825

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**Y136**  
**NNW**  
**1/8-1/4**  
**0.235 mi.**  
**1242 ft.**

**TOM PARATORE**  
**484 CHETWOOD ST**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1025846195**  
**CAC003025952**

**Site 1 of 2 in cluster Y**

**Relative:**  
**Higher**  
**Actual:**  
**124 ft.**

RCRA Listings:	20190725
Date Form Received by Agency:	20190725
Handler Name:	Tom Paratore
Handler Address:	484 Chetwood St
Handler City,State,Zip:	OAKLAND, CA 94610-2649
EPA ID:	CAC003025952
Contact Name:	TOM PARATORE
Contact Address:	484 CHETWOOD ST
Contact City,State,Zip:	OAKLAND, CA 94610-2649
Contact Telephone:	510-589-1392
Contact Fax:	Not reported
Contact Email:	YRODRIGUEZ@MGREMEDIATION.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	484 CHETWOOD ST
Mailing City,State,Zip:	OAKLAND, CA 94610-2649
Owner Name:	Tom Paratore
Owner Type:	Other
Operator Name:	Tom Paratore
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**TOM PARATORE (Continued)**

**1025846195**

Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20190729
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name: TOM PARATORE	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	484 CHETWOOD ST
Owner/Operator City,State,Zip:	OAKLAND, CA 94610-2649
Owner/Operator Telephone:	510-589-1392
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name: TOM PARATORE	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	484 CHETWOOD ST
Owner/Operator City,State,Zip:	OAKLAND, CA 94610-2649
Owner/Operator Telephone:	510-589-1392
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20190725
Handler Name: TOM PARATORE	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**TOM PARATORE (Continued)**

**1025846195**

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
 NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**Z137**  
**ESE**  
**1/8-1/4**  
**0.237 mi.**  
**1251 ft.**

**KLAUS WIRSING**  
**525 GLENVIEW AVE. #1**  
**OAKLAND, CA 94610**  
**Site 1 of 2 in cluster Z**

**RCRA NonGen / NLR**

**1026167806**  
**CAC003067851**

**Relative:**  
**Higher**  
**Actual:**  
**50 ft.**

RCRA Listings:

Date Form Received by Agency:	20200521
Handler Name:	Klaus Wirsing
Handler Address:	525 Glenview Ave. #1
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003067851
Contact Name:	KLAUS WIRSING
Contact Address:	525 GLENVIEW AVE. #1
Contact City,State,Zip:	OAKLAND, CA 94610
Contact Telephone:	510-717-0246
Contact Fax:	Not reported
Contact Email:	KLAUSWIRSING@YAHOO.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	525 GLENVIEW AVE. #1
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Klaus Wirsing
Owner Type:	Other
Operator Name:	Klaus Wirsing
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**KLAUS WIRSING (Continued)**

**1026167806**

Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20200608
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name: KLAUS WIRSING	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	525 GLENVIEW AVE. #1
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-717-0246
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name: KLAUS WIRSING	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	525 GLENVIEW AVE. #1
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-717-0246
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**KLAUS WIRSING (Continued)**

**1026167806**

Historic Generators:

Receive Date: 20200521  
Handler Name: KLAUS WIRSING  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Code: 531110  
NAICS Description: LESSORS OF RESIDENTIAL BUILDINGS AND DWELLINGS

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

AA138  
East  
1/8-1/4  
0.242 mi.  
1277 ft.

**LEXIA LITTLEJOHN**  
**525 MANDANA BLVD #212**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1024776536**  
**CAC002996471**

**Site 1 of 5 in cluster AA**

**Relative:**  
**Higher**  
**Actual:**  
**88 ft.**

RCRA Listings:

Date Form Received by Agency: 20190114  
Handler Name: Lexia Littlejohn  
Handler Address: 525 Mandana Blvd #212  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC002996471  
Contact Name: LEXIA LITTLEJOHN  
Contact Address: 206 AVE. G  
Contact City,State,Zip: KEY WEST, FL 33040  
Contact Telephone: 510-414-0213  
Contact Fax: Not reported  
Contact Email: ELIZABETH.GARCIA@SYNERGYCOMPANIES.ORG  
Contact Title: Not reported  
EPA Region: 09  
Land Type: Not reported  
Federal Waste Generator Description: Not a generator, verified  
Non-Notifier: Not reported  
Biennial Report Cycle: Not reported  
Accessibility: Not reported  
Active Site Indicator: Handler Activities  
State District Owner: Not reported  
State District: Not reported  
Mailing Address: 206 AVE. G  
Mailing City,State,Zip: KEY WEST, FL 33040  
Owner Name: Lexia Littlejohn

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**LEXIA LITTLEJOHN (Continued)**

**1024776536**

Owner Type:	Other
Operator Name:	Lexia Littlejohn
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20190222
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	LEXIA LITTLEJOHN
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	206 AVE. G
Owner/Operator City,State,Zip:	KEY WEST, FL 33040
Owner/Operator Telephone:	510-414-0213
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**LEXIA LITTLEJOHN (Continued)**

**1024776536**

Owner/Operator Indicator:	Owner
Owner/Operator Name:	LEXIA LITTLEJOHN
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	206 AVE. G
Owner/Operator City,State,Zip:	KEY WEST, FL 33040
Owner/Operator Telephone:	510-414-0213
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20190114
Handler Name:	LEXIA LITTLEJOHN
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
-------------	---------------------

Evaluation Action Summary:

Evaluations:	No Evaluations Found
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**AA139**  
**East**  
**1/8-1/4**  
**0.242 mi.**  
**1277 ft.**

**INDEPENDENT PLANNING**  
**525 MANDANA BLVD #309**  
**OAKLAND, CA 94610**  
**Site 2 of 5 in cluster AA**

**RCRA NonGen / NLR**

**1027527002**  
**CAC003219651**

**Relative:**  
**Higher**  
**Actual:**  
**88 ft.**

RCRA Listings:

Date Form Received by Agency:	20230224
Handler Name:	Independent Planning
Handler Address:	525 Mandana Blvd #309
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003219651
Contact Name:	INDEPENDENT PLANNING
Contact Address:	525 MANDANA BLVD #309
Contact City,State,Zip:	OAKLAND, CA 94610
Contact Telephone:	415-971-9820
Contact Fax:	Not reported
Contact Email:	JGONZALEZ@RMC.COM
Contact Title:	Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**INDEPENDENT PLANNING (Continued)**

**1027527002**

EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	525 MANDANA BLVD #309
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Independent Planning
Owner Type:	Other
Operator Name:	Independent Planning
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20230224
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**INDEPENDENT PLANNING (Continued)**

**1027527002**

Handler - Owner Operator:

Owner/Operator Indicator: Operator  
Owner/Operator Name: INDEPENDENT PLANNING  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 525 MANDANA BLVD #309  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 415-971-9820  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner  
Owner/Operator Name: INDEPENDENT PLANNING  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 525 MANDANA BLVD #309  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 415-971-9820  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20230224  
Handler Name: INDEPENDENT PLANNING  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found



Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SHANNON CARSON (Continued)**

**1027460295**

Human Exposure Controls Indicator: N/A  
Groundwater Controls Indicator: N/A  
Significant Non-Complier Universe: No  
Unaddressed Significant Non-Complier Universe: No  
Addressed Significant Non-Complier Universe: No  
Significant Non-Complier With a Compliance Schedule Universe: No  
Financial Assurance Required: Not reported  
Handler Date of Last Change: 20221012  
Recognized Trader-Importer: No  
Recognized Trader-Exporter: No  
Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Owner  
Owner/Operator Name: SHANNON CARSON  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 525 MANDANA BOULEVARD  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 404-931-3410  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator  
Owner/Operator Name: SHANNON CARSON  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 525 MANDANA BOULEVARD  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 404-931-3410  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20221010  
Handler Name: SHANNON CARSON  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**SHANNON CARSON (Continued)**

**1027460295**

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
 NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**AB141  
 SE  
 1/8-1/4  
 0.242 mi.  
 1280 ft.**

**THIAT "JOE" LIANG (DBA JOE'S S  
 3201 LAKESHORE AVE  
 OAKLAND, CA 94610  
 Site 1 of 4 in cluster AB**

**HIST UST U001599361  
 N/A**

**Relative:  
 Lower  
 Actual:  
 13 ft.**

HIST UST:  
 Name: THIAT "JOE" LIANG (DBA JOE'S S  
 Address: 3201 LAKESHORE AVE  
 City,State,Zip: OAKLAND, CA 94610  
 File Number: Not reported  
 URL: Not reported  
 Region: STATE  
 Facility ID: 00000005900  
 Facility Type: Gas Station  
 Other Type: Not reported  
 Contact Name: Not reported  
 Telephone: 4158364056  
 Owner Name: SHELL OIL COMPANY  
 Owner Address: P.O. BOX 4848  
 Owner City,St,Zip: ANAHEIM, CA 92803  
 Total Tanks: 0003

Tank Num: 001  
 Container Num: 1  
 Year Installed: 1974  
 Tank Capacity: 00010000  
 Tank Used for: PRODUCT  
 Type of Fuel: PREMIUM  
 Container Construction Thickness: 1/4  
 Leak Detection: Stock Inventor, 10

Tank Num: 002  
 Container Num: 2  
 Year Installed: 1974  
 Tank Capacity: 00010000  
 Tank Used for: PRODUCT  
 Type of Fuel: REGULAR  
 Container Construction Thickness: 1/4  
 Leak Detection: Stock Inventor, 10

Tank Num: 003  
 Container Num: 3  
 Year Installed: 1974  
 Tank Capacity: 00010000

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**THIAT "JOE" LIANG (DBA JOE'S S (Continued))**

**U001599361**

Tank Used for: PRODUCT  
Type of Fuel: UNLEADED  
Container Construction Thickness: 1/4  
Leak Detection: Stock Inventor, 10

**AB142  
SE  
1/8-1/4  
0.242 mi.  
1280 ft.**

**THIAT "JOE" LIANG (DBA JOE'S S  
3201 LAKESHORE AVE  
OAKLAND, CA 94610**

**SWEEPS UST  
HIST UST  
CA FID UST**

**S101624470  
N/A**

**Site 2 of 4 in cluster AB**

**Relative:  
Lower  
Actual:  
13 ft.**

**SWEEPS UST:**  
Name: THIAT "JOE" LIANG (DBA JOE'S S  
Address: 3201 LAKESHORE AVE  
City: OAKLAND  
Status: Not reported  
Comp Number: 5900  
Number: Not reported  
Board Of Equalization: 44-000078  
Referral Date: Not reported  
Action Date: Not reported  
Created Date: Not reported  
Owner Tank Id: Not reported  
SWRCB Tank Id: 01-000-005900-000001  
Tank Status: Not reported  
Capacity: 10000  
Active Date: Not reported  
Tank Use: M.V. FUEL  
STG: PRODUCT  
Content: REG UNLEADED  
Number Of Tanks: 3

Name: THIAT "JOE" LIANG (DBA JOE'S S  
Address: 3201 LAKESHORE AVE  
City: OAKLAND  
Status: Not reported  
Comp Number: 5900  
Number: Not reported  
Board Of Equalization: 44-000078  
Referral Date: Not reported  
Action Date: Not reported  
Created Date: Not reported  
Owner Tank Id: Not reported  
SWRCB Tank Id: 01-000-005900-000002  
Tank Status: Not reported  
Capacity: 10000  
Active Date: Not reported  
Tank Use: M.V. FUEL  
STG: PRODUCT  
Content: LEADED  
Number Of Tanks: Not reported

Name: THIAT "JOE" LIANG (DBA JOE'S S  
Address: 3201 LAKESHORE AVE  
City: OAKLAND  
Status: Not reported  
Comp Number: 5900  
Number: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**THIAT "JOE" LIANG (DBA JOE'S S (Continued))**

**S101624470**

Board Of Equalization: 44-000078  
Referral Date: Not reported  
Action Date: Not reported  
Created Date: Not reported  
Owner Tank Id: Not reported  
SWRCB Tank Id: 01-000-005900-000003  
Tank Status: Not reported  
Capacity: 10000  
Active Date: Not reported  
Tank Use: M.V. FUEL  
STG: PRODUCT  
Content: REG UNLEADED  
Number Of Tanks: Not reported

**HIST UST:**

Name: THIAT JOE LIANG (DBA JOES S  
Address: 3201 LAKESHORE AVE  
City,State,Zip: OAKLAND, CA 94610  
File Number: 00036325  
URL: <https://documents.geotracker.waterboards.ca.gov/ustpdfs/pdf/00036325.pdf>  
Region: Not reported  
Facility ID: Not reported  
Facility Type: Not reported  
Other Type: Not reported  
Contact Name: Not reported  
Telephone: Not reported  
Owner Name: Not reported  
Owner Address: Not reported  
Owner City,St,Zip: Not reported  
Total Tanks: Not reported  
  
Tank Num: Not reported  
Container Num: Not reported  
Year Installed: Not reported  
Tank Capacity: Not reported  
Tank Used for: Not reported  
Type of Fuel: Not reported  
Container Construction Thickness: Not reported  
Leak Detection: Not reported

Click here for Geo Tracker PDF:

**CA FID UST:**

Facility ID: 01002092  
Regulated By: UTKNI  
Regulated ID: 00005900  
Cortese Code: Not reported  
SIC Code: Not reported  
Facility Phone: 4158364056  
Mail To: Not reported  
Mailing Address: 3201 LAKESHORE AVE  
Mailing Address 2: Not reported  
Mailing City,St,Zip: OAKLAND 94610  
Contact: Not reported  
Contact Phone: Not reported  
DUNS Number: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**THIAT "JOE" LIANG (DBA JOE'S S (Continued))**

**S101624470**

NPDES Number: Not reported  
 EPA ID: Not reported  
 Comments: Not reported  
 Status: Inactive

**AC143**  
**SSW**  
**1/8-1/4**  
**0.243 mi.**  
**1285 ft.**

**FRANKLIN CHAN**  
**420 BURK STREET**  
**OAKLAND, CA 94610**

**RCRA NonGen / NLR**

**1027518494**  
**CAC003210550**

**Site 1 of 5 in cluster AC**

**Relative:**  
**Lower**  
**Actual:**  
**42 ft.**

RCRA Listings:	
Date Form Received by Agency:	20221230
Handler Name:	Franklin Chan
Handler Address:	420 Burk Street
Handler City,State,Zip:	OAKLAND, CA 94610
EPA ID:	CAC003210550
Contact Name:	FRANKLIN CHAN
Contact Address:	420 BURK STREET
Contact City,State,Zip:	OAKLAND, CA 94610
Contact Telephone:	510-761-4595
Contact Fax:	Not reported
Contact Email:	LILIAN.RAMOS@SYNERGYCOMPANIES.ORG
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	420 BURK STREET
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Franklin Chan
Owner Type:	Other
Operator Name:	Franklin Chan
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**FRANKLIN CHAN (Continued)**

**1027518494**

202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20230102
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name: FRANKLIN CHAN	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	420 BURK STREET
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-761-4595
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name: FRANKLIN CHAN	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	420 BURK STREET
Owner/Operator City,State,Zip:	OAKLAND, CA 94610
Owner/Operator Telephone:	510-761-4595
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20221230
Handler Name: FRANKLIN CHAN	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**FRANKLIN CHAN (Continued)**

**1027518494**

Spent Lead Acid Battery Importer: No  
 Spent Lead Acid Battery Exporter: No  
 Current Record: Yes  
 Non Storage Recycler Activity: No  
 Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
 NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

Z144  
 ESE  
 1/8-1/4  
 0.247 mi.  
 1303 ft.

**SAMMY GO**  
**546 GLENVIEW AVE**  
**OAKLAND, CA 94610**  
**Site 2 of 2 in cluster Z**

RCRA NonGen / NLR

**1026041155**  
**CAC003047280**

**Relative:**  
**Higher**  
**Actual:**  
**61 ft.**

RCRA Listings:  
 Date Form Received by Agency: 20191216  
 Handler Name: Sammy Go  
 Handler Address: 546 Glenview Ave  
 Handler City,State,Zip: OAKLAND, CA 94610-2214  
 EPA ID: CAC003047280  
 Contact Name: SAMMY GO  
 Contact Address: 546 GLENVIEW AVE  
 Contact City,State,Zip: OAKLAND, CA 94610-2214  
 Contact Telephone: 415-271-8162  
 Contact Fax: Not reported  
 Contact Email: LISAR@SYNERGYCOMPANIES.ORG  
 Contact Title: Not reported  
 EPA Region: 09  
 Land Type: Not reported  
 Federal Waste Generator Description: Not a generator, verified  
 Non-Notifier: Not reported  
 Biennial Report Cycle: Not reported  
 Accessibility: Not reported  
 Active Site Indicator: Not reported  
 State District Owner: Not reported  
 State District: Not reported  
 Mailing Address: 546 GLENVIEW AVE  
 Mailing City,State,Zip: OAKLAND, CA 94610-2214  
 Owner Name: Sammy Go  
 Owner Type: Other  
 Operator Name: Sammy Go  
 Operator Type: Other  
 Short-Term Generator Activity: No  
 Importer Activity: No  
 Mixed Waste Generator: No  
 Transporter Activity: No  
 Transfer Facility Activity: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**SAMMY GO (Continued)**

**1026041155**

Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20200210
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name: SAMMY GO	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	546 GLENVIEW AVE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610-2214
Owner/Operator Telephone:	415-271-8162
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name: SAMMY GO	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	546 GLENVIEW AVE
Owner/Operator City,State,Zip:	OAKLAND, CA 94610-2214

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SAMMY GO (Continued)**

**1026041155**

Owner/Operator Telephone: 415-271-8162  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20191216  
Handler Name: SAMMY GO  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

Y145  
NNW  
1/8-1/4  
0.248 mi.  
1311 ft.

**CINDY BUFFING**  
**492 CHETWOOD ST**  
**OAKLAND, CA 94610**  
**Site 2 of 2 in cluster Y**

RCRA NonGen / NLR

**1026050946**  
**CAC003057807**

**Relative:**  
**Higher**  
**Actual:**  
**117 ft.**

RCRA Listings:

Date Form Received by Agency: 20200227  
Handler Name: Cindy Buffing  
Handler Address: 492 Chetwood St  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003057807  
Contact Name: CINDY BUFFING  
Contact Address: 492 CHETWOOD ST  
Contact City,State,Zip: OAKLAND, CA 94610  
Contact Telephone: 415-272-3381  
Contact Fax: Not reported  
Contact Email: CINDY.BUFFING@GMAIL.COM  
Contact Title: Not reported  
EPA Region: 09  
Land Type: Not reported  
Federal Waste Generator Description: Not a generator, verified  
Non-Notifier: Not reported  
Biennial Report Cycle: Not reported  
Accessibility: Not reported  
Active Site Indicator: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**CINDY BUFFING (Continued)**

**1026050946**

State District Owner:	Not reported
State District:	Not reported
Mailing Address:	492 CHETWOOD ST
Mailing City, State, Zip:	OAKLAND, CA 94610
Owner Name:	Cindy Buffing
Owner Type:	Other
Operator Name:	Cindy Buffing
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20200306
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name: CINDY BUFFING	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	492 CHETWOOD ST

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CINDY BUFFING (Continued)**

**1026050946**

Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 415-272-3381  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner  
Owner/Operator Name: CINDY BUFFING  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 492 CHETWOOD ST  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 415-272-3381  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:  
Receive Date: 20200227  
Handler Name: CINDY BUFFING  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:  
NAICS Code: 56299  
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:  
Violations: No Violations Found

Evaluation Action Summary:  
Evaluations: No Evaluations Found

X146  
SW  
1/8-1/4  
0.249 mi.  
1313 ft.

**BLACK OAK PROPERTIES**  
**405 BELLEVUE AVE.**  
**OAKLAND, CA 94610**  
**Site 2 of 3 in cluster X**

**RCRA NonGen / NLR 1026799682**  
**CAC003111527**

**Relative:**  
**Lower**  
**Actual:**  
**41 ft.**

RCRA Listings:  
Date Form Received by Agency: 20210324  
Handler Name: Black Oak Properties  
Handler Address: 405 Bellevue Ave.  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003111527  
Contact Name: BLACK OAK PROPERTIES

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BLACK OAK PROPERTIES (Continued)**

**1026799682**

Contact Address:	405 BELLEVUE AVE. #401
Contact City,State,Zip:	OAKLAND, CA 94610
Contact Telephone:	510-329-1911
Contact Fax:	Not reported
Contact Email:	RENTALS@BLACKOAKPROPERTIES.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	405 BELLEVUE AVE. #401
Mailing City,State,Zip:	OAKLAND, CA 94610
Owner Name:	Black Oak Properties
Owner Type:	Other
Operator Name:	Black Oak Properties
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20210326
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BLACK OAK PROPERTIES (Continued)**

**1026799682**

Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: No  
Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Operator  
Owner/Operator Name: BLACK OAK PROPERTIES  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 405 BELLEVUE AVE. #401  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-329-1911  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner  
Owner/Operator Name: BLACK OAK PROPERTIES  
Legal Status: Other  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: 405 BELLEVUE AVE. #401  
Owner/Operator City,State,Zip: OAKLAND, CA 94610  
Owner/Operator Telephone: 510-329-1911  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 20210324  
Handler Name: BLACK OAK PROPERTIES  
Federal Waste Generator Description: Not a generator, verified  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: No  
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:

NAICS Code: 238290  
NAICS Description: OTHER BUILDING EQUIPMENT CONTRACTORS

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**X147**      **BLACK OAK PROPERTIES**      **RCRA NonGen / NLR**      **1024762116**  
**SW**      **405 BELLEVUE AVENUE**           **CAC002981978**  
**1/8-1/4**      **OAKLAND, CA 94610**

**0.249 mi.**  
**1313 ft.**      **Site 3 of 3 in cluster X**

**Relative:**  
**Lower**

**Actual:**  
**41 ft.**

RCRA Listings:	20180925
Date Form Received by Agency:	Black Oak Properties
Handler Name:	405 Bellevue Avenue
Handler Address:	OAKLAND, CA 94610
Handler City,State,Zip:	CAC002981978
EPA ID:	DELLA GUTIERREZ
Contact Name:	669 OAKLAND AVENUE
Contact Address:	OAKLAND, CA 94611
Contact City,State,Zip:	510-326-5482
Contact Telephone:	Not reported
Contact Fax:	RENTALS@BLACKOAKPROPERTIES.COM
Contact Email:	Not reported
Contact Title:	09
EPA Region:	Not reported
Land Type:	Not a generator, verified
Federal Waste Generator Description:	Not reported
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	669 OAKLAND AVENUE
Mailing City,State,Zip:	OAKLAND, CA 94611
Owner Name:	Mimi Johnson-Jacobs
Owner Type:	Other
Operator Name:	Della Gutierrez
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**BLACK OAK PROPERTIES (Continued)**

**1024762116**

Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20181001
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name: MIMI JOHNSON-JACOBS	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	669 OAKLAND AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94611
Owner/Operator Telephone:	510-601-7441
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name: DELLA GUTIERREZ	
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	669 OAKLAND AVENUE
Owner/Operator City,State,Zip:	OAKLAND, CA 94611
Owner/Operator Telephone:	510-326-5482
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20180925
Handler Name: BLACK OAK PROPERTIES	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**BLACK OAK PROPERTIES (Continued)**

**1024762116**

List of NAICS Codes and Descriptions:

NAICS Code: 531110  
 NAICS Description: LESSORS OF RESIDENTIAL BUILDINGS AND DWELLINGS

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**AB148**  
**SE**  
**1/4-1/2**  
**0.262 mi.**  
**1381 ft.**

**UNOCAL #5325**  
**3220 LAKESHORE AVE.**  
**OAKLAND, CA 94610**  
**Site 3 of 4 in cluster AB**

**UST FINDER RELEASE** **1029123955**  
**N/A**

**Relative:**  
**Lower**  
**Actual:**  
**14 ft.**

UST FINDER RELEASE:

Object ID: 41766  
 Facility ID: Not reported  
 LUST ID: CAT0600101463  
 Name: UNOCAL #5325  
 Address: 3220 LAKESHORE AVE.  
 City,State,Zip: OAKLAND, CA 94610  
 Address Match Type: StreetAddress  
 Reported Date: Not reported  
 Status: No Further Action  
 Substance: Not reported  
 Population within 1500ft: 3125  
 Domestic Wells within 1500ft: 0  
 Land Use: Developed, High Intensity  
 Within SPA: No  
 SPA PWS Facility ID: Not reported  
 SPA Water Type: Not reported  
 SPA Facility Type: Not reported  
 SPA HUC12: Not reported  
 Within WHPA: No  
 WHPA PWS Facility ID: Not reported  
 WHPA Water Type: Not reported  
 WHPA Facility Type: Not reported  
 WHPA HUC12: Not reported  
 Within 100yr Floodplain: No  
 Tribe: Not reported  
 EPA Region: 9  
 NFA Letter 1: Not reported  
 NFA Letter 2: Not reported  
 NFA Letter 3: Not reported  
 NFA Letter 4: Not reported  
 Closed With Residual Contaminate: Not reported  
 Coordinate Source: Geocode  
 X Coord: -122.24504  
 Y Coord: 37.8103300000001  
 Latitude: 37.81033  
 Longitude: -122.24504

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**AB149**  
**SE**  
**1/4-1/2**  
**0.262 mi.**  
**1381 ft.**  
  
**Relative:**  
**Lower**  
  
**Actual:**  
**14 ft.**

**UNOCAL #5325**  
**3220 LAKESHORE AVE.**  
**OAKLAND, CA 94610**  
  
**Site 4 of 4 in cluster AB**

**LUST** **S101580183**  
**Alameda County CS**  
**SWEEPS UST**  
**HIST UST**  
**CA FID UST**  
**Cortese**  
**HIST CORTESE**  
**CERS**  
  
**N/A**

**LUST:**  
 Name: UNOCAL #5325  
 Address: 3220 LAKESHORE AVE.  
 City,State,Zip: OAKLAND, CA 94610  
 Lead Agency: ALAMEDA COUNTY LOP  
 Case Type: LUST Cleanup Site  
 Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0600101463](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600101463)  
 Global Id: T0600101463  
 Latitude: 37.810044522  
 Longitude: -122.245263538  
 Status: Completed - Case Closed  
 Status Date: 11/17/2015  
 Case Worker: KEN  
 RB Case Number: 01-1588  
 Local Agency: ALAMEDA COUNTY LOP  
 File Location: All Files are on GeoTracker or in the Local Agency Database  
 Local Case Number: RO0000229  
 Potential Media Affect: Other Groundwater (uses other than drinking water)  
 Potential Contaminants of Concern: MTBE / TBA / Other Fuel Oxygenates, Gasoline  
 EPA Region: 9  
 Coordinate Source: \* Historical Geocode - Exact Address Match  
 Cuf Case: NO  
 Quantity Released Gallons: 0  
 Begin Date: 06/08/1990  
 Leak Reported Date: 06/08/1990  
 How Discovered: Site Assessment/Site Investigation  
 How Discovered Description: Not reported  
 Discharge Source: Not reported  
 Discharge Cause: Not reported  
 Stop Method: Close and Replace Tank  
 Stop Description: Not reported  
 No Further Action Date: 11/17/2015  
 CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
 Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
 Disadvantaged Community: Not reported  
 CA Enviroscreen 3 Score: 11-15%  
 CA Enviroscreen 4 Score: 5-10%  
 Military DOD Site: No  
 Facility Project Subtype: Not reported  
 RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
 Site History: The site is currently an active fueling station with three dispenser islands. Four tanks were removed in October 1985. Stained odiferous soil was noted. Free product was observed in well S-1. In May 1990, three soil borings were advanced adjacent to the UST complex. Soil samples indicated that TPHg was present in concentrations up to 7,500 mg/kg. In June 1990 two 10,000-gallon gasoline USTs, one waste-oil UST (variously reported having a capacity of 120-, 280-, and 550 gallons), were removed and replaced by 2 12,000-gal fuel and 1 550-gal waste oil tank. Piping and dispensers were also removed and replaced at the site. Petroleum hydrocarbons were detected in soil.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNOCAL #5325 (Continued)**

**S101580183**

Approximately 250 cu yds soil excavated and removed from site. Groundwater wells were subsequently installed on-site and petroleum hydrocarbons were detected in groundwater. Free product was observed in wells U-1 and U-2 in the late 1990s, and was last observed in March 1998. Free product skimmers operated in wells U-1 and U-2 in 1996 and 1997. The 550-gal waste oil tank removed and product piping was removed and replaced in November 1996. An additional 276 tons of soil was excavated and off-hauled at the time of the waste oil tank removal. A tank cavity well was installed on 6/24/1997 and one on 9/28/2000. A minimum of 36,700 gallons of contaminated groundwater was extracted via these wells and transported for off-site disposal. A 6-day DPE event was performed in April 1999. Ozone sparging pilot test was performed June through August 2006 with post test monitoring. Groundwater monitoring has been performed through May 2015.

LUST:

Global Id: T0600101463  
Contact Type: Local Agency Caseworker - Primary Caseworker  
Contact Name: KEITH NOWELL  
Organization Name: ALAMEDA COUNTY LOP  
Address: 1131 Harbor Bay Parkway  
City: ALAMEDA  
Email: keith.nowell@acgov.org  
Phone Number: 5105676764

Global Id: T0600101463  
Contact Type: Regional Board Caseworker  
Contact Name: Regional Water Board  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY ST SUITE 1400  
City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

LUST:

Global Id: T0600101463  
Action Type: ENFORCEMENT  
Date: 09/04/2012  
Action: Staff Letter - #20120904

Global Id: T0600101463  
Action Type: ENFORCEMENT  
Date: 06/14/2013  
Action: Staff Letter - #20130614

Global Id: T0600101463  
Action Type: ENFORCEMENT  
Date: 06/07/2012  
Action: File review

Global Id: T0600101463  
Action Type: ENFORCEMENT  
Date: 11/17/2015  
Action: Closure/No Further Action Letter - #20151117

Global Id: T0600101463

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNOCAL #5325 (Continued)**

**S101580183**

Action Type: Other  
Date: 05/01/1990  
Action: Leak Discovery

Global Id: T0600101463  
Action Type: RESPONSE  
Date: 09/04/1990  
Action: Tank Removal Report / UST Sampling Report

Global Id: T0600101463  
Action Type: RESPONSE  
Date: 06/19/1992  
Action: Monitoring Report - Quarterly

Global Id: T0600101463  
Action Type: ENFORCEMENT  
Date: 06/16/2015  
Action: Notification - Fee Title Owners Notice - #20150616

Global Id: T0600101463  
Action Type: ENFORCEMENT  
Date: 05/27/2015  
Action: Staff Letter - #20150527

Global Id: T0600101463  
Action Type: RESPONSE  
Date: 11/14/2013  
Action: Request for Closure - Regulator Responded

Global Id: T0600101463  
Action Type: RESPONSE  
Date: 01/03/2014  
Action: Correspondence - Regulator Responded

Global Id: T0600101463  
Action Type: RESPONSE  
Date: 06/11/2015  
Action: Other Report / Document - Regulator Responded

Global Id: T0600101463  
Action Type: REMEDIATION  
Date: 07/11/1990  
Action: Excavation

Global Id: T0600101463  
Action Type: REMEDIATION  
Date: 10/24/1985  
Action: Excavation

Global Id: T0600101463  
Action Type: REMEDIATION  
Date: 06/24/1997  
Action: Pump & Treat (P&T) Groundwater

Global Id: T0600101463  
Action Type: REMEDIATION  
Date: 04/05/1999

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNOCAL #5325 (Continued)**

**S101580183**

Action: Dual Phase Extraction

Global Id: T0600101463  
Action Type: REMEDIATION  
Date: 11/19/1996  
Action: Excavation

Global Id: T0600101463  
Action Type: REMEDIATION  
Date: 06/14/2006  
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0600101463  
Action Type: ENFORCEMENT  
Date: 12/24/2013  
Action: Staff Letter - #20131224

Global Id: T0600101463  
Action Type: ENFORCEMENT  
Date: 02/07/2014  
Action: Staff Letter - #20140207

Global Id: T0600101463  
Action Type: ENFORCEMENT  
Date: 01/03/2014  
Action: Technical Correspondence / Assistance / Other - #20140103

Global Id: T0600101463  
Action Type: ENFORCEMENT  
Date: 01/13/2014  
Action: Staff Letter - #20140113

Global Id: T0600101463  
Action Type: Other  
Date: 06/08/1990  
Action: Leak Reported

Global Id: T0600101463  
Action Type: RESPONSE  
Date: 10/26/1990  
Action: Tank Removal Report / UST Sampling Report

Global Id: T0600101463  
Action Type: RESPONSE  
Date: 12/19/1991  
Action: Monitoring Report - Quarterly

Global Id: T0600101463  
Action Type: RESPONSE  
Date: 07/16/1990  
Action: Unauthorized Release Form

Global Id: T0600101463  
Action Type: RESPONSE  
Date: 09/15/1995  
Action: Other Report / Document

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNOCAL #5325 (Continued)**

**S101580183**

Global Id: T0600101463  
Action Type: RESPONSE  
Date: 12/21/1990  
Action: Well Installation Report

Global Id: T0600101463  
Action Type: ENFORCEMENT  
Date: 07/24/2009  
Action: Staff Letter - #20090724

Global Id: T0600101463  
Action Type: ENFORCEMENT  
Date: 06/02/2011  
Action: Staff Letter - #20110602

Global Id: T0600101463  
Action Type: RESPONSE  
Date: 09/18/2015  
Action: Well Destruction Report

Global Id: T0600101463  
Action Type: ENFORCEMENT  
Date: 05/18/2015  
Action: Notice of Responsibility - #20150518

Global Id: T0600101463  
Action Type: ENFORCEMENT  
Date: 08/03/2015  
Action: Staff Letter - #20150803

Global Id: T0600101463  
Action Type: RESPONSE  
Date: 08/02/2011  
Action: Other Report / Document

Global Id: T0600101463  
Action Type: RESPONSE  
Date: 04/30/2013  
Action: Monitoring Report - Semi-Annually

Global Id: T0600101463  
Action Type: RESPONSE  
Date: 10/30/2013  
Action: Monitoring Report - Semi-Annually

Global Id: T0600101463  
Action Type: RESPONSE  
Date: 11/06/2012  
Action: Pilot Study / Treatability Workplan

Global Id: T0600101463  
Action Type: RESPONSE  
Date: 08/02/2013  
Action: Sensitive Receptor Survey Report

Global Id: T0600101463  
Action Type: RESPONSE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNOCAL #5325 (Continued)**

**S101580183**

Date: 10/30/2013  
Action: Monitoring Report - Semi-Annually

Global Id: T0600101463  
Action Type: RESPONSE  
Date: 04/30/2014  
Action: Monitoring Report - Semi-Annually

Global Id: T0600101463  
Action Type: RESPONSE  
Date: 02/28/2014  
Action: Conceptual Site Model

Global Id: T0600101463  
Action Type: RESPONSE  
Date: 06/09/2014  
Action: Correspondence

**LUST:**

Global Id: T0600101463  
Status: Open - Case Begin Date  
Status Date: 06/08/1990

Global Id: T0600101463  
Status: Open - Site Assessment  
Status Date: 08/31/1990

Global Id: T0600101463  
Status: Open - Site Assessment  
Status Date: 11/19/1990

Global Id: T0600101463  
Status: Open - Remediation  
Status Date: 06/14/2006

Global Id: T0600101463  
Status: Open - Verification Monitoring  
Status Date: 11/26/2007

Global Id: T0600101463  
Status: Completed - Case Closed  
Status Date: 11/17/2015

**LUST REG 2:**

Region: 2  
Facility Id: 01-1588  
Facility Status: Preliminary site assessment underway  
Case Number: 1059  
How Discovered: Tank Closure  
Leak Cause: Structure Failure  
Leak Source: Tank  
Date Leak Confirmed: Not reported  
Oversight Program: LUST  
Prelim. Site Assesment Wokplan Submitted: Not reported  
Preliminary Site Assesment Began: 9/24/1990

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNOCAL #5325 (Continued)**

**S101580183**

Pollution Characterization Began: Not reported  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

Alameda County CS:

Name: UNOCAL #5325  
Address: 3220 LAKESHORE AVE  
City,State,Zip: OAKLAND, CA 94610  
Status: Leak Confirmation  
Record Id: RO0000229  
PE: 5602  
Facility Status: Leak Confirmation  
Latitude: 37.81004764  
Longitude: -122.24576306

Name: UNOCAL #5325  
Address: 3220 LAKESHORE AVE  
City,State,Zip: OAKLAND, CA 94610  
Status: Pollution Characterization  
Record Id: RO0000229  
PE: 5602  
Facility Status: Pollution Charaterization  
Latitude: 37.81004764  
Longitude: -122.24576306

SWEEPS UST:

Name: UNOCAL SS #5325  
Address: 3220 LAKESHORE AVE  
City: OAKLAND  
Status: Active  
Comp Number: 8151  
Number: 1  
Board Of Equalization: 44-000051  
Referral Date: 11-17-92  
Action Date: 11-22-93  
Created Date: 02-29-88  
Owner Tank Id: 5325-RU-1  
SWRCB Tank Id: 01-000-008151-000001  
Tank Status: A  
Capacity: 12000  
Active Date: 11-17-92  
Tank Use: M.V. FUEL  
STG: P  
Content: REG UNLEADED  
Number Of Tanks: 3

Name: UNOCAL SS #5325  
Address: 3220 LAKESHORE AVE  
City: OAKLAND  
Status: Active  
Comp Number: 8151  
Number: 1  
Board Of Equalization: 44-000051  
Referral Date: 11-17-92  
Action Date: 11-22-93

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNOCAL #5325 (Continued)**

**S101580183**

Created Date: 02-29-88  
Owner Tank Id: 5325-SU-1  
SWRCB Tank Id: 01-000-008151-000002  
Tank Status: A  
Capacity: 12000  
Active Date: 11-17-92  
Tank Use: M.V. FUEL  
STG: P  
Content: PRM UNLEADED  
Number Of Tanks: Not reported

Name: UNOCAL SS #5325  
Address: 3220 LAKESHORE AVE  
City: OAKLAND  
Status: Active  
Comp Number: 8151  
Number: 1  
Board Of Equalization: 44-000051  
Referral Date: 11-17-92  
Action Date: 11-22-93  
Created Date: 02-29-88  
Owner Tank Id: 5325-WO-1  
SWRCB Tank Id: 01-000-008151-000003  
Tank Status: A  
Capacity: 500  
Active Date: 11-17-92  
Tank Use: OIL  
STG: W  
Content: WASTE OIL  
Number Of Tanks: Not reported

**HIST UST:**

Name: UNION OIL SS5325  
Address: 3220 LAKESHORE AVENUE  
City,State,Zip: OAKLAND, CA 94610  
File Number: 00036488  
URL: <https://documents.geotracker.waterboards.ca.gov/ustpdfs/pdf/00036488.pdf>  
Region: Not reported  
Facility ID: Not reported  
Facility Type: Not reported  
Other Type: Not reported  
Contact Name: Not reported  
Telephone: Not reported  
Owner Name: Not reported  
Owner Address: Not reported  
Owner City,St,Zip: Not reported  
Total Tanks: Not reported

Tank Num: Not reported  
Container Num: Not reported  
Year Installed: Not reported  
Tank Capacity: Not reported  
Tank Used for: Not reported  
Type of Fuel: Not reported  
Container Construction Thickness: Not reported  
Leak Detection: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNOCAL #5325 (Continued)**

**S101580183**

[Click here for Geo Tracker PDF:](#)

**CA FID UST:**

Facility ID: 01001695  
Regulated By: UTNKA  
Regulated ID: 00008151  
Cortese Code: Not reported  
SIC Code: Not reported  
Facility Phone: 4158931675  
Mail To: Not reported  
Mailing Address: P O BOX  
Mailing Address 2: Not reported  
Mailing City,St,Zip: OAKLAND 94610  
Contact: Not reported  
Contact Phone: Not reported  
DUNs Number: Not reported  
NPDES Number: Not reported  
EPA ID: Not reported  
Comments: Not reported  
Status: Active

**CORTESE:**

Name: UNOCAL #5325  
Address: 3220 LAKESHORE AVE.  
City,State,Zip: OAKLAND, CA 94610  
Region: CORTESE  
Envirostor Id: Not reported  
Global ID: T0600101463  
Site/Facility Type: LUST CLEANUP SITE  
Cleanup Status: COMPLETED - CASE CLOSED  
Status Date: Not reported  
Site Code: Not reported  
Latitude: Not reported  
Longitude: Not reported  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: active  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported  
File Name: Active Open

**HIST CORTESE:**

edr\_fname: UNOCAL  
edr\_fadd1: 3220 LAKESHORE  
City,State,Zip: OAKLAND, CA 94610  
Region: CORTESE  
Facility County Code: 1  
Reg By: LTNKA  
Reg Id: 01-1588

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNOCAL #5325 (Continued)**

**S101580183**

**CERS:**

Name: UNOCAL #5325  
Address: 3220 LAKESHORE AVE.  
City,State,Zip: OAKLAND, CA 94610  
Site ID: 770246  
CERS ID: T0600101463  
CERS Description: Leaking Underground Storage Tank Cleanup Site

**Affiliation:**

Affiliation Type Desc: Local Agency Caseworker  
Entity Name: KEITH NOWELL - ALAMEDA COUNTY LOP  
Entity Title: Not reported  
Affiliation Address: 1131 Harbor Bay Parkway  
Affiliation City: ALAMEDA  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: 5105676764,

Affiliation Type Desc: Regional Board Caseworker  
Entity Name: Regional Water Board - SAN FRANCISCO BAY RWQCB (REGION 2)  
Entity Title: Not reported  
Affiliation Address: 1515 CLAY ST SUITE 1400  
Affiliation City: OAKLAND  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: ,

**AD150  
SSE  
1/4-1/2  
0.267 mi.  
1412 ft.**

**CHEVRON #9-0121  
3026 LAKESHORE AVENUE  
OAKLAND, CA 94610**

**UST FINDER RELEASE 1028933201  
N/A**

**Site 1 of 5 in cluster AD**

**Relative:  
Lower  
Actual:  
15 ft.**

**UST FINDER RELEASE:**

Object ID: 41732  
Facility ID: Not reported  
Lust ID: CAT0600100328  
Name: CHEVRON #9-0121  
Address: 3026 LAKESHORE AVENUE  
City,State,Zip: OAKLAND, CA 94610  
Address Match Type: PointAddress  
Reported Date: Not reported  
Status: Open  
Substance: Not reported  
Population within 1500ft: 3180  
Domestic Wells within 1500ft: 0  
Land Use: Developed, High Intensity  
Within SPA: No  
SPA PWS Facility ID: Not reported  
SPA Water Type: Not reported  
SPA Facility Type: Not reported  
SPA HUC12: Not reported  
Within WHPA: No  
WHPA PWS Facility ID: Not reported  
WHPA Water Type: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**CHEVRON #9-0121 (Continued)**

**1028933201**

WHPA Facility Type: Not reported  
 WHPA HUC12: Not reported  
 Within 100yr Floodplain: No  
 Tribe: Not reported  
 EPA Region: 9  
 NFA Letter 1: Not reported  
 NFA Letter 2: Not reported  
 NFA Letter 3: Not reported  
 NFA Letter 4: Not reported  
 Closed With Residual Contaminate: Not reported  
 Coordinate Source: Geocode  
 X Coord: -122.24699  
 Y Coord: 37.8093700000001  
 Latitude: 37.80937  
 Longitude: -122.246989999999

**AD151  
 SSE  
 1/4-1/2  
 0.267 mi.  
 1412 ft.**

**FORMER CHEVRON SERVICE STATION NO. 90121 (NON-LUST  
 3026 LAKESHORE AVENUE  
 OAKLAND, CA 94610  
 Site 2 of 5 in cluster AD**

**CPS-SLIC S113176551  
 HWTS N/A  
 HAZNET  
 CERS**

**Relative:  
 Lower  
 Actual:  
 15 ft.**

**CPS-SLIC:**  
 Name: FORMER CHEVRON SERVICE STATION NO. 90121 (NON-LUST)  
 Address: 3026 LAKESHORE AVENUE  
 City,State,Zip: OAKLAND, CA 94610  
 Region: STATE  
**Facility Status: Open - Site Assessment**  
 Status Date: 07/31/2023  
 Global Id: T10000021260  
 Lead Agency: ALAMEDA COUNTY LOP  
 Lead Agency Case Number: RO0003590  
 Latitude: 37.80915  
 Longitude: -122.2468  
 Case Type: Cleanup Program Site  
 Case Worker: TF  
 Local Agency: ALAMEDA COUNTY LOP  
 RB Case Number: Not reported  
 File Location: Not reported  
 Potential Media Affected: Not reported  
 Potential Contaminants of Concern: Other Chlorinated Hydrocarbons  
 EPA Region: 9  
 Coordinate Source: Not reported  
 Cuf Case: NO  
 Quantity Released Gallons: Not reported  
 Begin Date: 07/31/2023  
 Leak Reported Date: Not reported  
 How Discovered: Not reported  
 How Discovered Description: Not reported  
 Discharge Source: Not reported  
 Discharge Cause: Not reported  
 Stop Method: Not reported  
 Stop Description: Not reported  
 No Further Action Date: Not reported  
 CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
 Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
 Disadvantaged Community: Not reported  
 CA Enviroscreen 3 Score: 41-45%

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**FORMER CHEVRON SERVICE STATION NO. 90121 (NON-LUST) (Continued)**

**S113176551**

CA Enviroscreen 4 Score: 40-45%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Not reported

[Click here to access the California GeoTracker records for this facility:](#)

**HWTS:**

Name: CHEVRON 90121  
Address: 3026 LAKESHORE AVE  
Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAR000116764  
Inactive Date: Not reported  
Create Date: 03/04/2003  
Last Act Date: Not reported  
Mailing Name: Not reported  
Mailing Address: PO BOX 6004  
Mailing Address 2: Not reported  
Mailing City,State,Zip: SAN RAMON, CA 948012106  
Owner Name: WALTRUST PROPERTIES INC  
Owner Address: PO BOX 6004  
Owner Address 2: Not reported  
Owner City,State,Zip: SAN RAMON, CA 945830000  
Owner Phone: Not reported  
Owner Fax: Not reported  
Contact Name: KWAME AWUKU  
Contact Address: 6001 BOLLINGER CANYON RD.  
Contact Address 2: Not reported  
City,State,Zip: SAN RAMON, CA 94583  
Contact Phone: Not reported  
Contact Fax: Not reported  
Facility Status: Active  
Facility Type: PERMANENT  
Category: FEDERAL  
Latitude: 37.80919  
Longitude: -122.24689

**NAICS:**

EPA ID: CAR000116764  
Create Date: 2011-08-17 14:36:26.000  
NAICS Code: 447110  
NAICS Description: Gasoline Stations with Convenience Stores  
Issued EPA ID Date: 2003-03-04 14:25:35.18700  
Inactive Date: Not reported  
Facility Name: CHEVRON 90121  
Facility Address: 3026 LAKESHORE AVE  
Facility Address 2: Not reported  
Facility City: OAKLAND  
Facility County: Not reported  
Facility State: CA  
Facility Zip: 946103615  
  
EPA ID: CAR000116764  
Create Date: 2009-12-03 12:41:18.000  
NAICS Code: 44719

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**FORMER CHEVRON SERVICE STATION NO. 90121 (NON-LUST) (Continued)**

**S113176551**

NAICS Description: Other Gasoline Stations  
Issued EPA ID Date: 2003-03-04 14:25:35.18700  
Inactive Date: Not reported  
Facility Name: CHEVRON 90121  
Facility Address: 3026 LAKESHORE AVE  
Facility Address 2: Not reported  
Facility City: OAKLAND  
Facility County: Not reported  
Facility State: CA  
Facility Zip: 946103615

**HAZNET:**

Name: CHEVRON STATION 90121  
Address: 3026 LAKESHORE AVE  
Address 2: Not reported  
City, State, Zip: OAKLAND, CA 946103615  
Contact: KATHY NORRIS-SLUSHER  
Telephone: 8773866044  
Mailing Name: Not reported  
Mailing Address: PO BOX 6004

Year: 2010  
Gepaid: CAR000116764  
TSD EPA ID: CAD097030993  
CA Waste Code: 512 - Other empty containers 30 gallons or more  
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)  
Tons: 16

Year: 2009  
Gepaid: CAR000116764  
TSD EPA ID: CAD982444481  
CA Waste Code: 352 - Other organic solids  
Disposal Method: H129 - Other Treatment  
Tons: 0.015

Year: 2009  
Gepaid: CAR000116764  
TSD EPA ID: CAD044429835  
CA Waste Code: 223 - Unspecified oil-containing waste  
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)  
Tons: 0.0325

Year: 2009  
Gepaid: CAR000116764  
TSD EPA ID: CAD044429835  
CA Waste Code: 343 - Unspecified organic liquid mixture  
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)  
Tons: 0.153

Year: 2009  
Gepaid: CAR000116764  
TSD EPA ID: CAD008302903  
CA Waste Code: 134 - Aqueous solution with total organic residues less than 10

Map ID  
Direction  
Distance  
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MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**FORMER CHEVRON SERVICE STATION NO. 90121 (NON-LUST) (Continued)**

**S113176551**

Disposal Method:	percent H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	2.1
Year:	2008
Gepaid:	CAR000116764
TSD EPA ID:	CAD982444481
CA Waste Code:	352 - Other organic solids
Disposal Method:	H129 - Other Treatment
Tons:	0.0375
Year:	2008
Gepaid:	CAR000116764
TSD EPA ID:	CAD044429835
CA Waste Code:	343 - Unspecified organic liquid mixture
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.102
Year:	2008
Gepaid:	CAR000116764
TSD EPA ID:	CAD044429835
CA Waste Code:	223 - Unspecified oil-containing waste
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.065
Year:	2008
Gepaid:	CAR000116764
TSD EPA ID:	CAD982444481
CA Waste Code:	134 - Aqueous solution with total organic residues less than 10 percent
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.924
Year:	2007
Gepaid:	CAR000116764
TSD EPA ID:	CAD008302903
CA Waste Code:	134 - Aqueous solution with total organic residues less than 10 percent
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.042

[Click this hyperlink](#) while viewing on your computer to access  
6 additional CA HAZNET: record(s) in the EDR Site Report.

Additional Info:

Year:	2010
Gen EPA ID:	CAR000116764
Shipment Date:	20100810
Creation Date:	10/8/2010 18:30:19
Receipt Date:	20100811

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**FORMER CHEVRON SERVICE STATION NO. 90121 (NON-LUST) (Continued)**

**S113176551**

Manifest ID:	004202881JJK
Trans EPA ID:	CAR000189431
Trans Name:	ADAMS SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES COR
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	512 - Other empty containers 30 gallons or more
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	3
Waste Quantity:	3
Quantity Unit:	T
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20100810
Creation Date:	10/8/2010 18:30:19
Receipt Date:	20100811
Manifest ID:	004202882JJK
Trans EPA ID:	CAD981425853
Trans Name:	HOYT TRANSPORTATION INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	512 - Other empty containers 30 gallons or more
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	3
Waste Quantity:	3
Quantity Unit:	T
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20100810
Creation Date:	11/3/2010 18:30:24
Receipt Date:	20100811
Manifest ID:	004202885JJK
Trans EPA ID:	CAR000189431
Trans Name:	ADAMS SERVICES INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES CORP

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**FORMER CHEVRON SERVICE STATION NO. 90121 (NON-LUST) (Continued)**

**S113176551**

TSDF Alt EPA ID: Not reported  
TSDF Alt Name: Not reported  
Waste Code Description: 512 - Other empty containers 30 gallons or more  
RCRA Code: Not reported  
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)  
Quantity Tons: 4  
Waste Quantity: 4  
Quantity Unit: T  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20100810  
Creation Date: 10/8/2010 18:30:19  
Receipt Date: 20100811  
Manifest ID: 004202884JJK  
Trans EPA ID: CAD981425853  
Trans Name: HOYT TRANSPORTATION INC  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDF EPA ID: CAD097030993  
Trans Name: SIEMENS WATER TECHNOLOGIES COR  
TSDF Alt EPA ID: Not reported  
TSDF Alt Name: Not reported  
Waste Code Description: 512 - Other empty containers 30 gallons or more  
RCRA Code: Not reported  
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

Quantity Tons: 3  
Waste Quantity: 3  
Quantity Unit: T  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20100810  
Creation Date: 10/8/2010 18:30:19  
Receipt Date: 20100811  
Manifest ID: 004202883JJK  
Trans EPA ID: CAD981425853  
Trans Name: HOYT TRANSPORTATION INC  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDF EPA ID: CAD097030993  
Trans Name: SIEMENS WATER TECHNOLOGIES CORP  
TSDF Alt EPA ID: Not reported  
TSDF Alt Name: Not reported  
Waste Code Description: 512 - Other empty containers 30 gallons or more  
RCRA Code: Not reported  
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)  
Quantity Tons: 3

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**FORMER CHEVRON SERVICE STATION NO. 90121 (NON-LUST) (Continued)**

**S113176551**

Waste Quantity: 3  
Quantity Unit: T  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Additional Info:

Year: 2009  
Gen EPA ID: CAR000116764

Shipment Date: 20090331  
Creation Date: 4/29/2009 18:30:21  
Receipt Date: 20090403  
Manifest ID: 004202509JJK  
Trans EPA ID: CAR000189431  
Trans Name: ADAMS SERVICES INC  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD008302903  
Trans Name: VEOLIA ES TECHNICAL SOLUTIONS  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 134 - Aqueous solution with <10% total organic residues  
RCRA Code: D018  
Meth Code: H039 - Other Recovery Of Reclamation For Reuse Including Acid  
Regeneration, Organics Recovery Ect

Quantity Tons: 2.1  
Waste Quantity: 500  
Quantity Unit: G  
Additional Code 1: D001  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20090327  
Creation Date: 6/5/2009 18:30:08  
Receipt Date: 20090409  
Manifest ID: 005049957JJK  
Trans EPA ID: CAR000172478  
Trans Name: ENVIRONMENTAL LOGISTICS INC  
Trans 2 EPA ID: MAD039322250  
Trans 2 Name: CLEAN HARBORS ENVIRONMENTAL SERVICES  
TSDf EPA ID: CAD044429835  
Trans Name: CLEAN HARBORS ENVIRONMENTAL SERVICES  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 223 - Unspecified oil-containing waste  
RCRA Code: D018  
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No  
Treatment/Reovery (H010-H129) Or (H131-H135)

Quantity Tons: 0.015  
Waste Quantity: 30  
Quantity Unit: P  
Additional Code 1: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**FORMER CHEVRON SERVICE STATION NO. 90121 (NON-LUST) (Continued)**

**S113176551**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20090327
Creation Date:	5/11/2009 18:30:30
Receipt Date:	20090401
Manifest ID:	005049962JJK
Trans EPA ID:	CAR000172478
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD982444481
Trans Name:	FILTER RECYCLING SERVICES INC
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H129 - Other Treatment
Quantity Tons:	0.015
Waste Quantity:	30
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20090327
Creation Date:	6/5/2009 18:30:08
Receipt Date:	20090409
Manifest ID:	005049957JJK
Trans EPA ID:	CAR000172478
Trans Name:	ENVIRONMENTAL LOGISTICS INC
Trans 2 EPA ID:	MAD039322250
Trans 2 Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES
TSDf EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS ENVIRONMENTAL SERVICES
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D018
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.051
Waste Quantity:	15
Quantity Unit:	G
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20090312
Creation Date:	6/4/2009 18:30:08
Receipt Date:	20090401

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**FORMER CHEVRON SERVICE STATION NO. 90121 (NON-LUST) (Continued)**

**S113176551**

Manifest ID: 005049615JJK  
Trans EPA ID: CAR000172478  
Trans Name: ENVIRONMENTAL LOGISTICS INC  
Trans 2 EPA ID: MAD039322250  
Trans 2 Name: CLEAN HARBORS ENVIRONMENTAL SERVICES  
TSDf EPA ID: CAD044429835  
Trans Name: CLEAN HARBORS ENVIRONMENTAL SERVICES  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: D018  
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)  
  
Quantity Tons: 0.102  
Waste Quantity: 30  
Quantity Unit: G  
Additional Code 1: D001  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20090312  
Creation Date: 6/4/2009 18:30:08  
Receipt Date: 20090401  
Manifest ID: 005049615JJK  
Trans EPA ID: CAR000172478  
Trans Name: ENVIRONMENTAL LOGISTICS INC  
Trans 2 EPA ID: MAD039322250  
Trans 2 Name: CLEAN HARBORS ENVIRONMENTAL SERVICES  
TSDf EPA ID: CAD044429835  
Trans Name: CLEAN HARBORS ENVIRONMENTAL SERVICES  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 223 - Unspecified oil-containing waste  
RCRA Code: D018  
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)  
  
Quantity Tons: 0.0175  
Waste Quantity: 35  
Quantity Unit: P  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Additional Info:  
Year: 2008  
Gen EPA ID: CAR000116764

Shipment Date: 20081017  
Creation Date: 1/15/2009 18:30:27  
Receipt Date: 20081024  
Manifest ID: 004849840JJK  
Trans EPA ID: CAR000172478  
Trans Name: ENVIRONMENTAL LOGISTICS INC

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**FORMER CHEVRON SERVICE STATION NO. 90121 (NON-LUST) (Continued)**

**S113176551**

Trans 2 EPA ID: MAD039322250  
Trans 2 Name: CLEAN HARBORS ENVIRONMENTAL SERVICES  
TSDf EPA ID: CAD044429835  
Trans Name: CLEAN HARBORS ENVIRONMENTAL SERVICES  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 223 - Unspecified oil-containing waste  
RCRA Code: D018  
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

Quantity Tons: 0.0175  
Waste Quantity: 35  
Quantity Unit: P  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20080614  
Creation Date: 8/8/2008 18:30:44  
Receipt Date: 20080623  
Manifest ID: 004250578JJK  
Trans EPA ID: CAR000172478  
Trans Name: ENVIRONMENTAL LOGISTICS INC  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD982444481  
Trans Name: FILTER RECYCLING SERVICES INC  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 352 - Other organic solids  
RCRA Code: Not reported  
Meth Code: H129 - Other Treatment  
Quantity Tons: 0.0375  
Waste Quantity: 75  
Quantity Unit: P  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20080612  
Creation Date: 5/28/2009 14:29:06  
Receipt Date: 20080703  
Manifest ID: 004250528JJK  
Trans EPA ID: CAR000172478  
Trans Name: ENVIRONMENTAL LOGISTICS INC  
Trans 2 EPA ID: MAD039322250  
Trans 2 Name: CLEAN HARBORS ENVIRONMENTAL SERVICES INC  
TSDf EPA ID: CAD044429835  
Trans Name: CLEAN HARBORS ENVIRONMENTAL SERVICES  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 223 - Unspecified oil-containing waste  
RCRA Code: D018

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**FORMER CHEVRON SERVICE STATION NO. 90121 (NON-LUST) (Continued)**

**S113176551**

Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)  
Quantity Tons: 0.0225  
Waste Quantity: 45  
Quantity Unit: P  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20080424  
Creation Date: 9/4/2008 18:30:30  
Receipt Date: 20080512  
Manifest ID: 001870970JJK  
Trans EPA ID: CAR000172478  
Trans Name: ENVIRONMENTAL LOGISTICS INC  
Trans 2 EPA ID: MAD039322250  
Trans 2 Name: CLEAN HARBORS ENVIRONMENTAL SERVICES  
TSDf EPA ID: CAD044429835  
Trans Name: CLEAN HARBORS ENVIRONMENTAL SERVICES  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: D018  
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

Quantity Tons: 0.102  
Waste Quantity: 30  
Quantity Unit: G  
Additional Code 1: D001  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20080424  
Creation Date: 9/4/2008 18:30:30  
Receipt Date: 20080512  
Manifest ID: 001870970JJK  
Trans EPA ID: CAR000172478  
Trans Name: ENVIRONMENTAL LOGISTICS INC  
Trans 2 EPA ID: MAD039322250  
Trans 2 Name: CLEAN HARBORS ENVIRONMENTAL SERVICES  
TSDf EPA ID: CAD044429835  
Trans Name: CLEAN HARBORS ENVIRONMENTAL SERVICES  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 223 - Unspecified oil-containing waste  
RCRA Code: D018  
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

Quantity Tons: 0.025  
Waste Quantity: 50  
Quantity Unit: P  
Additional Code 1: Not reported  
Additional Code 2: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**FORMER CHEVRON SERVICE STATION NO. 90121 (NON-LUST) (Continued)**

**S113176551**

Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20080220  
Creation Date: 4/22/2008 18:30:43  
Receipt Date: 20080223  
Manifest ID: 001870643JJK  
Trans EPA ID: CAR000172478  
Trans Name: ENVIRONMENTAL LOGISTICS INC  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD982444481  
Trans Name: FILTER RECYCLING SERVICES INC  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 134 - Aqueous solution with <10% total organic residues  
RCRA Code: Not reported  
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

Quantity Tons: 0.924  
Waste Quantity: 220  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Additional Info:  
Year: 2007  
Gen EPA ID: CAR000116764

Shipment Date: 20071022  
Creation Date: 1/25/2008 18:30:26  
Receipt Date: 20071025  
Manifest ID: 003318808JJK  
Trans EPA ID: CAR000162263  
Trans Name: CALIFORNIA HAZARDOUS SERVICES  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD008302903  
Trans Name: VEOLIA ENVIRONMENTAL SERVICES  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 134 - Aqueous solution with <10% total organic residues  
RCRA Code: D018  
Meth Code: H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect

Quantity Tons: 0.042  
Waste Quantity: 10  
Quantity Unit: G  
Additional Code 1: D001  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**FORMER CHEVRON SERVICE STATION NO. 90121 (NON-LUST) (Continued)**

**S113176551**

Shipment Date: 20070910  
Creation Date: 12/28/2007 18:30:32  
Receipt Date: 20070913  
Manifest ID: 001977087JJK  
Trans EPA ID: CAD982444481  
Trans Name: FILTER RECYCLING SERVICES INC  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD982444481  
Trans Name: FILTER RECYCLING SERVICES INC  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 352 - Other organic solids  
RCRA Code: Not reported  
Meth Code: H010 - Metals Recovery Including Retoring,Smelting,Chemicals,Ect  
Quantity Tons: 0.0175  
Waste Quantity: 35  
Quantity Unit: P  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20070731  
Creation Date: 1/8/2008 18:30:36  
Receipt Date: 20070807  
Manifest ID: 001869966JJK  
Trans EPA ID: CAD982444481  
Trans Name: FILTER RECYCLING SERVICES INC  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD982444481  
Trans Name: FILTER RECYCLING SERVICES INC  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 352 - Other organic solids  
RCRA Code: Not reported  
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)  
Quantity Tons: 0.05  
Waste Quantity: 100  
Quantity Unit: P  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Additional Info:  
Year: 2006  
Gen EPA ID: CAR000116764

Shipment Date: 20061122  
Creation Date: 3/30/2007 13:34:03  
Receipt Date: 20061122  
Manifest ID: 000880776JJK

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**FORMER CHEVRON SERVICE STATION NO. 90121 (NON-LUST) (Continued)**

**S113176551**

Trans EPA ID: CAR000162263  
Trans Name: CALIFORNIA HAZARDOUS SERVICES  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: ROMIC ENVIRONMENTAL TECH CORP  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 134 - Aqueous solution with <10% total organic residues  
RCRA Code: D018  
Meth Code: H081 - Biological Treatment With Or Without Precipitation  
Quantity Tons: 0.0168  
Waste Quantity: 4  
Quantity Unit: G  
Additional Code 1: D001  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Additional Info:

Year: 2005  
Gen EPA ID: CAR000116764

Shipment Date: 20051122  
Creation Date: 3/22/2006 18:30:36  
Receipt Date: 20051201  
Manifest ID: 24506777  
Trans EPA ID: CAR000129304  
Trans Name: FILTER RECYCLING SVS INC-NO  
Trans 2 EPA ID: CAD982444481  
Trans 2 Name: FILTER RECYCLING SERVICES INC  
TSDf EPA ID: CAD982444481  
Trans Name: FILTER RECYCLING SERVICES INC  
TSDf Alt EPA ID: CAD982444481  
TSDf Alt Name: Not reported  
Waste Code Description: 352 - Other organic solids  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0.02  
Waste Quantity: 40  
Quantity Unit: P  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20050207  
Creation Date: 6/3/2005 18:31:06  
Receipt Date: 20050208  
Manifest ID: 24143322  
Trans EPA ID: CAR000111146  
Trans Name: CALIFORNIA HAZARDOUS SERVICES  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**FORMER CHEVRON SERVICE STATION NO. 90121 (NON-LUST) (Continued)**

**S113176551**

Trans Name: ROMIC ENVIRONMENTAL TECH CORP  
TSDf Alt EPA ID: CAD009452657  
TSDf Alt Name: Not reported  
Waste Code Description: 134 - Aqueous solution with <10% total organic residues  
RCRA Code: D001  
Meth Code: R01 - Recycler  
Quantity Tons: 0.2142  
Waste Quantity: 51  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Additional Info:

Year: 2003  
Gen EPA ID: CAR000116764

Shipment Date: 20030603  
Creation Date: 6/22/2004 9:47:57  
Receipt Date: 20030606  
Manifest ID: 22265742  
Trans EPA ID: CAR000111146  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: CAD009452657  
TSDf Alt Name: Not reported  
Waste Code Description: 134 - Aqueous solution with <10% total organic residues  
RCRA Code: D001  
Meth Code: R01 - Recycler  
Quantity Tons: 0.1428  
Waste Quantity: 34  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

CERS:

Name: FORMER CHEVRON SERVICE STATION NO. 90121 (NON-LUST)  
Address: 3026 LAKESHORE AVENUE  
City,State,Zip: OAKLAND, CA 94610  
Site ID: 730968  
CERS ID: T10000021260  
CERS Description: Cleanup Program Site

Affiliation:

Affiliation Type Desc: Local Agency Caseworker  
Entity Name: TAMAMI FRENCH - ALAMEDA COUNTY LOP  
Entity Title: Not reported  
Affiliation Address: 1131 Harbor Bay Pkwy  
Affiliation City: ALAMEDA

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

FORMER CHEVRON SERVICE STATION NO. 90121 (NON-LUST) (Continued)

S113176551

Affiliation State: CA  
 Affiliation Country: Not reported  
 Affiliation Zip: Not reported  
 Affiliation Phone: 5106391370,

Affiliation Type Desc: Regional Board Caseworker  
 Entity Name: UUU - SAN FRANCISCO BAY RWQCB (REGION 2)  
 Entity Title: Not reported  
 Affiliation Address: 1515 CLAY ST SUITE 1400  
 Affiliation City: OAKLAND  
 Affiliation State: CA  
 Affiliation Country: Not reported  
 Affiliation Zip: Not reported  
 Affiliation Phone: ,

AD152 CHEVRON SERV STA #0121  
 SSE LAKESHORE & MCARTHUR  
 1/4-1/2 OAKLAND, CA 94610  
 0.267 mi.  
 1412 ft. Site 3 of 5 in cluster AD

Relative:  
 Lower

Actual:  
 15 ft.

LUST 1000434502  
 Alameda County CS CAT080031339  
 SWEEPS UST  
 HIST UST  
 CA FID UST  
 RCRA NonGen / NLR  
 Cortese  
 HIST CORTESE  
 CERS

LUST:

Name: CHEVRON #9-0121  
 Address: 3026 LAKESHORE AVENUE  
 City,State,Zip: OAKLAND, CA 94610  
 Lead Agency: ALAMEDA COUNTY LOP  
 Case Type: LUST Cleanup Site  
 Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0600100328](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600100328)  
 Global Id: T0600100328  
 Latitude: 37.8091906081871  
 Longitude: -122.246718406677  
 Status: Open - Site Assessment  
 Status Date: 08/10/2023  
 Case Worker: TF  
 RB Case Number: 01-0356  
 Local Agency: ALAMEDA COUNTY LOP  
 File Location: All Files are on GeoTracker or in the Local Agency Database  
 Local Case Number: RO0000284  
 Potential Media Affect: Indoor Air, Other Groundwater (uses other than drinking water), Soil, Soil Vapor, Surface water  
 Potential Contaminants of Concern: Benzene, Diesel, Gasoline, MTBE / TBA / Other Fuel Oxygenates, Naphthalene, Total Petroleum Hydrocarbons (TPH), Waste Oil / Motor / Hydraulic / Lubricating  
 EPA Region: 9  
 Coordinate Source: \* Historical Geocode - Exact Address Match  
 Cuf Case: YES  
 Quantity Released Gallons: 0  
 Begin Date: 04/25/1990  
 Leak Reported Date: 04/25/1990  
 How Discovered: Tank Closure  
 How Discovered Description: UST removal  
 Discharge Source: Other  
 Discharge Cause: Other

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON SERV STA #0121 (Continued)**

**1000434502**

Stop Method:	Close and Replace Tank
Stop Description:	UST infrastructure removal
No Further Action Date:	Not reported
CA Water Watershed Name:	South Bay - East Bay Cities (204.20)
Dwr Groundwater Subbasin Name:	Santa Clara Valley - East Bay Plain (2-009.04)
Disadvantaged Community:	Not reported
CA Enviroscreen 3 Score:	41-45%
CA Enviroscreen 4 Score:	40-45%
Military DOD Site:	No
Facility Project Subtype:	Not reported
RWQCB Region:	SAN FRANCISCO BAY RWQCB (REGION 2)
Site History:	<p>The site has been a service station since the 1950s. In 1967 a 2,000-gallon release was discovered, and the adjacent property owner complained about gasoline odors in their basement. In 1980 the adjacent owner again complained about odors, and the USTs were replaced; however, they were found to be tight, and it was assumed air conditioning may have drawn in the vapors. A sheet of plastic was placed between 0 and 14 to 16 feet deep onsite, as a barrier to minimize infiltration into the next door basement. In May 1981 free-product was discovered, a 24-inch extraction well was installed, but appears not to have been used. In 1984 station upgrades found two USTs in the sidewalk and they were abandoned in place with grout, and tenants next door again complained of odors. Sheen was not seen on groundwater in the basement sump at that time; however, a 1985 sample of the sump water contained gasoline-related aromatic compounds. In 1985 a stick hole in a gas UST was discovered, repaired, and the UST put back in service. In 1991 a drive-off event occurred and a small volume of product was lost. In 1991 all extant wells (except the 24-inch well), were destroyed due to damage from the 1984 upgrades, and onsite wells MW-1 to MW-4 were installed. Groundwater monitoring was initiated at that time. In July 1992 offsite wells MW-5 to MW-8 were installed. In April 1999 offsite well MW-9 was installed, and wells MW-2 to MW-4 were abandoned and replaced with MW-2A to MW-4A. Basement sump water was again sampled in 2005 and TPHD, TPHG, BTEX, and several oxygenates were detected; additional events were proposed but do not appear to have occurred. In August 2006 two soil bores were installed offsite in an attempt to define the extent in soil to the northwest of the site. In August 2010, four 10,000-gallon gasoline USTs were removed from the site and excavation and product line confirmation samples were collected, and documented soil contamination. In November 2013 seven soil bores were installed on- and offsite, to help define the extent of the soil and groundwater plume. Crawl space, sub-slab, and indoor air vapor samples were also collected at the adjacent downgradient properties, 3008 and 3014 Lakeshore Avenue. In September and October 2016 soil bores B-8 to B-13 were installed onsite, and well MW-10 was installed downgradient of the site. Additional wells and soil bores across Lakeshore could not be installed as planned due to extensive underground utility locations. Additional soil gas and indoor air sampling was conducted in March 2018 at the adjacent downgradient properties, and is planned again in 2019. ACDEH met with the property owner FWS Highland, LLC in 2022 and CEMC in a stakeholder meeting on January 6, 2023, and was informed that the property owner is currently planning to redevelop the Site with a mixed-use or residential building, rather than the previously proposed commercial site redevelopment of an outdoor restaurant area. The property owner's intent to redevelop the Site with a mixed-use or residential</p>

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
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**CHEVRON SERV STA #0121 (Continued)**

**1000434502**

building was confirmed in a letter sent to ACDEH on January 9, 2023 and uploaded to the Case file on GeoTracker. The schedule associated with the permit approval by the City of Oakland Building and Planning Department for a mixed use/residential building allows time for installation of the groundwater monitoring well network prior to excavation to support the extents of excavation presented in the Design Drawings, Former Chevron Service Station No. 90121, TPH Excavation Dated August 2022, and approved by ACDEH on September 16, 2022. The new monitoring well network will also inform the need for ISCO as a polishing step, and whether an ISCO pilot test will be required.

LUST:

Global Id: T0600100328  
Contact Type: Regional Board Caseworker  
Contact Name: Regional Water Board  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY ST SUITE 1400  
City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

Global Id: T0600100328  
Contact Type: Local Agency Caseworker - Primary Caseworker  
Contact Name: TAMAMI FRENCH  
Organization Name: ALAMEDA COUNTY LOP  
Address: 1131 Harbor Bay Pkwy  
City: ALAMEDA  
Email: tamami.french@acgov.org  
Phone Number: 5106391370

LUST:

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 08/04/2006  
Action: Staff Letter - #20060804

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 09/13/2013  
Action: Staff Letter - #20130913

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 04/04/2014  
Action: Staff Letter - #20140404

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 04/24/2014  
Action: Meeting - #20140424

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 03/13/2014  
Action: Meeting - #20140313

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON SERV STA #0121 (Continued)**

**1000434502**

Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	12/13/2017
Action:	Staff Letter
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	07/23/2018
Action:	Staff Letter
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	05/02/2018
Action:	Staff Letter
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	06/07/2017
Action:	Staff Letter
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	02/01/2018
Action:	Meeting
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	07/21/2020
Action:	Meeting - #20200721
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	05/27/2020
Action:	Meeting - #20200527
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	06/20/2019
Action:	Meeting
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	08/27/2020
Action:	Meeting - #20200827
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	05/02/2022
Action:	Meeting - #20220502
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	06/17/2022
Action:	Fact Sheets - Public Participation - #20220617
Global Id:	T0600100328
Action Type:	ENFORCEMENT

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON SERV STA #0121 (Continued)**

**1000434502**

Date: 06/17/2022  
Action: Staff Letter - #20220617

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 05/16/2011  
Action: Soil and Water Investigation Workplan

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 09/16/2011  
Action: Conceptual Site Model

Global Id: T0600100328  
Action Type: REMEDIATION  
Date: 01/01/1981  
Action: Excavation

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 07/24/2009  
Action: Staff Letter - #20090724

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 12/28/2011  
Action: Staff Letter - #20111228

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 10/23/2015  
Action: Staff Letter - #20151023

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 05/12/2016  
Action: Staff Letter - #20160512

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 07/25/2016  
Action: Staff Letter - #20160725

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 09/18/2018  
Action: Staff Letter

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 09/16/2022  
Action: Email Correspondence - #20220916

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 04/27/2021  
Action: Staff Letter - #20210427

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON SERV STA #0121 (Continued)**

**1000434502**

Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	06/11/2021
Action:	Email Correspondence - #20210611
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	04/14/2022
Action:	Email Correspondence - #20220414
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	05/28/2021
Action:	Staff Letter - #20210528
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	07/19/2022
Action:	Email Correspondence - #20220719
Global Id:	T0600100328
Action Type:	RESPONSE
Date:	08/24/2023
Action:	Other Report / Document
Global Id:	T0600100328
Action Type:	RESPONSE
Date:	06/25/2021
Action:	Soil and Water Investigation Report
Global Id:	T0600100328
Action Type:	RESPONSE
Date:	09/13/2023
Action:	Other Workplan
Global Id:	T0600100328
Action Type:	RESPONSE
Date:	10/15/2021
Action:	CAP/RAP - Final Remediation / Design Plan - Regulator Responded
Global Id:	T0600100328
Action Type:	RESPONSE
Date:	11/30/2012
Action:	Soil and Water Investigation Workplan - Addendum - Regulator Responded
Global Id:	T0600100328
Action Type:	RESPONSE
Date:	07/26/2013
Action:	Soil and Water Investigation Workplan - Addendum - Regulator Responded
Global Id:	T0600100328
Action Type:	RESPONSE
Date:	02/07/2014
Action:	Site Assessment Report - Regulator Responded
Global Id:	T0600100328
Action Type:	RESPONSE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON SERV STA #0121 (Continued)**

**1000434502**

Date: 10/16/2021  
Action: CAP/RAP - Final Remediation / Design Plan - Regulator Responded

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 02/06/2015  
Action: Soil and Water Investigation Workplan - Regulator Responded

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 06/15/2018  
Action: Interim Remedial Action Plan - Regulator Responded

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 11/30/2018  
Action: Corrective Action Plan / Remedial Action Plan - Regulator Responded

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 08/10/2020  
Action: Soil Vapor Intrusion Investigation Workplan - Regulator Responded

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 09/22/2017  
Action: Soil Vapor Intrusion Investigation Workplan - Regulator Responded

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 08/10/2020  
Action: Soil Vapor Intrusion Investigation Workplan - Regulator Responded

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 12/11/2020  
Action: Soil Vapor Intrusion Investigation Workplan - Regulator Responded

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 10/29/2018  
Action: Proposed Plan - Regulator Responded

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 10/29/2018  
Action: Soil Vapor Intrusion Investigation Workplan - Regulator Responded

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 05/20/2021  
Action: Soil and Water Investigation Workplan - Regulator Responded

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 03/12/2021  
Action: Site Investigation Workplan - Regulator Responded

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON SERV STA #0121 (Continued)**

**1000434502**

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 06/11/2021  
Action: Soil and Water Investigation Workplan - Regulator Responded

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 08/26/2022  
Action: Pilot Study / Treatability Workplan - Regulator Responded

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 06/10/2022  
Action: Soil and Water Investigation Workplan - Regulator Responded

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 07/20/2022  
Action: Well Destruction Workplan - Regulator Responded

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 01/28/2011  
Action: Staff Letter

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 01/06/2016  
Action: Staff Letter - #20160106

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 02/13/2019  
Action: Staff Letter

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 07/20/2018  
Action: Meeting

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 03/28/2018  
Action: Meeting

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 09/16/2020  
Action: Email Correspondence - #20200916

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 12/29/2020  
Action: Staff Letter - #20201229

Global Id: T0600100328  
Action Type: ENFORCEMENT

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON SERV STA #0121 (Continued)**

**1000434502**

Date: 01/06/2022  
Action: Meeting - #20220106

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 01/18/2023  
Action: Email Correspondence - #20230118

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 07/31/2023  
Action: Email Correspondence - #20230731

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 01/18/2023  
Action: Email Correspondence - #20230118

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 03/17/2023  
Action: Staff Letter - #20230317

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 02/10/2023  
Action: Meeting - #20230210

Global Id: T0600100328  
Action Type: Other  
Date: 04/25/1990  
Action: Leak Reported

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 08/10/2020  
Action: Other Report / Document

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 02/15/2019  
Action: Correspondence

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 05/30/2018  
Action: Site Assessment Report

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 01/04/2019  
Action: Risk Assessment Report

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 08/24/2020  
Action: Final Remedial Action Report / Corrective Action Report

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON SERV STA #0121 (Continued)**

**1000434502**

Global Id:	T0600100328
Action Type:	RESPONSE
Date:	03/02/2018
Action:	Monitoring Report - Quarterly
Global Id:	T0600100328
Action Type:	RESPONSE
Date:	07/20/2018
Action:	Correspondence
Global Id:	T0600100328
Action Type:	RESPONSE
Date:	12/09/2009
Action:	Site Assessment Report
Global Id:	T0600100328
Action Type:	RESPONSE
Date:	05/24/2019
Action:	Monitoring Report - Semi-Annually
Global Id:	T0600100328
Action Type:	RESPONSE
Date:	08/18/2017
Action:	Electronic Reporting Submittal Due
Global Id:	T0600100328
Action Type:	RESPONSE
Date:	01/12/2023
Action:	Email Correspondence
Global Id:	T0600100328
Action Type:	RESPONSE
Date:	08/03/2020
Action:	Email Correspondence
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	06/06/2011
Action:	Staff Letter - #20110606
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	04/25/2014
Action:	Technical Correspondence / Assistance / Other - #20140425
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	09/05/2018
Action:	Staff Letter - #20180905
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	12/21/2018
Action:	Staff Letter
Global Id:	T0600100328
Action Type:	ENFORCEMENT

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON SERV STA #0121 (Continued)**

**1000434502**

Date: 02/08/2019  
Action: Staff Letter

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 11/15/2017  
Action: Notice of Responsibility

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 09/16/2010  
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 11/17/2011  
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Global Id: T0600100328  
Action Type: ENFORCEMENT  
Date: 04/24/2023  
Action: Staff Letter - #20230424

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 10/29/2018  
Action: Remedial Progress Report

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 08/26/2020  
Action: Email Correspondence

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 04/30/2019  
Action: Soil Vapor Intrusion Investigation Report

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 11/30/2018  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 06/15/2018  
Action: CAP/RAP - Feasibility Study Report

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 12/29/2017  
Action: Correspondence

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 12/01/2017  
Action: Monitoring Report - Quarterly

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON SERV STA #0121 (Continued)**

**1000434502**

Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	07/01/2013
Action:	Staff Letter - #20130703
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	03/23/2015
Action:	Staff Letter - #20150323
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	07/18/2017
Action:	Staff Letter
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	08/28/2018
Action:	Other Report - #20180828
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	01/30/2019
Action:	Staff Letter
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	07/27/2018
Action:	Staff Letter
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	07/31/2020
Action:	Staff Letter - #20200731
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	05/11/2020
Action:	Meeting - #20200511
Global Id:	T0600100328
Action Type:	ENFORCEMENT
Date:	01/06/2023
Action:	Meeting - #20230106
Global Id:	T0600100328
Action Type:	RESPONSE
Date:	08/26/2011
Action:	Soil and Water Investigation Report
Global Id:	T0600100328
Action Type:	RESPONSE
Date:	07/30/2012
Action:	Correspondence
Global Id:	T0600100328
Action Type:	RESPONSE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON SERV STA #0121 (Continued)**

**1000434502**

Date: 07/31/1992  
Action: Soil and Water Investigation Report

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 10/04/1993  
Action: CAP/RAP - Feasibility Study Report

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 05/26/1999  
Action: Soil and Water Investigation Report

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 11/25/1991  
Action: Soil and Water Investigation Report

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 11/04/1996  
Action: Well Destruction Report

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 07/27/2007  
Action: Correspondence

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 10/18/1991  
Action: Soil and Water Investigation Report

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 12/06/2013  
Action: Other Report / Document

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 11/15/2013  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 04/25/2014  
Action: Other Report / Document

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 11/21/2014  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 12/07/2016  
Action: Site Assessment Report

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON SERV STA #0121 (Continued)**

**1000434502**

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 05/16/2014  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 05/22/2015  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100328  
Action Type: RESPONSE  
Date: 05/20/2015  
Action: Monitoring Report - Semi-Annually

**LUST:**

Global Id: T0600100328  
Status: Open - Case Begin Date  
Status Date: 04/25/1990

Global Id: T0600100328  
Status: Open - Site Assessment  
Status Date: 04/25/1990

Global Id: T0600100328  
Status: Open - Assessment & Interim Remedial Action  
Status Date: 08/10/2010

Global Id: T0600100328  
Status: Open - Verification Monitoring  
Status Date: 06/07/2017

Global Id: T0600100328  
Status: Open - Assessment & Interim Remedial Action  
Status Date: 05/12/2020

Global Id: T0600100328  
Status: Open - Site Assessment  
Status Date: 08/10/2023

**LUST REG 2:**

Region: 2  
Facility Id: 01-0356  
Facility Status: Preliminary site assessment underway  
Case Number: 3628  
How Discovered: Tank Closure  
Leak Cause: Structure Failure  
Leak Source: Tank  
Date Leak Confirmed: Not reported  
Oversight Program: LUST  
Prelim. Site Assessment Workplan Submitted: 5/11/1991  
Preliminary Site Assessment Began: 8/20/1991  
Pollution Characterization Began: Not reported  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON SERV STA #0121 (Continued)**

**1000434502**

Date Post Remedial Action Monitoring Began: Not reported

Alameda County CS:

Name: CHEVRON #9-0121  
Address: 3026 LAKESHORE AVE  
City,State,Zip: OAKLAND, CA 94610  
Status: Pollution Characterization  
Record Id: RO0000284  
PE: 5602  
Facility Status: Pollution Charaterization  
Latitude: 37.809058361  
Longitude: -122.2473737

SWEEPS UST:

Name: CHEVRON #90121  
Address: 3026 LAKESHORE AVE  
City: OAKLAND  
Status: Active  
Comp Number: 61724  
Number: 1  
Board Of Equalization: 44-031913  
Referral Date: 01-11-94  
Action Date: 05-10-94  
Created Date: 02-29-88  
Owner Tank Id: WC0000C  
SWRCB Tank Id: 01-000-061724-000001  
Tank Status: A  
Capacity: 10000  
Active Date: 12-23-92  
Tank Use: M.V. FUEL  
STG: P  
Content: PLUS UNLEADE  
Number Of Tanks: 4

Name: CHEVRON #90121  
Address: 3026 LAKESHORE AVE  
City: OAKLAND  
Status: Active  
Comp Number: 61724  
Number: 1  
Board Of Equalization: 44-031913  
Referral Date: 01-11-94  
Action Date: 05-10-94  
Created Date: 02-29-88  
Owner Tank Id: WC0000C  
SWRCB Tank Id: 01-000-061724-000002  
Tank Status: A  
Capacity: 10000  
Active Date: 12-23-92  
Tank Use: M.V. FUEL  
STG: P  
Content: REG UNLEADED  
Number Of Tanks: Not reported

Name: CHEVRON #90121  
Address: 3026 LAKESHORE AVE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON SERV STA #0121 (Continued)**

**1000434502**

City: OAKLAND  
Status: Active  
Comp Number: 61724  
Number: 1  
Board Of Equalization: 44-031913  
Referral Date: 01-11-94  
Action Date: 05-10-94  
Created Date: 02-29-88  
Owner Tank Id: WC0000C  
SWRCB Tank Id: 01-000-061724-000003  
Tank Status: A  
Capacity: 10000  
Active Date: 12-23-92  
Tank Use: M.V. FUEL  
STG: P  
Content: PRM UNLEADED  
Number Of Tanks: Not reported

Name: CHEVRON #90121  
Address: 3026 LAKESHORE AVE  
City: OAKLAND  
Status: Active  
Comp Number: 61724  
Number: 1  
Board Of Equalization: 44-031913  
Referral Date: 01-11-94  
Action Date: 05-10-94  
Created Date: 02-29-88  
Owner Tank Id: WC0000C  
SWRCB Tank Id: 01-000-061724-000004  
Tank Status: A  
Capacity: 10000  
Active Date: 12-23-92  
Tank Use: M.V. FUEL  
STG: P  
Content: DIESEL  
Number Of Tanks: Not reported

**HIST UST:**

Name: BETTS CHEVRON  
Address: 3500 LAKESHORE AVE  
City,State,Zip: OAKLAND, CA 94610  
File Number: 000360b7  
URL: <https://documents.geotracker.waterboards.ca.gov/ustpdfs/pdf/000360b7.pdf>  
Region: STATE  
Facility ID: 00000054295  
Facility Type: Gas Station  
Other Type: Not reported  
Contact Name: DONNA YEE  
Telephone: 4157639392  
Owner Name: KEN BETTS, INC.  
Owner Address: 770 WESLEY WAY  
Owner City,St,Zip: OAKLAND, CA 94610  
Total Tanks: 0001  
  
Tank Num: 001  
Container Num: 984-4

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON SERV STA #0121 (Continued)**

**1000434502**

Year Installed: 1984  
Tank Capacity: 00010000  
Tank Used for: PRODUCT  
Type of Fuel: DIESEL  
Container Construction Thickness: .36  
Leak Detection: None

[Click here for Geo Tracker PDF:](#)

**CA FID UST:**

Facility ID: 01000486  
Regulated By: UTNKA  
Regulated ID: CAT080031  
Cortese Code: Not reported  
SIC Code: Not reported  
Facility Phone: 5108393251  
Mail To: Not reported  
Mailing Address: PO BOX  
Mailing Address 2: Not reported  
Mailing City,St,Zip: OAKLAND 94610  
Contact: Not reported  
Contact Phone: Not reported  
DUNs Number: Not reported  
NPDES Number: Not reported  
EPA ID: Not reported  
Comments: Not reported  
Status: Active

**RCRA Listings:**

Date Form Received by Agency: 19810311  
Handler Name: Chevron Serv Sta #0121  
Handler Address: Lakeshore & Mcarthur  
Handler City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAT080031339  
Contact Name: ENVIRONMENTAL MANAGER  
Contact Address: LAKESHORE & MCARTHUR  
Contact City,State,Zip: OAKLAND, CA 94610  
Contact Telephone: 415-638-3434  
Contact Fax: Not reported  
Contact Email: Not reported  
Contact Title: Not reported  
EPA Region: 09  
Land Type: Other  
Federal Waste Generator Description: Not a generator, verified  
Non-Notifier: Not reported  
Biennial Report Cycle: Not reported  
Accessibility: Not reported  
Active Site Indicator: Not reported  
State District Owner: Ca  
State District: 2  
Mailing Address: PO BOX 2569  
Mailing City,State,Zip: OAKLAND, CA 94614  
Owner Name: Chevron Usa Inc  
Owner Type: Private  
Operator Name: Not Required  
Operator Type: Private

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**CHEVRON SERV STA #0121 (Continued)**

**1000434502**

Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20020627
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	No

**Handler - Owner Operator:**

Owner/Operator Indicator:	Owner
Owner/Operator Name: CHEVRON USA INC	
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	NOT REQUIRED
Owner/Operator City,State,Zip:	NOT REQUIRED, ME 99999
Owner/Operator Telephone:	415-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name: NOT REQUIRED	

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON SERV STA #0121 (Continued)**

**1000434502**

Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	NOT REQUIRED
Owner/Operator City,State,Zip:	NOT REQUIRED, ME 99999
Owner/Operator Telephone:	415-555-1212
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	19810311
Handler Name:	CHEVRON SERV STA #0121
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Ca
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Codes:	No NAICS Codes Found
--------------	----------------------

Facility Has Received Notices of Violations:

Violations:	No Violations Found
-------------	---------------------

Evaluation Action Summary:

Evaluations:	No Evaluations Found
--------------	----------------------

CORTESE:

Name:	CHEVRON #9-0121
Address:	3026 LAKESHORE AVENUE
City,State,Zip:	OAKLAND, CA 94610
Region:	CORTESE
Envirostor Id:	Not reported
Global ID:	T0600100328
Site/Facility Type:	LUST CLEANUP SITE
Cleanup Status:	OPEN - SITE ASSESSMENT
Status Date:	Not reported
Site Code:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	active
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON SERV STA #0121 (Continued)**

**1000434502**

WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported  
File Name: Active Open

**HIST CORTESE:**

edr\_fname: CHEVRON  
edr\_fadd1: 3026 LAKESHORE  
City,State,Zip: OAKLAND, CA 94610  
Region: CORTESE  
Facility County Code: 1  
Reg By: LTNKA  
Reg Id: 01-0356

**CERS:**

Name: CHEVRON #9-0121  
Address: 3026 LAKESHORE AVENUE  
City,State,Zip: OAKLAND, CA 94610  
Site ID: 719750  
CERS ID: T0600100328  
CERS Description: Leaking Underground Storage Tank Cleanup Site

**Affiliation:**

Affiliation Type Desc: Local Agency Caseworker  
Entity Name: TAMAMI FRENCH - ALAMEDA COUNTY LOP  
Entity Title: Not reported  
Affiliation Address: 1131 Harbor Bay Pkwy  
Affiliation City: ALAMEDA  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: 5106391370,

Affiliation Type Desc: Regional Board Caseworker  
Entity Name: Regional Water Board - SAN FRANCISCO BAY RWQCB (REGION 2)  
Entity Title: Not reported  
Affiliation Address: 1515 CLAY ST SUITE 1400  
Affiliation City: OAKLAND  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: ,

AA153  
East  
1/4-1/2  
0.277 mi.  
1464 ft.

**YORK STREET APARTMENTS**  
**800 YORK**  
**OAKLAND, CA 94610**  
**Site 4 of 5 in cluster AA**

**UST FINDER RELEASE 1029133579**  
**N/A**

**Relative:**  
**Higher**

**UST FINDER RELEASE:**

**Actual:**  
**83 ft.**

Object ID: 41793  
Facility ID: Not reported  
Lust ID: CAT0600101560  
Name: YORK STREET APARTMENTS  
Address: 800 YORK  
City,State,Zip: OAKLAND, CA 94610

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**YORK STREET APARTMENTS (Continued)**

**1029133579**

Address Match Type: PointAddress  
 Reported Date: Not reported  
 Status: No Further Action  
 Substance: Not reported  
 Population within 1500ft: 3319  
 Domestic Wells within 1500ft: 0  
 Land Use: Developed, Medium Intensity  
 Within SPA: No  
 SPA PWS Facility ID: Not reported  
 SPA Water Type: Not reported  
 SPA Facility Type: Not reported  
 SPA HUC12: Not reported  
 Within WHPA: No  
 WHPA PWS Facility ID: Not reported  
 WHPA Water Type: Not reported  
 WHPA Facility Type: Not reported  
 WHPA HUC12: Not reported  
 Within 100yr Floodplain: No  
 Tribe: Not reported  
 EPA Region: 9  
 NFA Letter 1: Not reported  
 NFA Letter 2: Not reported  
 NFA Letter 3: Not reported  
 NFA Letter 4: Not reported  
 Closed With Residual Contaminate: Not reported  
 Coordinate Source: Geocode  
 X Coord: -122.24368  
 Y Coord: 37.8128100000001  
 Latitude: 37.8128099999999  
 Longitude: -122.243679999999

**AA154**  
**East**  
**1/4-1/2**  
**0.277 mi.**  
**1464 ft.**

**YORK STREET APARTMENTS**  
**800 YORK**  
**OAKLAND, CA 94610**  
**Site 5 of 5 in cluster AA**

**LUST** **S102441441**  
**Alameda County CS** **N/A**  
**Cortese**  
**HIST CORTESE**  
**CERS**

**Relative:**  
**Higher**  
**Actual:**  
**83 ft.**

**LUST:**  
 Name: YORK STREET APARTMENTS  
 Address: 800 YORK  
 City,State,Zip: OAKLAND, CA 94610  
 Lead Agency: ALAMEDA COUNTY LOP  
 Case Type: LUST Cleanup Site  
 Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0600101560](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600101560)  
 Global Id: T0600101560  
 Latitude: 37.812717  
 Longitude: -122.243561  
 Status: Completed - Case Closed  
 Status Date: 12/03/1993  
 Case Worker: Not reported  
 RB Case Number: 01-1689  
 Local Agency: Not reported  
 File Location: All Files are on GeoTracker or in the Local Agency Database  
 Local Case Number: RO0000586  
 Potential Media Affect: Other Groundwater (uses other than drinking water)  
 Potential Contaminants of Concern: Diesel  
 EPA Region: 9  
 Coordinate Source: Google Map Move

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**YORK STREET APARTMENTS (Continued)**

**S102441441**

Cuf Case: YES  
Quantity Released Gallons: 0  
Begin Date: 07/29/1991  
Leak Reported Date: 07/29/1991  
How Discovered: Other Means  
How Discovered Description: Not reported  
Discharge Source: Not reported  
Discharge Cause: Not reported  
Stop Method: Other Means  
Stop Description: Not reported  
No Further Action Date: 12/03/1993  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Not reported  
CA Enviroscreen 3 Score: 6-10%  
CA Enviroscreen 4 Score: 15-20%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Not reported

LUST:

Global Id: T0600101560  
Contact Type: Regional Board Caseworker  
Contact Name: Regional Water Board  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY ST SUITE 1400  
City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

LUST:

Global Id: T0600101560  
Action Type: REMEDIATION  
Date: 09/09/9999  
Action: Excavation

Global Id: T0600101560  
Action Type: ENFORCEMENT  
Date: 12/04/1992  
Action: Closure/No Further Action Letter

Global Id: T0600101560  
Action Type: Other  
Date: 07/29/1991  
Action: Leak Reported

LUST:

Global Id: T0600101560  
Status: Open - Case Begin Date  
Status Date: 07/29/1991

Global Id: T0600101560  
Status: Completed - Case Closed  
Status Date: 12/03/1993

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**YORK STREET APARTMENTS (Continued)**

**S102441441**

LUST REG 2:

Region: 2  
Facility Id: 01-1689  
Facility Status: Case Closed  
Case Number: 3616  
How Discovered: Tank Closure  
Leak Cause: Structure Failure  
Leak Source: Tank  
Date Leak Confirmed: Not reported  
Oversight Program: LUST  
Prelim. Site Assessment Wokplan Submitted: Not reported  
Preliminary Site Assessment Began: 12/27/1991  
Pollution Characterization Began: Not reported  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

Alameda County CS:

Name: YORK STREET APARTMENTS  
Address: 800 YORK ST  
City,State,Zip: OAKLAND, CA 94610  
Status: Case Closed  
Record Id: RO0000586  
PE: 5602  
Facility Status: Case Closed  
Latitude: 37.812786701  
Longitude: -122.24399023

CORTESE:

Name: YORK STREET APARTMENTS  
Address: 800 YORK  
City,State,Zip: OAKLAND, CA 94610  
Region: CORTESE  
Envirostor Id: Not reported  
Global ID: T0600101560  
Site/Facility Type: LUST CLEANUP SITE  
Cleanup Status: COMPLETED - CASE CLOSED  
Status Date: Not reported  
Site Code: Not reported  
Latitude: Not reported  
Longitude: Not reported  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: active  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported  
File Name: Active Open

HIST CORTESE:

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**YORK STREET APARTMENTS (Continued)**

**S102441441**

edr\_fname: YORK STREET APARTMENTS  
edr\_fadd1: 800 YORK  
City,State,Zip: OAKLAND, CA 94602  
Region: CORTESE  
Facility County Code: 1  
Reg By: LTNKA  
Reg Id: 01-1689

**CERS:**

Name: YORK STREET APARTMENTS  
Address: 800 YORK  
City,State,Zip: OAKLAND, CA 94610  
Site ID: 774859  
CERS ID: T0600101560  
CERS Description: Leaking Underground Storage Tank Cleanup Site

**Affiliation:**

Affiliation Type Desc: Regional Board Caseworker  
Entity Name: Regional Water Board - SAN FRANCISCO BAY RWQCB (REGION 2)  
Entity Title: Not reported  
Affiliation Address: 1515 CLAY ST SUITE 1400  
Affiliation City: OAKLAND  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: ,

**AE155 BERG RESIDENCE**  
**ESE 3329 LAKESHORE**  
**1/4-1/2 OAKLAND, CA 94610**  
**0.288 mi.**  
**1522 ft. Site 1 of 2 in cluster AE**

**EMI S103953739**  
**HIST CORTESE N/A**

**Relative:**  
**Lower**  
**Actual:**  
**19 ft.**

**EMI:**  
Name: CHRISTOPHER'S CLEANERS  
Address: 3329 LAKESHORE AVE  
City,State,Zip: OAKLAND, CA 946070000  
Year: 1987  
County Code: 1  
Air Basin: SF  
Facility ID: 2768  
Air District Name: BA  
SIC Code: 7216  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 2  
Reactive Organic Gases Tons/Yr: 0  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0  
  
Name: CHRISTOPHER'S CLEANERS  
Address: 3329 LAKESHORE AVE  
City,State,Zip: OAKLAND, CA 946070000

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**BERG RESIDENCE (Continued)**

**S103953739**

Year: 1990  
 County Code: 1  
 Air Basin: SF  
 Facility ID: 2768  
 Air District Name: BA  
 SIC Code: 7216  
 Air District Name: BAY AREA AQMD  
 Community Health Air Pollution Info System: Not reported  
 Consolidated Emission Reporting Rule: Not reported  
 Total Organic Hydrocarbon Gases Tons/Yr: 2  
 Reactive Organic Gases Tons/Yr: 0  
 Carbon Monoxide Emissions Tons/Yr: 0  
 NOX - Oxides of Nitrogen Tons/Yr: 0  
 SOX - Oxides of Sulphur Tons/Yr: 0  
 Particulate Matter Tons/Yr: 0  
 Part. Matter 10 Micrometers and Smlr Tons/Yr: 0

**HIST CORTESE:**

edr\_fname: BERG RESIDENCE  
 edr\_fadd1: 3329 LAKESHORE  
 City,State,Zip: OAKLAND, CA 94610  
 Region: CORTESE  
 Facility County Code: 1  
 Reg By: LTNKA  
 Reg Id: 2768

**AC156 EXXON**  
**SSW 500 GRAND AVE**  
**1/4-1/2 OAKLAND, CA 94610**  
**0.293 mi.**  
**1549 ft. Site 2 of 5 in cluster AC**  
**Relative:**  
**Lower**  
**Actual:**  
**20 ft.**

**LUST S101580164**  
**CPS-SLIC N/A**  
**Alameda County CS**  
**SWEEPS UST**  
**CA FID UST**  
**Cortese**  
**HIST CORTESE**  
**CERS**

**LUST:**

Name: CHEVRON #21-1173 / EXXON #7-0237  
 Address: 500 GRAND AVE  
 City,State,Zip: OAKLAND, CA 94610  
 Lead Agency: ALAMEDA COUNTY LOP  
 Case Type: LUST Cleanup Site  
 Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0600101355](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600101355)  
 Global Id: T0600101355  
 Latitude: 37.8088536709682  
 Longitude: -122.251310348511  
 Status: Completed - Case Closed  
 Status Date: 09/21/2011  
 Case Worker: MD  
 RB Case Number: 01-1467  
 Local Agency: ALAMEDA COUNTY LOP  
 File Location: All Files are on GeoTracker or in the Local Agency Database  
 Local Case Number: RO0000391  
 Potential Media Affect: Other Groundwater (uses other than drinking water)  
 Potential Contaminants of Concern: Gasoline  
 EPA Region: 9  
 Coordinate Source: Manual Entry on Screens  
 Cuf Case: YES

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EXXON (Continued)**

**S101580164**

Quantity Released Gallons: 0  
Begin Date: 11/02/1988  
Leak Reported Date: 02/03/1989  
How Discovered: Subsurface Monitoring  
How Discovered Description: Not reported  
Discharge Source: Not reported  
Discharge Cause: Not reported  
Stop Method: Other Means  
Stop Description: Not reported  
No Further Action Date: 09/21/2011  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Not reported  
CA Enviroscreen 3 Score: 16-20%  
CA Enviroscreen 4 Score: 25-30%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: The site has been occupied by a service station since as early as 1946; however, the earliest date is unknown. The former USTs are reported to have been installed in the mid-1980 s. Wells MW-8A to MW-8D were installed in June 1988. In September 1988 a soil gas survey was conducted. In October 1988 soil bores B-1 to B-4 were installed. In March 1989 bore B-5 was installed, MW-8D was destroyed, and wells MW-8F and MW-8G were installed. In October 1989 bores B-8 to B-9 were installed. In January 1990 bores B-10 to B-12 and wells MW-8H to MW-8K were installed. Bores B-13 and B-14 are reported to have been installed in the second quarter 1990. The waste oil UST was removed in September 1990 and an overexcavation of the area was conducted in October 1990. In January 1991 a clay pipe previously used to convey waste oil to the waste oil UST was removed; the pipe was characterized as broken at the time of installation. In April 1992 three 10,000-gallon gasoline USTs, two dispenser islands, and piping were removed from the site, and UST pit was overexcavated. In May 1992 an overexcavation of the former dispenser area was conducted. In August 1992 wells MW-8A and MW-8E were decommissioned. In January 1993 the northern area of the site was excavated. In April 1993 wells MW-8A and MW-8C were decommissioned. In May 1993 wells MW-8K and MW-8L were installed. Between December 1996 and March 2000 ORC socks were installed and periodically replaced in wells MW-8F, MW-8G, and MW-8I. In November 2006 bores S-1 to S-3 were installed for a soil vapor investigation. In March 2008 soil vapor bores SV-4 to SV-8 were installed, but due to shallow groundwater, vapor samples could not be collected; grab groundwater samples were instead collected. Verification groundwater monitored was conducted in late 2009.

**LUST:**

Global Id: T0600101355  
Contact Type: Local Agency Caseworker - Primary Caseworker  
Contact Name: MARK DETTERMAN  
Organization Name: ALAMEDA COUNTY LOP  
Address: 1131 HARBOR BAY PARKWAY  
City: ALAMEDA  
Email: mark.detterman@acgov.org  
Phone Number: 5105676876

Global Id: T0600101355

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EXXON (Continued)**

**S101580164**

Contact Type: Regional Board Caseworker  
Contact Name: Regional Water Board  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY ST SUITE 1400  
City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

**LUST:**

Global Id: T0600101355  
Action Type: ENFORCEMENT  
Date: 05/13/2009  
Action: Staff Letter - #20090513

Global Id: T0600101355  
Action Type: ENFORCEMENT  
Date: 07/10/2009  
Action: Staff Letter - #20090710

Global Id: T0600101355  
Action Type: ENFORCEMENT  
Date: 07/24/2009  
Action: Staff Letter - #20090724

Global Id: T0600101355  
Action Type: Other  
Date: 07/20/1988  
Action: Leak Discovery

Global Id: T0600101355  
Action Type: Other  
Date: 02/03/1989  
Action: Leak Reported

Global Id: T0600101355  
Action Type: ENFORCEMENT  
Date: 09/30/2008  
Action: Staff Letter - #20080930

Global Id: T0600101355  
Action Type: ENFORCEMENT  
Date: 03/11/2011  
Action: Notification - Public Notice of Case Closure

Global Id: T0600101355  
Action Type: ENFORCEMENT  
Date: 04/27/2011  
Action: Staff Letter - #20110427

Global Id: T0600101355  
Action Type: ENFORCEMENT  
Date: 09/21/2011  
Action: Closure/No Further Action Letter - #20110921

Global Id: T0600101355  
Action Type: ENFORCEMENT  
Date: 01/26/2011

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EXXON (Continued)**

**S101580164**

Action: Clean Up Fund - Case Closure Review Summary Report (RSR)  
Global Id: T0600101355  
Action Type: RESPONSE  
Date: 09/16/2011  
Action: Well Destruction Report

**LUST:**

Global Id: T0600101355  
Status: Open - Case Begin Date  
Status Date: 11/02/1988

Global Id: T0600101355  
Status: Open - Site Assessment  
Status Date: 11/02/1988

Global Id: T0600101355  
Status: Open - Site Assessment  
Status Date: 06/24/1993

Global Id: T0600101355  
Status: Completed - Case Closed  
Status Date: 09/21/2011

**LUST REG 2:**

Region: 2  
Facility Id: 01-1467  
Facility Status: Pollution Characterization  
Case Number: 1109  
How Discovered: Tank Closure  
Leak Cause: Structure Failure  
Leak Source: Tank  
Date Leak Confirmed: Not reported  
Oversight Program: LUST  
Prelim. Site Assessment Workplan Submitted: Not reported  
Preliminary Site Assessment Began: 6/30/1988  
Pollution Characterization Began: 10/31/1988  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

**CPS-SLIC:**

Name: 500 GRAND REDEVELOPMENT  
Address: 500 GRAND AVENUE  
City,State,Zip: OAKLAND, CA 94611  
Region: STATE  
**Facility Status: Completed - Case Closed**  
Status Date: 09/20/2018  
Global Id: T10000007707  
Lead Agency: ALAMEDA COUNTY LOP  
Lead Agency Case Number: RO0003175  
Latitude: 37.8087925886184  
Longitude: -122.251368212814  
Case Type: Cleanup Program Site  
Case Worker: MD

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EXXON (Continued)**

**S101580164**

Local Agency: ALAMEDA COUNTY LOP  
RB Case Number: Not reported  
File Location: All Files are on GeoTracker or in the Local Agency Database  
Potential Media Affected: Under Investigation  
Potential Contaminants of Concern: Gasoline  
EPA Region: 9  
Coordinate Source: Google Map Move  
Cuf Case: NO  
Quantity Released Gallons: Not reported  
Begin Date: 05/01/1988  
Leak Reported Date: 02/03/1989  
How Discovered: Site Assessment/Site Investigation  
How Discovered Description: Site investigation  
Discharge Source: Tank  
Discharge Cause: Unknown  
Stop Method: Not reported  
Stop Description: TANK REMOVAL  
No Further Action Date: 09/20/2018  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Not reported  
CA Enviroscreen 3 Score: 16-20%  
CA Enviroscreen 4 Score: 25-30%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Former fuel leak case RO0000391 was closed for this site on September 21, 2011 with site management requirements. This case was opened in order to assess current conditions and proposed mixed use redevelopment of the site.

[Click here to access the California GeoTracker records for this facility:](#)

Alameda County CS:

Name: CHEVRON #21-1173 / EXXON #7-0237  
Address: 500 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610  
Status: Leak Confirmation  
Record Id: RO0000391  
PE: 5602  
Facility Status: Leak Confirmation  
Latitude: 37.808726521  
Longitude: -122.25163073

Name: CHEVRON #21-1173 / EXXON #7-0237  
Address: 500 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610  
Status: Pollution Characterization  
Record Id: RO0000391  
PE: 5602  
Facility Status: Pollution Charaterization  
Latitude: 37.808726521  
Longitude: -122.25163073

Name: CHEVRON #21-1173 / EXXON #7-0237  
Address: 500 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EXXON (Continued)**

**S101580164**

Status: Case Closed  
Record Id: RO0000391  
PE: 5602  
Facility Status: Case Closed  
Latitude: 37.808726521  
Longitude: -122.25163073

**SWEEPS UST:**

Name: TEXACO COMPANIES INC  
Address: 500 GRAND  
City: OAKLAND  
Status: Not reported  
Comp Number: 2545  
Number: Not reported  
Board Of Equalization: Not reported  
Referral Date: Not reported  
Action Date: Not reported  
Created Date: Not reported  
Owner Tank Id: Not reported  
SWRCB Tank Id: 01-000-002545-000003  
Tank Status: Not reported  
Capacity: 10000  
Active Date: Not reported  
Tank Use: M.V. FUEL  
STG: PRODUCT  
Content: REG UNLEADED  
Number Of Tanks: 2

Name: TEXACO COMPANIES INC  
Address: 500 GRAND  
City: OAKLAND  
Status: Not reported  
Comp Number: 2545  
Number: Not reported  
Board Of Equalization: Not reported  
Referral Date: Not reported  
Action Date: Not reported  
Created Date: Not reported  
Owner Tank Id: Not reported  
SWRCB Tank Id: 01-000-002545-000004  
Tank Status: Not reported  
Capacity: 550  
Active Date: Not reported  
Tank Use: EMPTY  
STG: WASTE  
Content: WASTE OIL  
Number Of Tanks: Not reported

Name: TEXACO COMPANIES INC  
Address: 500 GRAND  
City: OAKLAND  
Status: Active  
Comp Number: 2545  
Number: 1  
Board Of Equalization: Not reported  
Referral Date: 05-08-92  
Action Date: 05-08-92

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EXXON (Continued)**

**S101580164**

Created Date: 01-10-91  
Owner Tank Id: 351519  
SWRCB Tank Id: 01-000-002545-000001  
Tank Status: A  
Capacity: 10000  
Active Date: 05-08-92  
Tank Use: M.V. FUEL  
STG: P  
Content: REG UNLEADED  
Number Of Tanks: 2

Name: TEXACO COMPANIES INC  
Address: 500 GRAND  
City: OAKLAND  
Status: Active  
Comp Number: 2545  
Number: 1  
Board Of Equalization: Not reported  
Referral Date: 05-08-92  
Action Date: 05-08-92  
Created Date: 01-10-91  
Owner Tank Id: 2  
SWRCB Tank Id: 01-000-002545-000002  
Tank Status: A  
Capacity: 10000  
Active Date: 05-08-92  
Tank Use: M.V. FUEL  
STG: P  
Content: LEADED  
Number Of Tanks: Not reported

**CA FID UST:**

Facility ID: 01001585  
Regulated By: UTNKA  
Regulated ID: Not reported  
Cortese Code: Not reported  
SIC Code: Not reported  
Facility Phone: 4159995015  
Mail To: Not reported  
Mailing Address: 4550 DACOMA  
Mailing Address 2: Not reported  
Mailing City,St,Zip: OAKLAND 94612  
Contact: Not reported  
Contact Phone: Not reported  
DUNS Number: Not reported  
NPDES Number: Not reported  
EPA ID: Not reported  
Comments: Not reported  
Status: Active

**CORTESE:**

Name: CHEVRON #21-1173 / EXXON #7-0237  
Address: 500 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610  
Region: CORTESE  
Envirostor Id: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EXXON (Continued)**

**S101580164**

Global ID: T0600101355  
Site/Facility Type: LUST CLEANUP SITE  
Cleanup Status: COMPLETED - CASE CLOSED  
Status Date: Not reported  
Site Code: Not reported  
Latitude: Not reported  
Longitude: Not reported  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: active  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported  
File Name: Active Open

**HIST CORTESE:**

edr\_fname: EXXON  
edr\_fadd1: 500 GRAND  
City,State,Zip: OAKLAND, CA 91608  
Region: CORTESE  
Facility County Code: 1  
Reg By: LTNKA  
Reg Id: 01-1467

**CERS:**

Name: 500 GRAND REDEVELOPMENT  
Address: 500 GRAND AVENUE  
City,State,Zip: OAKLAND, CA 94611  
Site ID: 706744  
CERS ID: T10000007707  
CERS Description: Cleanup Program Site

**Affiliation:**

Affiliation Type Desc: Regional Board Caseworker  
Entity Name: Regional Water Board - SAN FRANCISCO BAY RWQCB (REGION 2)  
Entity Title: Not reported  
Affiliation Address: 1515 CLAY ST SUITE 1400  
Affiliation City: OAKLAND  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: ,

Affiliation Type Desc: Local Agency Caseworker  
Entity Name: MARK DETTERMAN - ALAMEDA COUNTY LOP  
Entity Title: Not reported  
Affiliation Address: 1131 HARBOR BAY PARKWAY  
Affiliation City: ALAMEDA  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: 5105676876,

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EXXON (Continued)**

**S101580164**

Name: CHEVRON #21-1173 / EXXON #7-0237  
Address: 500 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610  
Site ID: 719677  
CERS ID: T0600101355  
CERS Description: Leaking Underground Storage Tank Cleanup Site

**Affiliation:**

Affiliation Type Desc: Local Agency Caseworker  
Entity Name: MARK DETTERMAN - ALAMEDA COUNTY LOP  
Entity Title: Not reported  
Affiliation Address: 1131 HARBOR BAY PARKWAY  
Affiliation City: ALAMEDA  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: 5105676876,

Affiliation Type Desc: Regional Board Caseworker  
Entity Name: Regional Water Board - SAN FRANCISCO BAY RWQCB (REGION 2)  
Entity Title: Not reported  
Affiliation Address: 1515 CLAY ST SUITE 1400  
Affiliation City: OAKLAND  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: ,

**AC157**  
**SSW**  
**1/4-1/2**  
**0.293 mi.**  
**1549 ft.**

**SERVICE STATION**  
**500 GRAND AVENUE**  
**OAKLAND, CA 92626**  
**Site 3 of 5 in cluster AC**

**Notify 65** **S100178954**  
**N/A**

**Relative:**  
**Lower**  
**Actual:**  
**20 ft.**

**NOTIFY 65:**  
Name: SERVICE STATION  
Address: 500 GRAND AVENUE  
City,State,Zip: OAKLAND, CA 92626  
Date Reported: Not reported  
Staff Initials: Not reported  
Board File Number: Not reported  
Facility Type: Not reported  
Discharge Date: Not reported  
Issue Date: Not reported  
Incident Description: Not reported  
Global ID: Not reported  
Status: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

AC158  
SSW  
1/4-1/2  
0.293 mi.  
1549 ft.

**CHEVRON #21-1173 / EXXON #7-0237**  
**500 GRAND AVE**  
**OAKLAND, CA 94610**

**UST FINDER RELEASE**    **1028933133**  
**N/A**

**Site 4 of 5 in cluster AC**

**Relative:**  
**Lower**  
**Actual:**  
**20 ft.**

UST FINDER RELEASE:  
Object ID: 41641  
Facility ID: Not reported  
Lust ID: CAT0600101355  
Name: CHEVRON #21-1173 / EXXON #7-0237  
Address: 500 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610  
Address Match Type: PointAddress  
Reported Date: Not reported  
Status: No Further Action  
Substance: Not reported  
Population within 1500ft: 4079  
Domestic Wells within 1500ft: 0  
Land Use: Developed, Medium Intensity  
Within SPA: No  
SPA PWS Facility ID: Not reported  
SPA Water Type: Not reported  
SPA Facility Type: Not reported  
SPA HUC12: Not reported  
Within WHPA: No  
WHPA PWS Facility ID: Not reported  
WHPA Water Type: Not reported  
WHPA Facility Type: Not reported  
WHPA HUC12: Not reported  
Within 100yr Floodplain: No  
Tribe: Not reported  
EPA Region: 9  
NFA Letter 1: Not reported  
NFA Letter 2: Not reported  
NFA Letter 3: Not reported  
NFA Letter 4: Not reported  
Closed With Residual Contaminate: Not reported  
Coordinate Source: Geocode  
X Coord: -122.25131  
Y Coord: 37.8086000000001  
Latitude: 37.8085999999999  
Longitude: -122.25131

AC159  
SSW  
1/4-1/2  
0.293 mi.  
1549 ft.

**500 GRAND REDEVELOPMENT**  
**500 GRAND AVE**  
**OAKLAND, CA 94611**

**Alameda County CS**    **S117978973**  
**N/A**

**Site 5 of 5 in cluster AC**

**Relative:**  
**Lower**  
**Actual:**  
**20 ft.**

Alameda County CS:  
Name: 500 GRAND REDEVELOPMENT  
Address: 500 GRAND AVE  
City,State,Zip: OAKLAND, CA 94611-  
Status: Pollution Characterization  
Record Id: RO0003175  
PE: 5502  
Facility Status: Pollution Charaterization  
Latitude: Not reported  
Longitude: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s) EDR ID Number  
EPA ID Number

AE160  
ESE  
1/4-1/2  
0.293 mi.  
1549 ft.

**SHERMAN CLEANERS (FORMER)**  
**3321/3329 LAKESHORE AVENUE**  
**OAKLAND, CA**

**CPS-SLIC S106234885**  
**CERS N/A**

**Site 2 of 2 in cluster AE**

**Relative:**  
**Lower**  
**Actual:**  
**15 ft.**

SLIC REG 2:  
Region: 2  
Facility ID: 01S0518  
Facility Status: Case Closed  
Date Closed: Not reported  
Local Case #: Not reported  
How Discovered: PTR  
Leak Cause: Not reported  
Leak Source: Not reported  
Date Confirmed: Not reported  
Date Prelim Site Assmnt Workplan Submitted: Not reported  
Date Preliminary Site Assessment Began: Not reported  
Date Pollution Characterization Began: Not reported  
Date Remediation Plan Submitted: Not reported  
Date Remedial Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

**CPS-SLIC:**

Name: SHERMAN CLEANERS (FORMER)  
Address: 3321/3329 LAKESHORE AVENUE  
City,State,Zip: OAKLAND, CA  
Region: STATE  
**Facility Status: Completed - Case Closed**  
Status Date: 07/01/2002  
Global Id: SL18331751  
Lead Agency: SAN FRANCISCO BAY RWQCB (REGION 2)  
Lead Agency Case Number: Not reported  
Latitude: 37.8109663902629  
Longitude: -122.243690192699  
Case Type: Cleanup Program Site  
Case Worker: UUU  
Local Agency: Not reported  
RB Case Number: 01S0518  
File Location: Regional Board  
Potential Media Affected: Not reported  
Potential Contaminants of Concern: Not reported  
EPA Region: 9  
Coordinate Source: Manual Entry on Screens  
Cuf Case: NO  
Quantity Released Gallons: Not reported  
Begin Date: 06/01/1996  
Leak Reported Date: 01/02/1965  
How Discovered: \* PTR  
How Discovered Description: Not reported  
Discharge Source: Not reported  
Discharge Cause: Not reported  
Stop Method: Not reported  
Stop Description: Not reported  
No Further Action Date: 07/01/2002  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Not reported  
CA Enviroscreen 3 Score: 6-10%

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SHERMAN CLEANERS (FORMER) (Continued)**

**S106234885**

CA Enviroscreen 4 Score: 15-20%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Not reported

[Click here to access the California GeoTracker records for this facility:](#)

**CERS:**

Name: SHERMAN CLEANERS (FORMER)  
Address: 3321/3329 LAKESHORE AVENUE  
City,State,Zip: OAKLAND, CA  
Site ID: 762160  
CERS ID: SL18331751  
CERS Description: Cleanup Program Site

**Affiliation:**

Affiliation Type Desc: Regional Board Caseworker  
Entity Name: Regional Water Board - SAN FRANCISCO BAY RWQCB (REGION 2)  
Entity Title: Not reported  
Affiliation Address: 1515 CLAY ST SUITE 1400  
Affiliation City: OAKLAND  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: ,

**AF161**  
**SW**  
**1/4-1/2**  
**0.299 mi.**  
**1578 ft.**

**WILMOT PROPERTY**  
**433 BELLEVUE AVE**  
**OAKLAND, CA 94610**  
**Site 1 of 3 in cluster AF**

**LUST** **S128365588**  
**Cortese** **N/A**  
**HWTS**

**Relative:**  
**Lower**  
**Actual:**  
**27 ft.**

**LUST:**

Name: WILMOT PROPERTY  
Address: 433 BELLEVUE AVE  
City,State,Zip: OAKLAND, CA 94610  
Lead Agency: ALAMEDA COUNTY LOP  
Case Type: LUST Cleanup Site  
Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T10000018664](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000018664)  
Global Id: T10000018664  
Latitude: 37.80942  
Longitude: -122.25291  
Status: Completed - Case Closed  
Status Date: 11/09/2023  
Case Worker: EH  
RB Case Number: Not reported  
Local Agency: ALAMEDA COUNTY LOP  
File Location: Not reported  
Local Case Number: RO0003533  
Potential Media Affect: Other Groundwater (uses other than drinking water), Soil, Under Investigation  
Potential Contaminants of Concern: Heating Oil / Fuel Oil, Total Petroleum Hydrocarbons (TPH)  
EPA Region: 9  
Coordinate Source: Not reported  
Cuf Case: NO  
Quantity Released Gallons: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**WILMOT PROPERTY (Continued)**

**S128365588**

Begin Date: 03/16/2022  
Leak Reported Date: 03/24/2022  
How Discovered: Subsurface Monitoring  
How Discovered Description: Not reported  
Discharge Source: Tank  
Discharge Cause: Unknown  
Stop Method: Close and Fill Tank in Place  
Stop Description: Not reported  
No Further Action Date: 11/09/2023  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Not reported  
CA Enviroscreen 3 Score: 16-20%  
CA Enviroscreen 4 Score: 25-30%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Alameda County Department of Environmental Health (ACDEH) opened case number RO0003533 in 2022 to investigate impacts to environmental media from historical land use at or in the vicinity of the Site following closure-in-place of a 1,500-gallon heating oil underground storage tank. Site investigations were conducted from 2022 to 2023. The lateral extent of the TPH-d plume has been defined to below 1,000 g/L, which is below the odor/nuisance level of 5,000 g/L for non-drinking water. No TPH-g or benzene were detected in the groundwater samples at or above their respective laboratory method reporting limit. The concentrations of ethylbenzene, total xylenes, and chloroform were below their respective vapor intrusion ESLs and are likely not sourced from the heating oil UST. With the provision that the information provided to this agency is accurate and representative of actual Site conditions, ACDEH has determined that there is a low threat to human health and safety and the environment at and in the vicinity of the Site from residual subsurface contamination associated with former uses of the Site and the Site configuration at the time of closure of the Case.

LUST:

Global Id: T10000018664  
Contact Type: Local Agency Caseworker - Primary Caseworker  
Contact Name: EVA HEY  
Organization Name: ALAMEDA COUNTY LOP  
Address: 1131 Harbor Bay Parkway  
City: ALAMEDA  
Email: eva.hey@acgov.org  
Phone Number: 5105676791

Global Id: T10000018664  
Contact Type: Regional Board Caseworker  
Contact Name: UUU  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY ST SUITE 1400  
City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

LUST:

Global Id: T10000018664

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**WILMOT PROPERTY (Continued)**

**S128365588**

Action Type:	ENFORCEMENT
Date:	06/16/2022
Action:	Staff Letter - #20220616
Global Id:	T10000018664
Action Type:	ENFORCEMENT
Date:	01/17/2023
Action:	Email Correspondence - #20230117
Global Id:	T10000018664
Action Type:	Other
Date:	03/24/2022
Action:	Leak Reported
Global Id:	T10000018664
Action Type:	RESPONSE
Date:	03/28/2022
Action:	Other Report / Document
Global Id:	T10000018664
Action Type:	RESPONSE
Date:	06/15/2023
Action:	Other Report / Document
Global Id:	T10000018664
Action Type:	RESPONSE
Date:	09/01/2022
Action:	Other Report / Document
Global Id:	T10000018664
Action Type:	RESPONSE
Date:	08/15/2022
Action:	Other Report / Document
Global Id:	T10000018664
Action Type:	RESPONSE
Date:	03/28/2022
Action:	Unauthorized Release Form
Global Id:	T10000018664
Action Type:	RESPONSE
Date:	11/18/2022
Action:	Soil and Water Investigation Workplan - Regulator Responded
Global Id:	T10000018664
Action Type:	RESPONSE
Date:	09/01/2022
Action:	Soil and Water Investigation Workplan - Regulator Responded
Global Id:	T10000018664
Action Type:	RESPONSE
Date:	05/01/2023
Action:	Soil and Water Investigation Report - Regulator Responded
Global Id:	T10000018664
Action Type:	ENFORCEMENT
Date:	03/22/2022

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**WILMOT PROPERTY (Continued)**

**S128365588**

Action: Site Visit / Inspection / Sampling

Global Id: T10000018664  
Action Type: ENFORCEMENT  
Date: 10/07/2022  
Action: Staff Letter - #20221007

Global Id: T10000018664  
Action Type: ENFORCEMENT  
Date: 05/11/2023  
Action: Staff Letter - #20230511

Global Id: T10000018664  
Action Type: ENFORCEMENT  
Date: 05/11/2023  
Action: Notification - Public Notice of Case Closure - #20230511

Global Id: T10000018664  
Action Type: RESPONSE  
Date: 04/27/2022  
Action: Tank Removal Report / UST Sampling Report

Global Id: T10000018664  
Action Type: ENFORCEMENT  
Date: 11/09/2023  
Action: Closure Summary

Global Id: T10000018664  
Action Type: ENFORCEMENT  
Date: 11/09/2023  
Action: Closure/No Further Action Letter

Global Id: T10000018664  
Action Type: ENFORCEMENT  
Date: 10/27/2023  
Action: Notice of Responsibility - #20231027

Global Id: T10000018664  
Action Type: Other  
Date: 03/23/2022  
Action: Leak Stopped

Global Id: T10000018664  
Action Type: ENFORCEMENT  
Date: 09/30/2022  
Action: Staff Letter

Global Id: T10000018664  
Action Type: Other  
Date: 03/16/2022  
Action: Leak Discovery

LUST:  
Global Id: T10000018664  
Status: Open - Case Begin Date  
Status Date: 03/16/2022

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**WILMOT PROPERTY (Continued)**

**S128365588**

Global Id: T10000018664  
Status: Open - Site Assessment  
Status Date: 03/29/2022

Global Id: T10000018664  
Status: Open - Eligible for Closure  
Status Date: 05/11/2023

Global Id: T10000018664  
Status: Completed - Case Closed  
Status Date: 11/09/2023

**CORTESE:**

Name: WILMOT PROPERTY  
Address: 433 BELLEVUE AVE  
City,State,Zip: OAKLAND, CA 94610  
Region: CORTESE  
Envirostor Id: Not reported  
Global ID: T10000018664  
Site/Facility Type: LUST CLEANUP SITE  
Cleanup Status: COMPLETED - CASE CLOSED  
Status Date: Not reported  
Site Code: Not reported  
Latitude: Not reported  
Longitude: Not reported  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: active  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported  
File Name: Active Open

**HWTS:**

Name: JON WILMOT  
Address: 433 BELLEVUE AVENUE  
Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003154255  
Inactive Date: 03/26/2022  
Create Date: 12/25/2021  
Last Act Date: Not reported  
Mailing Name: Not reported  
Mailing Address: JON WILMOT  
Mailing Address 2: Not reported  
Mailing City,State,Zip: ORINDA, CA 94563  
Owner Name: ORINDA  
Owner Address: JON WILMOT  
Owner Address 2: Not reported  
Owner City,State,Zip: ORINDA, CA 94563

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**WILMOT PROPERTY (Continued)**

**S128365588**

Owner Phone: Not reported  
 Owner Fax: Not reported  
 Contact Name: JON WILMOT  
 Contact Address: 167 HALL DRIVE  
 Contact Address 2: Not reported  
 City,State,Zip: ORINDA, CA 94563  
 Contact Phone: Not reported  
 Contact Fax: Not reported  
 Facility Status: Inactive  
 Facility Type: TEMPORARY  
 Category: STATE  
 Latitude: 37.809417  
 Longitude: -122.25291898

**AD162**  
**SSE**  
**1/4-1/2**  
**0.316 mi.**  
**1670 ft.**

**OAKLAND CITY OF**  
**637 BEACON ST**  
**OAKLAND, CA 94610**  
**Site 4 of 5 in cluster AD**

**LUST**  
**Alameda County CS**  
**Cortese**  
**HIST CORTESE**  
**CERS**

**S101293670**  
**N/A**

**Relative:**  
**Lower**  
**Actual:**  
**46 ft.**

**LUST:**  
 Name: CITY OF OAKLAND  
 Address: 637 BEACON  
 City,State,Zip: OAKLAND, CA 94610  
 Lead Agency: ALAMEDA COUNTY LOP  
 Case Type: LUST Cleanup Site  
 Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0600100800](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600100800)  
 Global Id: T0600100800  
 Latitude: 37.808496  
 Longitude: -122.246451  
 Status: Completed - Case Closed  
 Status Date: 10/19/1999  
 Case Worker: Not reported  
 RB Case Number: 01-0866  
 Local Agency: Not reported  
 File Location: All Files are on GeoTracker or in the Local Agency Database  
 Local Case Number: RO0000777  
 Potential Media Affect: Soil  
 Potential Contaminants of Concern: Heating Oil / Fuel Oil  
 EPA Region: 9  
 Coordinate Source: Google Map Move  
 Cuf Case: NO  
 Quantity Released Gallons: 0  
 Begin Date: 12/06/1988  
 Leak Reported Date: 12/06/1988  
 How Discovered: Other Means  
 How Discovered Description: Not reported  
 Discharge Source: Not reported  
 Discharge Cause: Not reported  
 Stop Method: Other Means  
 Stop Description: Not reported  
 No Further Action Date: 10/19/1999  
 CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
 Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
 Disadvantaged Community: Not reported  
 CA Enviroscreen 3 Score: 46-50%  
 CA Enviroscreen 4 Score: 40-45%  
 Military DOD Site: No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**OAKLAND CITY OF (Continued)**

**S101293670**

Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Not reported

LUST:

Global Id: T0600100800  
Contact Type: Regional Board Caseworker  
Contact Name: Regional Water Board  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY ST SUITE 1400  
City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

LUST:

Global Id: T0600100800  
Action Type: REMEDIATION  
Date: 02/17/1989  
Action: Excavation

Global Id: T0600100800  
Action Type: Other  
Date: 12/06/1988  
Action: Leak Reported

LUST:

Global Id: T0600100800  
Status: Open - Case Begin Date  
Status Date: 12/06/1988

Global Id: T0600100800  
Status: Completed - Case Closed  
Status Date: 10/19/1999

LUST REG 2:

Region: 2  
Facility Id: 01-0866  
Facility Status: Case Closed  
Case Number: 3662  
How Discovered: OM  
Leak Cause: UNK  
Leak Source: Tank  
Date Leak Confirmed: Not reported  
Oversight Program: LUST  
Prelim. Site Assessment Workplan Submitted: 6/9/1989  
Preliminary Site Assessment Began: Not reported  
Pollution Characterization Began: Not reported  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

Alameda County CS:

Name: CITY OF OAKLAND  
Address: 637 BEACON ST  
City,State,Zip: OAKLAND, CA 94610

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**OAKLAND CITY OF (Continued)**

**S101293670**

Status: Case Closed  
Record Id: RO0000777  
PE: 5602  
Facility Status: Case Closed  
Latitude: 37.808398993  
Longitude: -122.24651899

**CORTESE:**

Name: CITY OF OAKLAND  
Address: 637 BEACON  
City,State,Zip: OAKLAND, CA 94610  
Region: CORTESE  
Envirostor Id: Not reported  
Global ID: T0600100800  
Site/Facility Type: LUST CLEANUP SITE  
Cleanup Status: COMPLETED - CASE CLOSED  
Status Date: Not reported  
Site Code: Not reported  
Latitude: Not reported  
Longitude: Not reported  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: active  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported  
File Name: Active Open

**HIST CORTESE:**

edr\_fname: OAKLAND CITY OF  
edr\_fadd1: 637 BEACON  
City,State,Zip: OAKLAND, CA 94612  
Region: CORTESE  
Facility County Code: 1  
Reg By: LTNKA  
Reg Id: 01-0866

**CERS:**

Name: CITY OF OAKLAND  
Address: 637 BEACON  
City,State,Zip: OAKLAND, CA 94610  
Site ID: 722313  
CERS ID: T0600100800  
CERS Description: Leaking Underground Storage Tank Cleanup Site

**Affiliation:**

Affiliation Type Desc: Regional Board Caseworker  
Entity Name: Regional Water Board - SAN FRANCISCO BAY RWQCB (REGION 2)  
Entity Title: Not reported  
Affiliation Address: 1515 CLAY ST SUITE 1400  
Affiliation City: OAKLAND

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**OAKLAND CITY OF (Continued)**

**S101293670**

Affiliation State: CA  
 Affiliation Country: Not reported  
 Affiliation Zip: Not reported  
 Affiliation Phone: ,

**AD163  
 SSE  
 1/4-1/2  
 0.316 mi.  
 1670 ft.**

**CITY OF OAKLAND  
 637 BEACON  
 OAKLAND, CA 94610**

**UST FINDER RELEASE 1028936998  
 N/A**

**Site 5 of 5 in cluster AD**

**Relative:  
 Lower**

**UST FINDER RELEASE:**

**Actual:  
 46 ft.**

Object ID: 41742  
 Facility ID: Not reported  
 Lust ID: CAT0600100800  
 Name: CITY OF OAKLAND  
 Address: 637 BEACON  
 City,State,Zip: OAKLAND, CA 94610  
 Address Match Type: PointAddress  
 Reported Date: Not reported  
 Status: No Further Action  
 Substance: Not reported  
 Population within 1500ft: 3013  
 Domestic Wells within 1500ft: 0  
 Land Use: Developed, Medium Intensity  
 Within SPA: No  
 SPA PWS Facility ID: Not reported  
 SPA Water Type: Not reported  
 SPA Facility Type: Not reported  
 SPA HUC12: Not reported  
 Within WHPA: No  
 WHPA PWS Facility ID: Not reported  
 WHPA Water Type: Not reported  
 WHPA Facility Type: Not reported  
 WHPA HUC12: Not reported  
 Within 100yr Floodplain: No  
 Tribe: Not reported  
 EPA Region: 9  
 NFA Letter 1: Not reported  
 NFA Letter 2: Not reported  
 NFA Letter 3: Not reported  
 NFA Letter 4: Not reported  
 Closed With Residual Contaminate: Not reported  
 Coordinate Source: Geocode  
 X Coord: -122.24634  
 Y Coord: 37.80834  
 Latitude: 37.80834  
 Longitude: -122.24634

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**AF164**      **CHEVRON #9-0006 / GULF #0006**  
**SW**        **460 GRAND**  
**1/4-1/2**    **OAKLAND, CA 94610**  
**0.332 mi.**  
**1753 ft.**    **Site 2 of 3 in cluster AF**

**LUST**      **S102431085**  
**CPS-SLIC**    **N/A**  
**Alameda County CS**  
**Cortese**  
**HIST CORTESE**  
**CERS**

**Relative:**  
**Lower**

**Actual:**  
**20 ft.**

LUST:

Name: CHEVRON #9-0006 / GULF #0006  
Address: 460 GRAND  
City,State,Zip: OAKLAND, CA 94610  
Lead Agency: ALAMEDA COUNTY LOP  
Case Type: LUST Cleanup Site  
Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0600100563](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600100563)  
Global Id: T0600100563  
Latitude: 37.808981  
Longitude: -122.252418  
Status: Completed - Case Closed  
Status Date: 12/03/1998  
Case Worker: Not reported  
RB Case Number: 01-0611  
Local Agency: Not reported  
File Location: All Files are on GeoTracker or in the Local Agency Database  
Local Case Number: RO0000839  
Potential Media Affect: Other Groundwater (uses other than drinking water)  
Potential Contaminants of Concern: Gasoline  
EPA Region: 9  
Coordinate Source: Google Geocode  
Cuf Case: YES  
Quantity Released Gallons: 0  
Begin Date: 11/30/1990  
Leak Reported Date: 11/30/1990  
How Discovered: Other Means  
How Discovered Description: Not reported  
Discharge Source: Not reported  
Discharge Cause: Not reported  
Stop Method: Other Means  
Stop Description: Not reported  
No Further Action Date: 12/03/1998  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Not reported  
CA Enviroscreen 3 Score: 16-20%  
CA Enviroscreen 4 Score: 25-30%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Not reported

LUST:

Global Id: T0600100563  
Contact Type: Regional Board Caseworker  
Contact Name: Regional Water Board  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY ST SUITE 1400  
City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON #9-0006 / GULF #0006 (Continued)**

**S102431085**

LUST:

Global Id: T0600100563  
Action Type: REMEDIATION  
Date: 01/03/1994  
Action: Excavation

Global Id: T0600100563  
Action Type: ENFORCEMENT  
Date: 10/11/2001  
Action: Staff Letter - #20011011

Global Id: T0600100563  
Action Type: Other  
Date: 11/30/1990  
Action: Leak Reported

Global Id: T0600100563  
Action Type: RESPONSE  
Date: 11/18/2003  
Action: Correspondence

LUST:

Global Id: T0600100563  
Status: Open - Case Begin Date  
Status Date: 11/30/1990

Global Id: T0600100563  
Status: Completed - Case Closed  
Status Date: 12/03/1998

LUST REG 2:

Region: 2  
Facility Id: 01-0611  
Facility Status: Case Closed  
Case Number: 3615  
How Discovered: Tank Closure  
Leak Cause: Structure Failure  
Leak Source: Tank  
Date Leak Confirmed: 1/3/1992  
Oversight Program: LUST  
Prelim. Site Assesment Wokplan Submitted: Not reported  
Preliminary Site Assesment Began: 1/15/1993  
Pollution Characterization Began: Not reported  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

CPS-SLIC:

Name: CHEVRON #9-0006 / GULF #0006  
Address: 460 GRAND  
City,State,Zip: OAKLAND, CA 94610  
Region: STATE  
**Facility Status: Completed - Case Closed**  
Status Date: 10/11/2001

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON #9-0006 / GULF #0006 (Continued)**

**S102431085**

Global Id: T06019779893  
Lead Agency: ALAMEDA COUNTY LOP  
Lead Agency Case Number: RO0002467  
Latitude: 37.8089808172691  
Longitude: -122.252452969551  
Case Type: Cleanup Program Site  
Case Worker: MD  
Local Agency: ALAMEDA COUNTY LOP  
RB Case Number: NA  
File Location: All Files are on GeoTracker or in the Local Agency Database  
Potential Media Affected: Other Groundwater (uses other than drinking water)  
Potential Contaminants of Concern: Benzene, Diesel, Gasoline  
EPA Region: 9  
Coordinate Source: Google Map Move  
Cuf Case: NO  
Quantity Released Gallons: Not reported  
Begin Date: 03/14/2001  
Leak Reported Date: 01/01/1965  
How Discovered: Other Means  
How Discovered Description: Not reported  
Discharge Source: Not reported  
Discharge Cause: Not reported  
Stop Method: Other Means  
Stop Description: Not reported  
No Further Action Date: 10/11/2001  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Not reported  
CA Enviroscreen 3 Score: 26-30%  
CA Enviroscreen 4 Score: 25-30%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Five USTs were removed from the site in 1991 and 1994. Contaminated soil was excavated and groundwater wells were installed. A case closure summary was issued by ACEH on November 19, 1996 with land use restrictions including a 15 foot set back from Grand Ave or the excavation of soil to 15 feet within the setback zone. Additional soil samples were collected in June 2001 to evaluate conditions within the setback zone. Following additional sampling and analysis in 2001, ACEH and RWQCB concurred with the recommendation that the site have unrestricted land use. ACEH issued a closure letter without restrictive land use conditions on October 11, 2001. Not all historic documents for the fuel leak case may be available on GeoTracker. A more complete historic case file for this site is located on the Alameda County Environmental Health website at: <http://ehgis.acgov.org/dehpublic/dehpublic.jsp>.

Click here to access the California GeoTracker records for this facility:

Alameda County CS:

Name: CHEVRON #9-0006 / GULF #0006  
Address: 460 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610  
Status: Case Closed  
Record Id: RO0000839  
PE: 5602

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON #9-0006 / GULF #0006 (Continued)**

**S102431085**

Facility Status: Case Closed  
Latitude: 37.808799117  
Longitude: -122.25249704

Name: CHEVRON #9-0006 / GULF #0006  
Address: 460 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610  
Status: Leak Confirmation  
Record Id: RO0002467  
PE: 5502  
Facility Status: Leak Confirmation  
Latitude: Not reported  
Longitude: Not reported

Name: CHEVRON #9-0006 / GULF #0006  
Address: 460 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610  
Status: Case Closed  
Record Id: RO0002467  
PE: 5502  
Facility Status: Case Closed  
Latitude: Not reported  
Longitude: Not reported

Name: 460 GRAND AVE  
Address: 460 GRAND AVE  
City,State,Zip: OAKLAND, CA 94018-  
Status: Leak Confirmation  
Record Id: RO0003222  
PE: 5602  
Facility Status: Leak Confirmation  
Latitude: Not reported  
Longitude: Not reported

**CORTESE:**

Name: CHEVRON #9-0006 / GULF #0006  
Address: 460 GRAND  
City,State,Zip: OAKLAND, CA 94610  
Region: CORTESE  
Envirostor Id: Not reported  
Global ID: T0600100563  
Site/Facility Type: LUST CLEANUP SITE  
Cleanup Status: COMPLETED - CASE CLOSED  
Status Date: Not reported  
Site Code: Not reported  
Latitude: Not reported  
Longitude: Not reported  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: active  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON #9-0006 / GULF #0006 (Continued)**

**S102431085**

Waste Management Unit Name: Not reported  
File Name: Active Open

HIST CORTESE:  
edr\_fname: SERVICE STATION  
edr\_fadd1: 460 GRAND  
City,State,Zip: OAKLAND, CA 94612  
Region: CORTESE  
Facility County Code: 1  
Reg By: LTNKA  
Reg Id: 01-0611

CERS:  
Name: CHEVRON #9-0006 / GULF #0006  
Address: 460 GRAND  
City,State,Zip: OAKLAND, CA 94610  
Site ID: 719727  
CERS ID: T0600100563  
CERS Description: Leaking Underground Storage Tank Cleanup Site

Coordinates:  
Site ID: 719727  
Facility Name: CHEVRON #9-0006 / GULF #0006  
Env Int Type Code: CPS  
Program ID: T06019779893  
Coord Name: Not reported  
Ref Point Type Desc: Unknown,  
Latitude: 37.808981  
Longitude: -122.252452

Affiliation:  
Affiliation Type Desc: Regional Board Caseworker  
Entity Name: Regional Water Board - SAN FRANCISCO BAY RWQCB (REGION 2)  
Entity Title: Not reported  
Affiliation Address: 1515 CLAY ST SUITE 1400  
Affiliation City: OAKLAND  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: ,

Affiliation Type Desc: Local Agency Caseworker  
Entity Name: MARK DETTERMAN - ALAMEDA COUNTY LOP  
Entity Title: Not reported  
Affiliation Address: 1131 HARBOR BAY PARKWAY  
Affiliation City: ALAMEDA  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: 5105676876,

Name: CHEVRON #9-0006 / GULF #0006  
Address: 460 GRAND  
City,State,Zip: OAKLAND, CA 94610  
Site ID: 719727

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON #9-0006 / GULF #0006 (Continued)**

**S102431085**

CERS ID: T06019779893  
CERS Description: Cleanup Program Site

Coordinates:  
Site ID: 719727  
Facility Name: CHEVRON #9-0006 / GULF #0006  
Env Int Type Code: CPS  
Program ID: T06019779893  
Coord Name: Not reported  
Ref Point Type Desc: Unknown,  
Latitude: 37.808981  
Longitude: -122.252452

Affiliation:  
Affiliation Type Desc: Regional Board Caseworker  
Entity Name: Regional Water Board - SAN FRANCISCO BAY RWQCB (REGION 2)  
Entity Title: Not reported  
Affiliation Address: 1515 CLAY ST SUITE 1400  
Affiliation City: OAKLAND  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: ,

Affiliation Type Desc: Local Agency Caseworker  
Entity Name: MARK DETTERMAN - ALAMEDA COUNTY LOP  
Entity Title: Not reported  
Affiliation Address: 1131 HARBOR BAY PARKWAY  
Affiliation City: ALAMEDA  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: 5105676876,

**AF165** **CHEVRON #9-0006 / GULF #0006**  
**SW** **460 GRAND**  
**1/4-1/2** **OAKLAND, CA 94610**  
**0.332 mi.**  
**1753 ft.** **Site 3 of 3 in cluster AF**

**UST FINDER RELEASE** **1028933180**  
**N/A**

**Relative:** UST FINDER RELEASE:  
**Lower** Object ID: 41592  
Facility ID: Not reported  
**Actual:** Lust ID: CAT0600100563  
**20 ft.** Name: CHEVRON #9-0006 / GULF #0006  
Address: 460 GRAND  
City,State,Zip: OAKLAND, CA 94610  
Address Match Type: PointAddress  
Reported Date: Not reported  
Status: No Further Action  
Substance: Not reported  
Population within 1500ft: 4069  
Domestic Wells within 1500ft: 0  
Land Use: Developed, High Intensity  
Within SPA: No  
SPA PWS Facility ID: Not reported  
SPA Water Type: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**CHEVRON #9-0006 / GULF #0006 (Continued)**

**1028933180**

SPA Facility Type: Not reported  
 SPA HUC12: Not reported  
 Within WHPA: No  
 WHPA PWS Facility ID: Not reported  
 WHPA Water Type: Not reported  
 WHPA Facility Type: Not reported  
 WHPA HUC12: Not reported  
 Within 100yr Floodplain: No  
 Tribe: Not reported  
 EPA Region: 9  
 NFA Letter 1: Not reported  
 NFA Letter 2: Not reported  
 NFA Letter 3: Not reported  
 NFA Letter 4: Not reported  
 Closed With Residual Contaminate: Not reported  
 Coordinate Source: Geocode  
 X Coord: -122.25246  
 Y Coord: 37.80866  
 Latitude: 37.80866  
 Longitude: -122.252459999999

**AG166  
 NNW  
 1/4-1/2  
 0.348 mi.  
 1836 ft.**

**POY-WING PROPERTY  
 240 MACARTHUR BLVD W  
 OAKLAND, CA 94611  
 Site 1 of 5 in cluster AG**

**LUST S103890680  
 Cortese N/A  
 HIST CORTESE  
 CERS**

**Relative:  
 Higher  
 Actual:  
 123 ft.**

**LUST:**  
 Name: FORMERLY DODSON LTD  
 Address: 240 MACARTHUR  
 City,State,Zip: OAKLAND, CA 94611  
 Lead Agency: ALAMEDA COUNTY LOP  
 Case Type: LUST Cleanup Site  
 Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0600102243](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600102243)  
 Global Id: T0600102243  
 Latitude: 37.8238932471611  
 Longitude: -122.256961424606  
 Status: Open - Verification Monitoring  
 Status Date: 06/30/2022  
 Case Worker: DY  
 RB Case Number: Not reported  
 Local Agency: ALAMEDA COUNTY LOP  
 File Location: All Files are on GeoTracker or in the Local Agency Database  
 Local Case Number: RO0000142  
 Potential Media Affect: Other Groundwater (uses other than drinking water), Soil Vapor  
 Potential Contaminants of Concern: Dichloroethene (DCE), Tetrachloroethylene (PCE), Trichloroethylene (TCE), Vinyl chloride, Lead, Benzene, Diesel, Ethylbenzene, Gasoline, MTBE / TBA / Other Fuel Oxygenates, Toluene, Xylene  
 EPA Region: 9  
 Coordinate Source: Google Map Move  
 Cuf Case: YES  
 Quantity Released Gallons: 0  
 Begin Date: 10/03/1996  
 Leak Reported Date: 01/03/1997  
 How Discovered: Other Means  
 How Discovered Description: site investigation  
 Discharge Source: Dispenser, Other, Piping, Tank  
 Discharge Cause: Unknown

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**POY-WING PROPERTY (Continued)**

**S103890680**

Stop Method: Close and Remove Tank, Other Means  
Stop Description: tank excavation  
No Further Action Date: Not reported  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Not reported  
CA Enviroscreen 3 Score: 6-10%  
CA Enviroscreen 4 Score: 10-15%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Three 10,000-gallon USTs were removed sometime prior to 1991; however, there is no documentation of the removals. A waste oil tank was removed in 1996. Subsurface investigations have been conducted between 1997 and 2019. The Site is being redeveloped in conjunction with the adjacent parcel. An SCP Case RO0003259 has been opened for the redevelopment of both parcels. Remediation and corrective action activities for this LUST case were performed in 2020 in conjunction with ACDEH-approved corrective actions being implemented during site redevelopment under SCP Case RO0003259. Corrective actions for petroleum hydrocarbons have included UST system removal, remedial soil excavation, groundwater remediation, and installation of vapor intrusion mitigation and migration engineering controls within the new building. Off-site groundwater monitoring wells were installed in March 2022 and the results indicate low residual concentrations of petroleum hydrocarbon constituents in groundwater. Elevated petroleum constituents remain in soil vapor at the site however the risk to occupants of the building are mitigated through the installation of the VIMMECs. Thus ACDEH has listed the case as eligible for closure conditioned upon a second two more quarterly groundwater events in June and September 2022 to confirm groundwater concentrations.

**LUST:**

Global Id: T0600102243  
Contact Type: Local Agency Caseworker - Primary Caseworker  
Contact Name: DREW YORK  
Organization Name: ALAMEDA COUNTY LOP  
Address: 1131 HARBOR BAY PARKWAY  
City: ALAMEDA  
Email: andrew.york@acgov.org  
Phone Number: Not reported

**LUST:**

Global Id: T0600102243  
Action Type: ENFORCEMENT  
Date: 03/21/2012  
Action: Referral to Regional Board - #20120321

Global Id: T0600102243  
Action Type: ENFORCEMENT  
Date: 02/27/2013  
Action: Staff Letter

Global Id: T0600102243  
Action Type: ENFORCEMENT  
Date: 11/27/2012  
Action: 13267 Requirement

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**POY-WING PROPERTY (Continued)**

**S103890680**

Global Id: T0600102243  
Action Type: ENFORCEMENT  
Date: 10/07/2013  
Action: Staff Letter

Global Id: T0600102243  
Action Type: ENFORCEMENT  
Date: 10/30/2014  
Action: Notification - Public Notice of ROD/RAP/CAP

Global Id: T0600102243  
Action Type: ENFORCEMENT  
Date: 09/24/2014  
Action: 13267 Requirement

Global Id: T0600102243  
Action Type: ENFORCEMENT  
Date: 08/26/2014  
Action: Site Visit / Inspection / Sampling

Global Id: T0600102243  
Action Type: ENFORCEMENT  
Date: 10/30/2007  
Action: Technical Correspondence / Assistance / Other

Global Id: T0600102243  
Action Type: ENFORCEMENT  
Date: 06/30/2022  
Action: Staff Letter - #20220630

Global Id: T0600102243  
Action Type: Other  
Date: 10/03/1996  
Action: Leak Discovery

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 05/21/2002  
Action: Monitoring Report - Quarterly

Global Id: T0600102243  
Action Type: REMEDIATION  
Date: 11/19/1996  
Action: Excavation

Global Id: T0600102243  
Action Type: ENFORCEMENT  
Date: 07/24/2009  
Action: Staff Letter - #20090724

Global Id: T0600102243  
Action Type: ENFORCEMENT  
Date: 01/09/2009  
Action: Technical Correspondence / Assistance / Other

Global Id: T0600102243  
Action Type: ENFORCEMENT

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**POY-WING PROPERTY (Continued)**

**S103890680**

Date: 05/10/2016  
Action: 13267 Requirement

Global Id: T0600102243  
Action Type: ENFORCEMENT  
Date: 10/30/2007  
Action: Site Visit / Inspection / Sampling

Global Id: T0600102243  
Action Type: Other  
Date: 01/01/1997  
Action: Leak Began

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 02/01/2012  
Action: Fact Sheets - Public Participation - Regulator Responded

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 02/01/2012  
Action: Corrective Action Plan / Remedial Action Plan - Regulator Responded

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 03/05/2013  
Action: Corrective Action Plan / Remedial Action Plan - Regulator Responded

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 06/30/2016  
Action: Soil Vapor Intrusion Investigation Workplan - Regulator Responded

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 10/12/2016  
Action: Soil Vapor Intrusion Investigation Report - Regulator Responded

Global Id: T0600102243  
Action Type: REMEDIATION  
Date: 05/31/2007  
Action: Soil Vapor Extraction (SVE)

Global Id: T0600102243  
Action Type: ENFORCEMENT  
Date: 07/01/2010  
Action: Staff Letter - #2010-07-01

Global Id: T0600102243  
Action Type: ENFORCEMENT  
Date: 11/30/2016  
Action: Staff Letter

Global Id: T0600102243  
Action Type: ENFORCEMENT  
Date: 09/15/2014  
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**POY-WING PROPERTY (Continued)**

**S103890680**

Global Id:	T0600102243
Action Type:	ENFORCEMENT
Date:	06/14/2017
Action:	Staff Letter
Global Id:	T0600102243
Action Type:	Other
Date:	01/03/1997
Action:	Leak Reported
Global Id:	T0600102243
Action Type:	RESPONSE
Date:	09/01/2010
Action:	Other Workplan
Global Id:	T0600102243
Action Type:	RESPONSE
Date:	10/17/2005
Action:	Monitoring Report - Quarterly
Global Id:	T0600102243
Action Type:	RESPONSE
Date:	04/24/2006
Action:	Monitoring Report - Quarterly
Global Id:	T0600102243
Action Type:	RESPONSE
Date:	02/08/2002
Action:	Monitoring Report - Quarterly
Global Id:	T0600102243
Action Type:	RESPONSE
Date:	06/22/2001
Action:	Monitoring Report - Quarterly
Global Id:	T0600102243
Action Type:	RESPONSE
Date:	01/12/2004
Action:	Monitoring Report - Other
Global Id:	T0600102243
Action Type:	RESPONSE
Date:	04/02/1998
Action:	Monitoring Report - Quarterly
Global Id:	T0600102243
Action Type:	RESPONSE
Date:	12/04/2002
Action:	Monitoring Report - Other
Global Id:	T0600102243
Action Type:	RESPONSE
Date:	09/11/2003
Action:	Monitoring Report - Other
Global Id:	T0600102243
Action Type:	RESPONSE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**POY-WING PROPERTY (Continued)**

**S103890680**

Date: 01/22/1999  
Action: Monitoring Report - Quarterly

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 01/05/1999  
Action: Monitoring Report - Quarterly

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 10/18/2005  
Action: Monitoring Report - Quarterly

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 11/06/2000  
Action: Other Workplan

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 03/06/2004  
Action: Other Workplan

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 08/02/1998  
Action: Monitoring Report - Quarterly

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 08/20/2002  
Action: Monitoring Report - Other

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 09/18/2001  
Action: Monitoring Report - Quarterly

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 07/12/2006  
Action: Monitoring Report - Quarterly

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 11/27/2006  
Action: Monitoring Report - Quarterly

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 04/15/1997  
Action: Other Workplan

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 12/21/1997  
Action: Monitoring Report - Quarterly

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**POY-WING PROPERTY (Continued)**

**S103890680**

Global Id:	T0600102243
Action Type:	ENFORCEMENT
Date:	10/07/2015
Action:	Site Visit / Inspection / Sampling
Global Id:	T0600102243
Action Type:	ENFORCEMENT
Date:	09/15/2010
Action:	Clean Up Fund - Case Closure Review Summary Report (RSR)
Global Id:	T0600102243
Action Type:	ENFORCEMENT
Date:	03/22/2010
Action:	Clean Up Fund - Case Closure Review Summary Report (RSR)
Global Id:	T0600102243
Action Type:	ENFORCEMENT
Date:	02/14/2008
Action:	Staff Letter
Global Id:	T0600102243
Action Type:	RESPONSE
Date:	04/02/2003
Action:	Monitoring Report - Other
Global Id:	T0600102243
Action Type:	RESPONSE
Date:	07/15/2004
Action:	Monitoring Report - Quarterly
Global Id:	T0600102243
Action Type:	RESPONSE
Date:	06/29/1998
Action:	Other Report / Document
Global Id:	T0600102243
Action Type:	RESPONSE
Date:	02/05/2002
Action:	Monitoring Report - Quarterly
Global Id:	T0600102243
Action Type:	RESPONSE
Date:	02/09/2001
Action:	Monitoring Report - Quarterly
Global Id:	T0600102243
Action Type:	RESPONSE
Date:	01/03/1997
Action:	Tank Removal Report / UST Sampling Report
Global Id:	T0600102243
Action Type:	RESPONSE
Date:	06/01/1997
Action:	Other Workplan
Global Id:	T0600102243
Action Type:	RESPONSE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**POY-WING PROPERTY (Continued)**

**S103890680**

Date: 12/23/2003  
Action: Other Workplan

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 12/20/2004  
Action: Other Workplan

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 09/06/2019  
Action: Correspondence

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 10/19/2004  
Action: Monitoring Report - Quarterly

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 10/01/2000  
Action: Other Workplan

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 09/18/2001  
Action: Other Workplan

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 08/04/2003  
Action: Other Workplan

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 08/11/2000  
Action: Monitoring Report - Quarterly

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 05/30/2003  
Action: Monitoring Report - Other

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 04/14/2004  
Action: Monitoring Report - Other

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 01/18/2005  
Action: Monitoring Report - Quarterly

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 01/18/2006  
Action: Monitoring Report - Quarterly

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**POY-WING PROPERTY (Continued)**

**S103890680**

Global Id:	T0600102243
Action Type:	ENFORCEMENT
Date:	09/05/2012
Action:	Meeting
Global Id:	T0600102243
Action Type:	ENFORCEMENT
Date:	01/16/2013
Action:	File Review - Closure
Global Id:	T0600102243
Action Type:	ENFORCEMENT
Date:	12/05/2014
Action:	13267 Requirement
Global Id:	T0600102243
Action Type:	ENFORCEMENT
Date:	06/10/2015
Action:	13267 Requirement
Global Id:	T0600102243
Action Type:	ENFORCEMENT
Date:	06/08/2018
Action:	Staff Letter - #6/8/2018
Global Id:	T0600102243
Action Type:	ENFORCEMENT
Date:	03/28/2018
Action:	Staff Letter - #03/28/2018
Global Id:	T0600102243
Action Type:	ENFORCEMENT
Date:	06/28/2019
Action:	Staff Letter - #6/28/2019
Global Id:	T0600102243
Action Type:	ENFORCEMENT
Date:	01/08/1997
Action:	Notice of Responsibility
Global Id:	T0600102243
Action Type:	ENFORCEMENT
Date:	01/09/2017
Action:	Clean Up Fund - Case Closure Review Summary Report (RSR)
Global Id:	T0600102243
Action Type:	Other
Date:	01/01/1997
Action:	Leak Stopped
Global Id:	T0600102243
Action Type:	RESPONSE
Date:	03/30/2012
Action:	Soil and Water Investigation Report
Global Id:	T0600102243
Action Type:	RESPONSE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**POY-WING PROPERTY (Continued)**

**S103890680**

Date: 02/14/1997  
Action: Site Assessment Report

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 09/05/1996  
Action: Correspondence

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 03/14/2006  
Action: Correspondence

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 08/01/1997  
Action: Soil and Water Investigation Report

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 06/08/2004  
Action: Soil and Water Investigation Report

Global Id: T0600102243  
Action Type: RESPONSE  
Date: 09/30/2015  
Action: Final Remedial Action Report / Corrective Action Report

**LUST:**

Global Id: T0600102243  
Status: Open - Case Begin Date  
Status Date: 10/03/1996

Global Id: T0600102243  
Status: Open - Site Assessment  
Status Date: 01/03/1997

Global Id: T0600102243  
Status: Open - Site Assessment  
Status Date: 02/14/1997

Global Id: T0600102243  
Status: Open - Remediation  
Status Date: 09/01/2015

Global Id: T0600102243  
Status: Open - Verification Monitoring  
Status Date: 02/01/2016

Global Id: T0600102243  
Status: Open - Eligible for Closure  
Status Date: 12/06/2017

Global Id: T0600102243  
Status: Open - Inactive  
Status Date: 12/06/2017

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**POY-WING PROPERTY (Continued)**

**S103890680**

Global Id: T0600102243  
Status: Open - Inactive  
Status Date: 02/05/2019

Global Id: T0600102243  
Status: Open - Remediation  
Status Date: 03/17/2020

Global Id: T0600102243  
Status: Open - Eligible for Closure  
Status Date: 06/30/2022

Global Id: T0600102243  
Status: Open - Verification Monitoring  
Status Date: 06/30/2022

**LUST REG 2:**

Region: 2  
Facility Id: 01-2434  
Facility Status: Leak being confirmed  
Case Number: 6059  
How Discovered: Tank Closure  
Leak Cause: UNK  
Leak Source: UNK  
Date Leak Confirmed: 2/6/1997  
Oversight Program: LUST  
Prelim. Site Assesment Wokplan Submitted: Not reported  
Preliminary Site Assesment Began: Not reported  
Pollution Characterization Began: Not reported  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

**CORTESE:**

Name: FORMERLY DODSON LTD  
Address: 240 MACARTHUR  
City,State,Zip: OAKLAND, CA 94611  
Region: CORTESE  
Envirostor Id: Not reported  
Global ID: T0600102243  
Site/Facility Type: LUST CLEANUP SITE  
Cleanup Status: OPEN - VERIFICATION MONITORING  
Status Date: Not reported  
Site Code: Not reported  
Latitude: Not reported  
Longitude: Not reported  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: active  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**POY-WING PROPERTY (Continued)**

**S103890680**

Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported  
File Name: Active Open

**HIST CORTESE:**

edr\_fname: DODSON LIMITED  
edr\_fadd1: 240 MACARTHUR  
City,State,Zip: OAKLAND, CA 94611  
Region: CORTESE  
Facility County Code: 1  
Reg By: LTNKA  
Reg Id: 01-2434

**CERS:**

Name: FORMERLY DODSON LTD  
Address: 240 MACARTHUR  
City,State,Zip: OAKLAND, CA 94611  
Site ID: 732144  
CERS ID: T0600102243  
CERS Description: Leaking Underground Storage Tank Cleanup Site

**Affiliation:**

Affiliation Type Desc: Local Agency Caseworker  
Entity Name: DREW YORK - ALAMEDA COUNTY LOP  
Entity Title: Not reported  
Affiliation Address: 1131 HARBOR BAY PARKWAY  
Affiliation City: ALAMEDA  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: ,

**AG167  
NNW  
1/4-1/2  
0.348 mi.  
1836 ft.**

**FORMERLY DODSON LTD  
240 MACARTHUR  
OAKLAND, CA 94611**

**UST FINDER RELEASE 1028966432  
N/A**

**Site 2 of 5 in cluster AG**

**Relative:  
Higher**

**UST FINDER RELEASE:**

**Actual:  
123 ft.**

Object ID: 41446  
Facility ID: Not reported  
Lust ID: CAT0600102243  
Name: FORMERLY DODSON LTD  
Address: 240 MACARTHUR  
City,State,Zip: OAKLAND, CA 94611  
Address Match Type: PointAddress  
Reported Date: Not reported  
Status: Open  
Substance: Not reported  
Population within 1500ft: 2982  
Domestic Wells within 1500ft: 0  
Land Use: Developed, High Intensity  
Within SPA: No  
SPA PWS Facility ID: Not reported  
SPA Water Type: Not reported  
SPA Facility Type: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**FORMERLY DODSON LTD (Continued)**

**1028966432**

SPA HUC12:	Not reported
Within WHPA:	No
WHPA PWS Facility ID:	Not reported
WHPA Water Type:	Not reported
WHPA Facility Type:	Not reported
WHPA HUC12:	Not reported
Within 100yr Floodplain:	No
Tribe:	Not reported
EPA Region:	9
NFA Letter 1:	Not reported
NFA Letter 2:	Not reported
NFA Letter 3:	Not reported
NFA Letter 4:	Not reported
Closed With Residual Contaminate:	Not reported
Coordinate Source:	Geocode
X Coord:	-122.25715
Y Coord:	37.82376
Latitude:	37.82376
Longitude:	-122.257149999999

**AG168  
 NNW  
 1/4-1/2  
 0.348 mi.  
 1840 ft.**

**SHELL #13-5676  
 230 MACARTHUR  
 OAKLAND, CA 94611**

**UST FINDER RELEASE 1029104717  
 N/A**

**Site 3 of 5 in cluster AG**

**Relative:  
 Higher  
 Actual:  
 123 ft.**

<b>UST FINDER RELEASE:</b>	
Object ID:	41453
Facility ID:	Not reported
Lust ID:	CAT0600101240
Name:	SHELL #13-5676
Address:	230 MACARTHUR
City,State,Zip:	OAKLAND, CA 94611
Address Match Type:	PointAddress
Reported Date:	Not reported
Status:	No Further Action
Substance:	Not reported
Population within 1500ft:	3153
Domestic Wells within 1500ft:	0
Land Use:	Developed, High Intensity
Within SPA:	No
SPA PWS Facility ID:	Not reported
SPA Water Type:	Not reported
SPA Facility Type:	Not reported
SPA HUC12:	Not reported
Within WHPA:	No
WHPA PWS Facility ID:	Not reported
WHPA Water Type:	Not reported
WHPA Facility Type:	Not reported
WHPA HUC12:	Not reported
Within 100yr Floodplain:	No
Tribe:	Not reported
EPA Region:	9
NFA Letter 1:	Not reported
NFA Letter 2:	Not reported
NFA Letter 3:	Not reported
NFA Letter 4:	Not reported
Closed With Residual Contaminate:	Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**SHELL #13-5676 (Continued)**

**1029104717**

Coordinate Source: Geocode  
 X Coord: -122.25674  
 Y Coord: 37.82345  
 Latitude: 37.82345  
 Longitude: -122.256739999999

**AG169  
 NNW  
 1/4-1/2  
 0.348 mi.  
 1840 ft.**

**SHELL  
 230 MACARTHUR BLVD W  
 OAKLAND, CA 94611**

**LUST S106610962  
 N/A**

**Site 4 of 5 in cluster AG**

**Relative:  
 Higher**

LUST REG 2:

**Actual:  
 123 ft.**

Region: 2  
 Facility Id: 01-1345  
 Facility Status: Preliminary site assessment underway  
 Case Number: 3673  
 How Discovered: Tank Closure  
 Leak Cause: Structure Failure  
 Leak Source: Tank  
 Date Leak Confirmed: Not reported  
 Oversight Program: LUST  
 Prelim. Site Assessment Wokplan Submitted: Not reported  
 Preliminary Site Assesment Began: 6/30/1988  
 Pollution Characterization Began: Not reported  
 Pollution Remediation Plan Submitted: Not reported  
 Date Remediation Action Underway: Not reported  
 Date Post Remedial Action Monitoring Began: Not reported

**AG170  
 NNW  
 1/4-1/2  
 0.348 mi.  
 1840 ft.**

**SHELL #13-5676  
 230 MACARTHUR  
 OAKLAND, CA 94611**

**LUST S110060316  
 Cortese N/A  
 HIST CORTESE  
 CERS**

**Site 5 of 5 in cluster AG**

**Relative:  
 Higher**

LUST:

**Actual:  
 123 ft.**

Name: SHELL #13-5676  
 Address: 230 MACARTHUR  
 City,State,Zip: OAKLAND, CA 94611  
 Lead Agency: ALAMEDA COUNTY LOP  
 Case Type: LUST Cleanup Site  
 Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0600101240](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600101240)  
 Global Id: T0600101240  
 Latitude: 37.823337981  
 Longitude: -122.256511639  
 Status: Completed - Case Closed  
 Status Date: 01/23/2013  
 Case Worker: Not reported  
 RB Case Number: 01-1345  
 Local Agency: Not reported  
 File Location: All Files are on GeoTracker or in the Local Agency Database  
 Local Case Number: RO0000303  
 Potential Media Affect: Other Groundwater (uses other than drinking water)  
 Potential Contaminants of Concern: Gasoline  
 EPA Region: 9  
 Coordinate Source: \* Historical Geocode - Exact Address Match

MAP FINDINGS

**SHELL #13-5676 (Continued)**

**S110060316**

<p>Cuf Case:          Quantity Released Gallons:          Begin Date:          Leak Reported Date:          How Discovered:          How Discovered Description:          Discharge Source:          Discharge Cause:          Stop Method:          Stop Description:          No Further Action Date:          CA Water Watershed Name:          Dwr Groundwater Subbasin Name:          Disadvantaged Community:          CA Enviroscreen 3 Score:          CA Enviroscreen 4 Score:          Military DOD Site:          Facility Project Subtype:          RWQCB Region:          Site History:</p>	<p>YES          0          11/03/1987          12/01/1987          Other Means          Not reported          Not reported          Not reported          Other Means          Not reported          01/23/2013          South Bay - East Bay Cities (204.20)          Santa Clara Valley - East Bay Plain (2-009.04)          Not reported          16-20%          10-15%          No          Not reported          SAN FRANCISCO BAY RWQCB (REGION 2)          The site is an active Shell-branded service station located on the northwest corner of West MacArthur Boulevard and Piedmont Avenue in Oakland, CA. Surrounding land use is commercial. In April 1986, four exploratory borings (S-A through S-D) were advanced within the area of the tank complex to total depths of 20.5 feet below grade (fbg). Soil samples contained up to 5,700 ppm TPH. In December 1986, a semi-quantitative soil vapor survey was conducted using a portable gas chromatograph. The soil vapor survey reported very high vapor concentrations near the storage tank fills and pump island closest to MacArthur Boulevard. Moderately high concentrations were reported beneath much of the remaining area. No additional soil vapor sampling and laboratory analysis was conducted to confirm or quantify these results. In March 1987, three soil vapor extraction (SVE) wells (VR-1, VR-2, and VR-3) were installed. The SVE treatment system operated between April and November 1987. In August 1987, two soil borings (B-1 and B-2) were advanced to characterize petroleum hydrocarbons remaining in the soil. Soil samples contained up to 1,870 ppm TPHg. In November 1987, two 8,000-gallon gasoline USTs and one 10,000-gallon gasoline UST were removed. Soil samples collected from the bottom of the UST excavation contained up to 480 ppm TPHg, 4.3 ppm benzene, 2.2 ppm toluene, and 55 ppm xylenes. New USTs were installed in the same excavation. In August 1989, three soil borings (SB-1, SB-2, and SB-3) were advanced in the area adjacent to the pump islands. Soil samples contained up to 490 ppm TPHg. Benzene was not detected at concentrations above the reporting limit in these soil samples. On October 10, 1989, three borings (GS-1, GS-2, and GS-3) were advanced to obtain grab groundwater samples from the area adjacent to the pump islands. Grab groundwater samples taken from GS-2 contained up to 8,800 ppb TPHg, 380 ppb benzene, 27 ppb toluene, 1,200 ppb ethylbenzene, and 62 ppb xylenes. These constituents were not detected at concentrations above the reporting limit in the grab groundwater sample from GS-1. Monitoring well MW-4 was installed in January 1990. In May 1990, six borings (Probe 1 through Probe 6) were advanced in the sidewalk along West MacArthur Boulevard to obtain shallow groundwater samples. Grab groundwater samples contained up to 31,000 ppb TPHg, 430 ppb benzene, 600 ppb toluene, 240 ppb ethylbenzene, and 1,400 ppb xylenes. TPHg and BTEX were not detected at concentrations above the reporting limit in grab groundwater</p>
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**SHELL #13-5676 (Continued)**

**S110060316**

samples collected from borings Probe 1 or Probe 3. In October 2002, a sensitive receptor survey (SRS) and conduit study identified a storm drain located just west of the site, along West MacArthur Boulevard, as a potential preferential pathway for contaminant migration. In October 2003, an additional SRS was completed to identify basements within 200 feet, surface water, and sensitive habitats within 500 feet, hospitals, residential care and childcare facilities within 1,000 feet, and water wells within one-half mile. No basements were observed within 200 feet and no surface water or sensitive habitats were observed within 500 feet. In March 2004, two soil borings (SB-1 and SB-2) were drilled adjacent to the storm drain located west of the site, and soil and groundwater samples were collected. Soil samples contained up to 43 ppm TPHg and 0.0099 ppm MTBE. BTEX were not detected at concentrations above the reporting limit in the soil samples. Grab groundwater samples contained up to 10,000 ppb TPHg, 430 ppb benzene, 75 ppb toluene, 98 ppb ethylbenzene, 44 ppb xylenes, and 320 ppb MTBE. In April 2005, soil samples were collected from beneath the site's dispensers and piping following an upgrade of the site's fueling system. Soil samples contained up to 2,700 ppm TPHg, 4.2 ppm benzene, 6.6 ppm toluene, 39 ppm ethylbenzene, 85 ppm xylenes, and 0.30 ppm MTBE. A UST Unauthorized Release/Contamination Site Report was filed on April 26, 2005 in conjunction with over-excavation of impacted soils. Following over-excavation, eight bottom and side-wall samples were collected. Soils samples contained up to 830 ppm TPHg, 1.4 ppm toluene, 4.1 ppm ethylbenzene, 1.5 ppm xylenes, and 0.017 ppm MTBE. In April 2006, four soil borings (SB-4, SB-6, SB-7, and SB-8) were advanced on site. Soil boring SB-8 was converted into on-site groundwater monitoring well MW-5. Soil samples from the borings contained up to 1,510 ppm TPHg, 2.90 ppm benzene, 9.47 ppm toluene, 9.46 ppm ethylbenzene, 70.6 ppm xylenes, 0.00970 ppm MTBE, and 0.0142 ppm di-isopropyl ether (DIPE). Grab groundwater samples contained up to 34,000 ppb TPHg, 404 ppb benzene, 22.5 ppb toluene, 110 ppb ethylbenzene, 56.8 ppb xylenes, 29.2 ppb MTBE, 40.2 ppb tertiary-butyl alcohol (TBA), and 26.6 DIPE. In February 2008, three off-site soil borings (SB-9, SB-10, and SB-11) were advanced southwest and west of well MW-5 to further delineate groundwater impacts down gradient. One on-site soil boring (SB-12) was drilled adjacent to well MW-5 for groundwater data comparison. MTBE was detected in one soil sample at a concentration of 0.0053 ppm in SB-12 at 15.5 fbg. TPHg, BTEX, TBA, DIPE, ethyl tertiary-butyl ether (ETBE), and tertiary-amyl methyl ether (TAME) were not detected at concentrations above the reporting limit in the soil samples. Off-site grab groundwater samples contained up to 1,700 ppb TPHg, 14 ppb toluene, and 120 ppb MTBE. Benzene, ethylbenzene, xylenes, TBA, DIPE, ETBE, and TAME were not detected in the off-site grab groundwater samples. The on-site grab groundwater sample contained 4,900 ppb TPHg, 120 ppb benzene, 11 ppb toluene, 170 ppb ethylbenzene, 42.2 ppb xylenes, 33 ppb MTBE, 100 ppb TBA, and 11 ppb DIPE. Groundwater monitoring has been conducted at the site since July 1988. Coordinated monitoring and sampling has been conducted with the adjacent former gas station, currently Oakland Auto works at the property of 240 West MacArthur Boulevard, since the fourth quarter of 2003. Significant seasonal variations in groundwater elevations have been observed. Constituent concentrations have generally been highest in monitoring well and MW-5, which is located immediately down gradient of the former UST and dispenser islands. Overall decreases in constituent concentrations have generally been

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SHELL #13-5676 (Continued)**

**S110060316**

observed in groundwater monitoring results from the site indicating that natural attenuation of dissolved petroleum hydrocarbons is apparently taking place.

LUST:

Global Id: T0600101240  
Contact Type: Regional Board Caseworker  
Contact Name: Regional Water Board  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY ST SUITE 1400  
City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

LUST:

Global Id: T0600101240  
Action Type: ENFORCEMENT  
Date: 02/27/2012  
Action: File review - #20120227

Global Id: T0600101240  
Action Type: ENFORCEMENT  
Date: 03/28/2012  
Action: Meeting - #20120328

Global Id: T0600101240  
Action Type: ENFORCEMENT  
Date: 10/15/2012  
Action: Staff Letter - #20121015

Global Id: T0600101240  
Action Type: ENFORCEMENT  
Date: 07/25/2012  
Action: Staff Letter - #20120725

Global Id: T0600101240  
Action Type: ENFORCEMENT  
Date: 01/23/2013  
Action: Closure/No Further Action Letter - #20130123

Global Id: T0600101240  
Action Type: ENFORCEMENT  
Date: 12/07/2007  
Action: Staff Letter - #20071207

Global Id: T0600101240  
Action Type: ENFORCEMENT  
Date: 11/10/2008  
Action: File review

Global Id: T0600101240  
Action Type: ENFORCEMENT  
Date: 07/24/2009  
Action: Staff Letter - #20090724

Global Id: T0600101240  
Action Type: Other

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SHELL #13-5676 (Continued)**

**S110060316**

Date: 11/03/1987  
Action: Leak Discovery

Global Id: T0600101240  
Action Type: REMEDIATION  
Date: 04/01/1987  
Action: Soil Vapor Extraction (SVE)

Global Id: T0600101240  
Action Type: ENFORCEMENT  
Date: 09/12/2012  
Action: Staff Letter - #20120912

Global Id: T0600101240  
Action Type: Other  
Date: 12/01/1987  
Action: Leak Reported

Global Id: T0600101240  
Action Type: REMEDIATION  
Date: 12/01/1987  
Action: Excavation

Global Id: T0600101240  
Action Type: ENFORCEMENT  
Date: 02/17/2011  
Action: Meeting - #20110217

Global Id: T0600101240  
Action Type: ENFORCEMENT  
Date: 07/25/2012  
Action: Notification - Preclosure - #20120725

Global Id: T0600101240  
Action Type: ENFORCEMENT  
Date: 05/14/2012  
Action: File Review - Closure - #20120514

Global Id: T0600101240  
Action Type: ENFORCEMENT  
Date: 07/25/2012  
Action: Notification - Fee Title Owners Notice - #20120725

Global Id: T0600101240  
Action Type: RESPONSE  
Date: 04/11/2008  
Action: Soil and Water Investigation Report

Global Id: T0600101240  
Action Type: RESPONSE  
Date: 08/01/2012  
Action: Correspondence

Global Id: T0600101240  
Action Type: RESPONSE  
Date: 12/21/2012  
Action: Well Destruction Report

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SHELL #13-5676 (Continued)**

**S110060316**

LUST:

Global Id: T0600101240  
Status: Open - Case Begin Date  
Status Date: 11/03/1987

Global Id: T0600101240  
Status: Open - Site Assessment  
Status Date: 12/01/1987

Global Id: T0600101240  
Status: Open - Site Assessment  
Status Date: 09/30/1988

Global Id: T0600101240  
Status: Open - Verification Monitoring  
Status Date: 02/15/2008

Global Id: T0600101240  
Status: Open - Eligible for Closure  
Status Date: 12/06/2012

Global Id: T0600101240  
Status: Completed - Case Closed  
Status Date: 01/23/2013

CORTESE:

Name: SHELL #13-5676  
Address: 230 MACARTHUR  
City,State,Zip: OAKLAND, CA 94611  
Region: CORTESE  
Envirostor Id: Not reported  
Global ID: T0600101240  
Site/Facility Type: LUST CLEANUP SITE  
Cleanup Status: COMPLETED - CASE CLOSED  
Status Date: Not reported  
Site Code: Not reported  
Latitude: Not reported  
Longitude: Not reported  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: active  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported  
File Name: Active Open

HIST CORTESE:

edr\_fname: SHELL  
edr\_fadd1: 230 MACARTHUR  
City,State,Zip: OAKLAND, CA 94611

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SHELL #13-5676 (Continued)**

**S110060316**

Region: CORTESE  
Facility County Code: 1  
Reg By: LTNKA  
Reg Id: 01-1345

**CERS:**

Name: SHELL #13-5676  
Address: 230 MACARTHUR  
City,State,Zip: OAKLAND, CA 94611  
Site ID: 761092  
CERS ID: T0600101240  
CERS Description: Leaking Underground Storage Tank Cleanup Site

**Affiliation:**

Affiliation Type Desc: Regional Board Caseworker  
Entity Name: Regional Water Board - SAN FRANCISCO BAY RWQCB (REGION 2)  
Entity Title: Not reported  
Affiliation Address: 1515 CLAY ST SUITE 1400  
Affiliation City: OAKLAND  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: ,

**AH171**  
**SW**  
**1/4-1/2**  
**0.385 mi.**  
**2032 ft.**

**378-382 GRAND AVE**  
**378, 380, 382 GRAND AVE**  
**OAKLAND, CA**

**Alameda County CS** **S118872775**  
**N/A**

**Site 1 of 5 in cluster AH**

**Relative:**  
**Lower**  
**Actual:**  
**22 ft.**

Alameda County CS:  
Name: 378-382 GRAND AVE  
Address: 378, 380, 382 GRAND AVE  
City,State,Zip: OAKLAND, CA  
Status: Leak Confirmation  
Record Id: RO0003218  
PE: 5602  
Facility Status: Leak Confirmation  
Latitude: Not reported  
Longitude: Not reported

Name: 378-382 GRAND AVE  
Address: 378, 380, 382 GRAND AVE  
City,State,Zip: OAKLAND, CA  
Status: Case Closed  
Record Id: RO0003218  
PE: 5602  
Facility Status: Case Closed  
Latitude: Not reported  
Longitude: Not reported

MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Site

Database(s)

EDR ID Number  
EPA ID Number

**AH172**  
**SW**  
**1/4-1/2**  
**0.385 mi.**  
**2032 ft.**

**GRAND AVENUE LLC**  
**378 GRAND AVENUE**  
**OAKLAND, CA 0**

**UST FINDER RELEASE**    **1028971546**  
**N/A**

**Site 2 of 5 in cluster AH**

**Relative:**  
**Lower**  
**Actual:**  
**22 ft.**

**UST FINDER RELEASE:**

Object ID: 41516  
 Facility ID: Not reported  
 Lust ID: CAT1000009122  
 Name: GRAND AVENUE LLC  
 Address: 378 GRAND AVENUE  
 City,State,Zip: OAKLAND, CA 0  
 Address Match Type: PointAddress  
 Reported Date: Not reported  
 Status: No Further Action  
 Substance: Not reported  
 Population within 1500ft: 4560  
 Domestic Wells within 1500ft: 0  
 Land Use: Developed, High Intensity  
 Within SPA: No  
 SPA PWS Facility ID: Not reported  
 SPA Water Type: Not reported  
 SPA Facility Type: Not reported  
 SPA HUC12: Not reported  
 Within WHPA: No  
 WHPA PWS Facility ID: Not reported  
 WHPA Water Type: Not reported  
 WHPA Facility Type: Not reported  
 WHPA HUC12: Not reported  
 Within 100yr Floodplain: No  
 Tribe: Not reported  
 EPA Region: 9  
 NFA Letter 1: Not reported  
 NFA Letter 2: Not reported  
 NFA Letter 3: Not reported  
 NFA Letter 4: Not reported  
 Closed With Residual Contaminate: Not reported  
 Coordinate Source: Geocode  
 X Coord: -122.25473  
 Y Coord: 37.80886  
 Latitude: 37.80886  
 Longitude: -122.254729999999

**AH173**  
**SW**  
**1/4-1/2**  
**0.385 mi.**  
**2032 ft.**

**378 GRAND AVE., LLC**  
**378 GRAND AVE**  
**OAKLAND, CA 94610**

**LUST**    **S118821910**  
**Cortese**    **N/A**  
**HWTS**  
**HAZNET**  
**CERS**

**Site 3 of 5 in cluster AH**

**Relative:**  
**Lower**  
**Actual:**  
**22 ft.**

**LUST:**

Name: GRAND AVENUE LLC  
 Address: 378 GRAND AVENUE  
 City,State,Zip: OAKLAND, CA 94610-4847  
 Lead Agency: ALAMEDA COUNTY LOP  
 Case Type: LUST Cleanup Site  
 Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T1000009122](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T1000009122)  
 Global Id: T1000009122  
 Latitude: 37.80916  
 Longitude: -122.2547

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**378 GRAND AVE., LLC (Continued)**

**S118821910**

Status: Completed - Case Closed  
Status Date: 03/14/2017  
Case Worker: Not reported  
RB Case Number: Not reported  
Local Agency: Not reported  
File Location: Not reported  
Local Case Number: RO0003218  
Potential Media Affect: Soil, Under Investigation  
Potential Contaminants of Concern: Diesel  
EPA Region: 9  
Coordinate Source: Not reported  
Cuf Case: NO  
Quantity Released Gallons: Not reported  
Begin Date: 07/12/2016  
Leak Reported Date: 01/26/2016  
How Discovered: Not reported  
How Discovered Description: Not reported  
Discharge Source: Other  
Discharge Cause: Unknown  
Stop Method: Not reported  
Stop Description: Not reported  
No Further Action Date: 03/14/2017  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Not reported  
CA EnviroScreen 3 Score: 16-20%  
CA EnviroScreen 4 Score: 25-30%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Current Land-use at time of Case Closure The subject property (APN 10-776-8) is located at 378 Grand Avenue between Staten Avenue and Perkins Street, in the northwest portion of the City of Oakland, approximately 2 + miles east of San Francisco bay, approximately + mile southwest of Interstate 580, and 680 feet north of Lake Merritt. At the time of this case closure, the site is developed with an apartment building with a barber shop and hairstyling salon occupying the first floor. This diesel UST release case has been evaluated for closure consistent with the current site use and the State Water Resource Control Board Low-Threat Underground Storage Tank Closure Policy (LTCP) for petroleum related contaminants. This case is closed to the current residential and commercial land use. Due to residual contamination, the site is closed with site management requirements that include notifying Alameda County Department of Environmental Health (ACDEH) of a proposed change in land use to any residential or conservative land use on the ground floor, or if any redevelopment or building alteration is proposed that affects or disturbs the existing subsurface conditions at the site. Adjacent Property(ies) Land-use at Time of Case Closure The site is located in a mixed commercial and residential area. At the time of this case closure, potential off-site contamination is likely on Grand Avenue, but may not extend onto properties across Grand Avenue. However, should off-site redevelopment occur, ACDEH recommends evaluating the areas of redevelopment for chemicals of concern that were identified on this site. Historic Land-use / Site Investigation The owner had no prior knowledge of a tank or previous activities conducted at the site. On March 2, 2016, one 1,500-gallon underground storage tank (UST) used

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

378 GRAND AVE., LLC (Continued)

S118821910

for Total Petroleum Hydrocarbons as diesel was removed from the sidewalk at the southern side of the site. During the UST removal, sidewall and bottom soil samples were collected and 12.5 tons of impacted soil were over-excavated to remove contaminated soil. In order to further determine the extent of the contamination and to evaluate the site consistent with the State Water Resource Control Board Low-Threat Underground Storage Tank Closure Policy (LTCP) for petroleum related contaminants, additional soil, grab groundwater, and soil gas investigation was performed. Potential Exposure to Chemicals of Concern The main chemicals of concern (COCs) at the site were total petroleum hydrocarbons as diesel (TPH-d). Because the site is capped with the building slab foundation and the groundwater depth is at 40.5 feet below ground surface (bgs), the site poses a low potential threat to human health and safety for vapor intrusion and direct contact to soil for residential land use. As groundwater is not used as drinking water at the site, the most applicable sensitive receptor is Lake Merritt. Remediation Activities Corrective action consisting of excavation of the USTs and contaminated soil have been completed. Case Closure & Future Site Management Requirements This fuel leak case has been evaluated for closure consistent with the State Water Resource Control Board Low-Threat Underground Storage Tank Closure Policy (LTCP). This diesel UST release case has been evaluated for closure consistent with the current site use and the State Water Resource Control Board Low-Threat Underground Storage Tank Closure Policy (LTCP) for petroleum related contaminants. The site meets the criterion for vapor intrusion for scenario 3A and for direct contact and outdoor air criterion for soil for residential land use. For groundwater, the site does not meet scenarios 1 through 4; however, a determination been made that under current and reasonably expected future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment and water quality objectives will be achieved within a reasonable time frame, and therefore meets scenario 5. In regard to the groundwater evaluation and data, one grab groundwater sample was collected in native soil immediately adjacent and downgradient of the tank excavation area. Laboratory analysis showed the following: Total Petroleum Hydrocarbons as diesel (TPH-d) at 360 g/L; benzene, toluene, ethylbenzene, and total xylenes (BTEX) all at <0.5 g/L; and methyl tert-butyl ether (MTBE) at <0.5 g/L. Based on the clayey lithology presented in the boring log and a thirty foot separation between the zone of soil impact and groundwater it is likely that the TPH-d detection in groundwater is a result of sampling bias due to drag down of contamination in the borehole. Although the plume boundary has not been defined through sampling, groundwater was encountered in sandy silt, and therefore, the TPH-d is not likely to be mobile As groundwater is not used as drinking water at the site, the most applicable sensitive receptor is Lake Merritt, which is located approximately 680 feet downgradient of the site, and the concentration of TPH-d at 360 g/L in groundwater is below the San Francisco Bay Regional Water Quality Control Board Environmental Screening Level (ESL) of 640 g/L for aquatic habitat. In addition, the depth to groundwater at the site is 40.5 feet, so the likelihood is low that groundwater will interact with surface water. Based on the evaluation, the site is being considered for closure as a low-risk site. Due to residual contamination, the site is closed consistent with the current site use of commercial ground floor and residential upper floors with site management requirements If there

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**378 GRAND AVE., LLC (Continued)**

**S118821910**

is a proposed in land use on the ground floor to any residential or conservative land use, or if redevelopment occurs, ACDEH must be notified as required by Government Code Section 65850.2.2. ACDEH will reevaluate the site relative to the proposed redevelopment. Excavation or construction activities in areas of residual contamination require planning and implementation of appropriate Health and Safety procedures by the Responsible Party prior to and during excavation and construction activities.

LUST:

Global Id:	T10000009122
Action Type:	ENFORCEMENT
Date:	12/19/2016
Action:	Email Correspondence - #20161219
Global Id:	T10000009122
Action Type:	Other
Date:	01/26/2016
Action:	Leak Reported
Global Id:	T10000009122
Action Type:	ENFORCEMENT
Date:	01/26/2016
Action:	Unauthorized Release Form - #20160126
Global Id:	T10000009122
Action Type:	ENFORCEMENT
Date:	03/14/2017
Action:	Closure/No Further Action Letter
Global Id:	T10000009122
Action Type:	RESPONSE
Date:	10/17/2016
Action:	Remedial Investigation Workplan - Regulator Responded
Global Id:	T10000009122
Action Type:	RESPONSE
Date:	10/17/2016
Action:	Remedial Investigation Workplan - Regulator Responded
Global Id:	T10000009122
Action Type:	RESPONSE
Date:	10/17/2016
Action:	Request for Closure - Regulator Responded
Global Id:	T10000009122
Action Type:	REMEDIATION
Date:	03/02/2016
Action:	Excavation
Global Id:	T10000009122
Action Type:	ENFORCEMENT
Date:	12/21/2016
Action:	Notification - Public Notice of Case Closure - #20161221
Global Id:	T10000009122
Action Type:	ENFORCEMENT
Date:	07/13/2016

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**378 GRAND AVE., LLC (Continued)**

**S118821910**

Action: Notice of Responsibility - #20160713

Global Id: T10000009122  
Action Type: ENFORCEMENT  
Date: 07/16/2016  
Action: Staff Letter - #20160716

Global Id: T10000009122  
Action Type: ENFORCEMENT  
Date: 12/20/2016  
Action: Staff Letter - #20161220

Global Id: T10000009122  
Action Type: ENFORCEMENT  
Date: 08/18/2016  
Action: Staff Letter - #20160818

Global Id: T10000009122  
Action Type: ENFORCEMENT  
Date: 08/15/2016  
Action: Staff Letter - #20160815

Global Id: T10000009122  
Action Type: Other  
Date: 01/26/2016  
Action: Leak Stopped

Global Id: T10000009122  
Action Type: Other  
Date: 01/26/2016  
Action: Leak Discovery

**LUST:**

Global Id: T10000009122  
Status: Completed - Case Closed  
Status Date: 03/14/2017

Global Id: T10000009122  
Status: Open - Case Begin Date  
Status Date: 07/12/2016

Global Id: T10000009122  
Status: Open - Site Assessment  
Status Date: 07/12/2016

Global Id: T10000009122  
Status: Open - Eligible for Closure  
Status Date: 12/19/2016

**CORTESE:**

Name: GRAND AVENUE LLC  
Address: 378 GRAND AVENUE  
City,State,Zip: OAKLAND, CA  
Region: CORTESE  
Envirostor Id: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**378 GRAND AVE., LLC (Continued)**

**S118821910**

Global ID: T10000009122  
Site/Facility Type: LUST CLEANUP SITE  
Cleanup Status: COMPLETED - CASE CLOSED  
Status Date: Not reported  
Site Code: Not reported  
Latitude: Not reported  
Longitude: Not reported  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: active  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported  
File Name: Active Open

**HWTS:**

Name: 378 GRAND AVE., LLC  
Address: 378 GRAND AVE  
Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC002840269  
Inactive Date: 03/08/2016  
Create Date: 12/07/2015  
Last Act Date: Not reported  
Mailing Name: Not reported  
Mailing Address: 2295 SAN PABLO AVE  
Mailing Address 2: Not reported  
Mailing City,State,Zip: BERKELEY, CA 947021871  
Owner Name: 378 GRAND AVENUE, LLC  
Owner Address: 2295 SAN PABLO AVE  
Owner Address 2: Not reported  
Owner City,State,Zip: BERKELEY, CA 947021871  
Owner Phone: Not reported  
Owner Fax: Not reported  
Contact Name: YUVAL BOBROVITCH  
Contact Address: 2295 SAN PABLO AVE  
Contact Address 2: Not reported  
City,State,Zip: BERKELEY, CA 947021871  
Contact Phone: Not reported  
Contact Fax: Not reported  
Facility Status: Inactive  
Facility Type: TEMPORARY  
Category: STATE  
Latitude: 37.808917  
Longitude: -122.254815

**HAZNET:**

Name: 378 GRAND AVE., LLC  
Address: 378 GRAND AVE  
Address 2: Not reported  
City,State,Zip: OAKLAND, CA 946104847

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**378 GRAND AVE., LLC (Continued)**

**S118821910**

Contact: YUVAL BOBROVITCH  
 Telephone: 5105405982  
 Mailing Name: Not reported  
 Mailing Address: 2295 SAN PABLO AVE  
  
 Year: 2016  
 Gepaid: CAC002840269  
 TSD EPA ID: CAT080012602  
 CA Waste Code: 223 - Unspecified oil-containing waste  
 Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)  
 Tons: 5.77962

**CERS:**

Name: GRAND AVENUE LLC  
 Address: 378 GRAND AVENUE  
 City,State,Zip: OAKLAND, CA 94610-4847  
 Site ID: 734525  
 CERS ID: T10000009122  
 CERS Description: Leaking Underground Storage Tank Cleanup Site

**AI174  
 WSW  
 1/4-1/2  
 0.388 mi.  
 2047 ft.**

**EAST BAY AGENCY FOR CHILDREN  
 303 VAN BUREN AVENUE  
 OAKLAND, CA 94610  
  
 Site 1 of 2 in cluster AI**

**LUST S124393535  
 Cortese N/A  
 HWTS**

**Relative:  
 Higher  
  
 Actual:  
 48 ft.**

**LUST:**

Name: EAST BAY AGENCY FOR CHILDREN  
 Address: 303 VAN BUREN AVENUE  
 City,State,Zip: OAKLAND, CA 94610  
 Lead Agency: ALAMEDA COUNTY LOP  
 Case Type: LUST Cleanup Site  
 Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T10000013048](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000013048)  
 Global Id: T10000013048  
 Latitude: 37.81069  
 Longitude: -122.25619  
 Status: Completed - Case Closed  
 Status Date: 03/11/2020  
 Case Worker: DY  
 RB Case Number: Not reported  
 Local Agency: ALAMEDA COUNTY LOP  
 File Location: All Files are on GeoTracker or in the Local Agency Database  
 Local Case Number: RO0003368  
 Potential Media Affect: Soil, Under Investigation  
 Potential Contaminants of Concern: Diesel, Total Petroleum Hydrocarbons (TPH)  
 EPA Region: 9  
 Coordinate Source: Not reported  
 Cuf Case: YES  
 Quantity Released Gallons: 250  
 Begin Date: 05/28/2019  
 Leak Reported Date: 05/09/2019  
 How Discovered: Site Assessment/Site Investigation  
 How Discovered Description: Not reported  
 Discharge Source: Other  
 Discharge Cause: Other

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EAST BAY AGENCY FOR CHILDREN (Continued)**

**S124393535**

Stop Method: Close and Remove Tank  
Stop Description: Tank Closed and Removed  
No Further Action Date: 03/11/2020  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Not reported  
CA EnviroScreen 3 Score: 11-15%  
CA EnviroScreen 4 Score: 20-25%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: The Site is located in a residential area in the Adams Point neighborhood of Oakland and is currently developed as a single-family residential home doing business as administrative offices for the East Bay Agency for Children. The property consists of one parcel Assessor Parcel Number (APN) 10-775-1 and is located at the southeast corner of Van Buren Avenue and Lee Street. In April 2019, one approximately 250-gallon single-walled steel home heating oil underground storage tank (UST) identified as UST 1 was removed from within the property line along Lee Street. During removal activities the UST was observed to be in poor condition with visible holes in the tank. Based on information presented in the Underground Storage Tank Closure Report, dated May 9, 2019 and the Unauthorized Release Form, dated May 9, 2019 significant soil discoloration and hydrocarbon odors was observed in the UST excavation area. The associated fill port was reported at the west end of the tank and the bottom of the tank was reported at approximately 4.5 feet below ground surface (bgs). Groundwater was not observed in the UST excavation area. Residual liquid inside the UST was not reported during removal activities. Two discrete soil samples (9781-East and 9781-West) were collected from approximately 2 feet below the east and west end of the former UST 1 location at a depth of approximately 6.5 feet below ground surface (bgs) and analyzed for total petroleum hydrocarbon as diesel (TPH d); benzene toluene, ethylbenzene, and xylenes (BTEX); naphthalene; fuel oxygenates and lead scavengers including ethylene dibromide (EDB), ethylene dichloride (EDC), methyl tertiary butyl ether (MTBE), tertiary amyl methyl ether (TAME), ethyl tertiary-butyl ether (ETBE), diisopropyl ether (DIPE), tertiary butyl alcohol (TBA), and ethanol; and polynuclear aromatic hydrocarbons (PAHs/PNAs). An additional three point composite sample was collected and analyzed for the same chemicals mentioned above for waste profiling. Results indicated TPH-d was detected above laboratory detection limits in all samples with the highest concentration of 530 milligrams per kilogram (mg/kg) collected beneath the east end of the tank indicating an unauthorized release had occur at this site. Additionally, several PAHs were detected in the discrete soil samples and soil stockpile. Based on concentrations reported from 6.5 feet beneath the east and west ends of the former UST 1 area, over-excavation and additional soil sampling was conducted at the site in May 2019. The UST 1 excavation pit was over-excavated to an approximate depth of 7 feet bgs. Lateral over-excavation was not mentioned in the Report. Subsequent to over-excavation two additional soil samples (9781-E-9 and 9781-W-9) were collected from approximately 9 feet bgs beneath the east and west ends of former UST and analyzed for same analytes mentioned above. Results indicated TPH-d was detected above laboratory detection limits in all samples with the highest concentration of 2,900 mg/kg collected beneath the

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EAST BAY AGENCY FOR CHILDREN (Continued)**

**S124393535**

west end of the tank. These concentrations were higher than the previous soil samples collected at 6 feet bgs. Several PAHs were also detected in the 9 foot bgs soil samples including but not limited to increased concentrations of phenanthrene, pyrene, and 1-methylnaphthalene relative to the previous soil sampling event collected at 6 feet bgs. The potential source of PAH is currently unknown. In June 2019, an additional 130-gallon single-walled steel UST (UST 2) was removed from within the property line near Perkins Street and the adjacent residential property. Information presented in the UST Closure Report, dated July 17, 2019 indicated UST 2 to be in good condition with no visible holes. The bottom of the tank was reported at approximately 6.5 feet bgs and the associated fill port was reported at the south end of the tank. Groundwater was not observed in the UST 2 excavation area. One discrete soil sample (9781-C) was collected from the beneath the tank excavation floor at 8.5 feet bgs. Additionally, one four-point composite soil sample (9781-SP) was collected from the stockpiled overburden soil. Samples were analyzed for TPH d; BTEX; naphthalene; PAHs. Results indicated several PAHs were detected in the discrete soil sample and soil overburden sample. Similar to PAH detections at UST 1, the potential source of PAHs at UST 2 is currently unknown. ACDEH has evaluated the data presented in the UST Removal Report, dated July 17, 2019 for UST 1 and UST 2, in conjunction with the case files, to determine if the site is eligible for closure as a low risk site under the State Water Resources Control Board's Low Threat Underground Storage Tank Case Closure Policy (LTCP). Based on ACDEH's review, we have determined that the site fails to meet the following criteria: LTCP General Criteria e (Site Conceptual Model) and f (Secondary Source Removal); Media Specific Criteria for Groundwater; Media Specific Criteria for Petroleum Vapor Intrusion to Indoor, and Media Specific Criteria for Direct Contact and Outdoor Air Exposure. Please refer to the LTCP Checklist for additional information about each criteria. Additionally, several PAHs were detected in both the UST 1 and UST 2, therefore, additional delineation to determine the source of PAH is required. On August 14, 2019 Alameda County Department of Environmental Health (ACDEH) conducted a kick-off meeting with the responsible party (RP) and their environmental consultant as well as the potential buyer and their associated EC. Brokers from both the RP and potential buyer were also present. Discussions during the meeting included the submittal of a work plan for additional subsurface investigations including the advancement of additional bores for the collection of soil and groundwater, and potentially soil vapor.

LUST:

Global Id: T10000013048  
Contact Type: Local Agency Caseworker - Primary Caseworker  
Contact Name: DREW YORK  
Organization Name: ALAMEDA COUNTY LOP  
Address: 1131 HARBOR BAY PARKWAY  
City: ALAMEDA  
Email: andrew.york@acgov.org  
Phone Number: Not reported

Global Id: T10000013048  
Contact Type: Regional Board Caseworker  
Contact Name: UUU  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY ST SUITE 1400

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EAST BAY AGENCY FOR CHILDREN (Continued)**

**S124393535**

City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

LUST:

Global Id: T10000013048  
Action Type: ENFORCEMENT  
Date: 08/08/2019  
Action: Email Correspondence - #8/8/2019

Global Id: T10000013048  
Action Type: ENFORCEMENT  
Date: 12/23/2019  
Action: Fact Sheets - Public Participation - #12/23/2019

Global Id: T10000013048  
Action Type: ENFORCEMENT  
Date: 03/11/2020  
Action: Closure/No Further Action Letter - #3/11/2020

Global Id: T10000013048  
Action Type: ENFORCEMENT  
Date: 08/14/2019  
Action: Meeting - #8/14/2019

Global Id: T10000013048  
Action Type: Other  
Date: 05/09/2019  
Action: Leak Reported

Global Id: T10000013048  
Action Type: RESPONSE  
Date: 05/28/2019  
Action: Tank Removal Report / UST Sampling Report

Global Id: T10000013048  
Action Type: ENFORCEMENT  
Date: 07/16/2019  
Action: Notice of Responsibility - #7/16/2019

Global Id: T10000013048  
Action Type: ENFORCEMENT  
Date: 08/08/2019  
Action: Email Correspondence - #8/8/2019

Global Id: T10000013048  
Action Type: ENFORCEMENT  
Date: 07/23/2019  
Action: Email Correspondence - #7/23/2019

Global Id: T10000013048  
Action Type: ENFORCEMENT  
Date: 07/16/2019  
Action: Staff Letter - #07/16/2019

Global Id: T10000013048  
Action Type: ENFORCEMENT

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EAST BAY AGENCY FOR CHILDREN (Continued)**

**S124393535**

Date: 05/09/2019  
Action: Unauthorized Release Form - #5/9/2019

Global Id: T10000013048  
Action Type: Other  
Date: 01/01/1964  
Action: Leak Began

Global Id: T10000013048  
Action Type: ENFORCEMENT  
Date: 08/21/2019  
Action: Email Correspondence - #8/21/2019

Global Id: T10000013048  
Action Type: ENFORCEMENT  
Date: 08/23/2019  
Action: Staff Letter - #8/23/2019

Global Id: T10000013048  
Action Type: Other  
Date: 05/09/2019  
Action: Leak Stopped

Global Id: T10000013048  
Action Type: RESPONSE  
Date: 09/25/2019  
Action: Correspondence

Global Id: T10000013048  
Action Type: RESPONSE  
Date: 07/18/2019  
Action: Tank Removal Report / UST Sampling Report

Global Id: T10000013048  
Action Type: ENFORCEMENT  
Date: 10/09/2019  
Action: Staff Letter - #10/9/2019

Global Id: T10000013048  
Action Type: ENFORCEMENT  
Date: 12/23/2019  
Action: Staff Letter - #12/23/2019

Global Id: T10000013048  
Action Type: ENFORCEMENT  
Date: 12/06/2019  
Action: Meeting - #12/6/2019

Global Id: T10000013048  
Action Type: Other  
Date: 05/03/2019  
Action: Leak Discovery

LUST:  
Global Id: T10000013048  
Status: Open - Case Begin Date  
Status Date: 05/28/2019

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EAST BAY AGENCY FOR CHILDREN (Continued)**

**S124393535**

Global Id: T10000013048  
Status: Open - Active  
Status Date: 05/29/2019

Global Id: T10000013048  
Status: Open - Site Assessment  
Status Date: 05/29/2019

Global Id: T10000013048  
Status: Open - Eligible for Closure  
Status Date: 12/23/2019

Global Id: T10000013048  
Status: Completed - Case Closed  
Status Date: 03/11/2020

**CORTESE:**

Name: EAST BAY AGENCY FOR CHILDREN  
Address: 303 VAN BUREN AVENUE  
City,State,Zip: OAKLAND, CA 94610  
Region: CORTESE  
Envirostor Id: Not reported  
Global ID: T10000013048  
Site/Facility Type: LUST CLEANUP SITE  
Cleanup Status: COMPLETED - CASE CLOSED  
Status Date: Not reported  
Site Code: Not reported  
Latitude: Not reported  
Longitude: Not reported  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: active  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported  
File Name: Active Open

**HWTS:**

Name: EAST BAY AGENCY FOR CHILDREN  
Address: 303 VAN BUREN AVENUE  
Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003013079  
Inactive Date: 08/01/2019  
Create Date: 05/02/2019  
Last Act Date: Not reported  
Mailing Name: Not reported  
Mailing Address: 303 VAN BUREN AVENUE  
Mailing Address 2: Not reported  
Mailing City,State,Zip: OAKLAND, CA 94610

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EAST BAY AGENCY FOR CHILDREN (Continued)**

**S124393535**

Owner Name: EAST BAY AGENCY FOR CHILDREN  
Owner Address: 303 VAN BUREN AVENUE  
Owner Address 2: Not reported  
Owner City,State,Zip: OAKLAND, CA 94610  
Owner Phone: Not reported  
Owner Fax: Not reported  
Contact Name: DEBBIE CHRISTOU  
Contact Address: 303 VAN BUREN AVENUE  
Contact Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94610  
Contact Phone: Not reported  
Contact Fax: Not reported  
Facility Status: Inactive  
Facility Type: TEMPORARY  
Category: STATE  
Latitude: 37.810807  
Longitude: -122.256278

AJ175  
SSW  
1/4-1/2  
0.393 mi.  
2077 ft.

**LAKESIDE PARK**  
**468 BELLEVUE AVE**  
**OAKLAND, CA 94610**  
**Site 1 of 2 in cluster AJ**

**LUST S100226707**  
**Alameda County CS N/A**  
**Cortese**  
**HIST CORTESE**  
**CERS**

**Relative:**  
**Lower**  
**Actual:**  
**17 ft.**

**LUST:**  
Name: LAKESIDE PARK  
Address: 468 BELLEVUE AVE  
City,State,Zip: OAKLAND, CA 94610  
Lead Agency: SAN FRANCISCO BAY RWQCB (REGION 2)  
Case Type: LUST Cleanup Site  
Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0600100811](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600100811)  
Global Id: T0600100811  
Latitude: 37.8084573969257  
Longitude: -122.252372503281  
Status: Completed - Case Closed  
Status Date: 01/27/2016  
Case Worker: Not reported  
RB Case Number: 01-0878  
Local Agency: Not reported  
File Location: All Files are on GeoTracker or in the Local Agency Database  
Local Case Number: RO0003062  
Potential Media Affect: Under Investigation  
Potential Contaminants of Concern: Diesel  
EPA Region: 9  
Coordinate Source: Manual Entry on Screens  
Cuf Case: NO  
Quantity Released Gallons: Not reported  
Begin Date: 01/11/1989  
Leak Reported Date: 04/11/1989  
How Discovered: Tank Closure  
How Discovered Description: Not reported  
Discharge Source: Other  
Discharge Cause: Unknown  
Stop Method: Other Means  
Stop Description: Not reported  
No Further Action Date: 01/27/2016  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**LAKESIDE PARK (Continued)**

**S100226707**

Disadvantaged Community: Not reported  
CA EnviroScreen 3 Score: 61-65%  
CA EnviroScreen 4 Score: 55-60%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: UST removed from the site. However, analytical data and/or Tank Removal Report not yet received. No response to a request for documents. Site needs to be evaluated.

**LUST:**

Global Id: T0600100811  
Action Type: ENFORCEMENT  
Date: 06/14/2012  
Action: Referral to Regional Board - #20120614

Global Id: T0600100811  
Action Type: Other  
Date: 04/11/1989  
Action: Leak Discovery

Global Id: T0600100811  
Action Type: Other  
Date: 04/11/1989  
Action: Leak Reported

Global Id: T0600100811  
Action Type: RESPONSE  
Date: 09/20/2010  
Action: Tank Removal Report / UST Sampling Report

Global Id: T0600100811  
Action Type: ENFORCEMENT  
Date: 06/12/1995  
Action: Other Report

Global Id: T0600100811  
Action Type: ENFORCEMENT  
Date: 11/18/2015  
Action: Staff Letter

Global Id: T0600100811  
Action Type: RESPONSE  
Date: 12/08/2015  
Action: Email Correspondence

Global Id: T0600100811  
Action Type: RESPONSE  
Date: 12/08/2015  
Action: Email Correspondence

Global Id: T0600100811  
Action Type: ENFORCEMENT  
Date: 07/21/2010  
Action: Staff Letter - #20100721

Global Id: T0600100811  
Action Type: ENFORCEMENT

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**LAKESIDE PARK (Continued)**

**S100226707**

Date: 02/14/2013  
Action: File Review - Closure

Global Id: T0600100811  
Action Type: Other  
Date: 04/11/1989  
Action: Leak Stopped

**LUST:**

Global Id: T0600100811  
Status: Open - Case Begin Date  
Status Date: 01/11/1989

Global Id: T0600100811  
Status: Open - Site Assessment  
Status Date: 01/11/1989

Global Id: T0600100811  
Status: Completed - Case Closed  
Status Date: 01/27/2016

**Alameda County CS:**

Name: LAKESIDE PARK  
Address: 468 BELLEVUE AVE  
City,State,Zip: OAKLAND, CA 94610  
Status: Leak Confirmation  
Record Id: RO0003062  
PE: 5602  
Facility Status: Leak Confirmation  
Latitude: 37.808078285  
Longitude: -122.25294595

Name: LAKESIDE PARK  
Address: 468 BELLEVUE AVE  
City,State,Zip: OAKLAND, CA 94610  
Status: 11  
Record Id: RO0003062  
PE: 5602  
Facility Status: Not reported  
Latitude: 37.808078285  
Longitude: -122.25294595

**CORTESE:**

Name: LAKESIDE PARK  
Address: 468 BELLEVUE AVE  
City,State,Zip: OAKLAND, CA 94610  
Region: CORTESE  
Envirostor Id: Not reported  
Global ID: T0600100811  
Site/Facility Type: LUST CLEANUP SITE  
Cleanup Status: COMPLETED - CASE CLOSED  
Status Date: Not reported  
Site Code: Not reported  
Latitude: Not reported  
Longitude: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**LAKESIDE PARK (Continued)**

**S100226707**

Owner: Not reported  
 Enf Type: Not reported  
 Swat R: Not reported  
 Flag: active  
 Order No: Not reported  
 Waste Discharge System No: Not reported  
 Effective Date: Not reported  
 Region 2: Not reported  
 WID Id: Not reported  
 Solid Waste Id No: Not reported  
 Waste Management Uit Name: Not reported  
 File Name: Active Open

**HIST CORTESE:**

edr\_fname: LAKESIDE PARK  
 edr\_fadd1: 468 BELLEVUE  
 City,State,Zip: OAKLAND, CA  
 Region: CORTESE  
 Facility County Code: 1  
 Reg By: LTNKA  
 Reg Id: 01-0878

**CERS:**

Name: LAKESIDE PARK  
 Address: 468 BELLEVUE AVE  
 City,State,Zip: OAKLAND, CA 94610  
 Site ID: 740657  
 CERS ID: T0600100811  
 CERS Description: Leaking Underground Storage Tank Cleanup Site

**AJ176**  
**SSW**  
**1/4-1/2**  
**0.393 mi.**  
**2077 ft.**

**LAKESIDE PARK**  
**468 BELLEVUE AVE**  
**OAKLAND, CA 94610**

**UST FINDER RELEASE** **1029013911**  
**N/A**

**Site 2 of 2 in cluster AJ**

**Relative:**  
**Lower**  
**Actual:**  
**17 ft.**

**UST FINDER RELEASE:**

Object ID: 41582  
 Facility ID: Not reported  
 Lust ID: CAT0600100811  
 Name: LAKESIDE PARK  
 Address: 468 BELLEVUE AVE  
 City,State,Zip: OAKLAND, CA 94610  
 Address Match Type: StreetAddress  
 Reported Date: Not reported  
 Status: No Further Action  
 Substance: Not reported  
 Population within 1500ft: 3734  
 Domestic Wells within 1500ft: 0  
 Land Use: Developed, Open Space  
 Within SPA: No  
 SPA PWS Facility ID: Not reported  
 SPA Water Type: Not reported  
 SPA Facility Type: Not reported  
 SPA HUC12: Not reported  
 Within WHPA: No  
 WHPA PWS Facility ID: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**LAKESIDE PARK (Continued)**

**1029013911**

WHPA Water Type:	Not reported
WHPA Facility Type:	Not reported
WHPA HUC12:	Not reported
Within 100yr Floodplain:	No
Tribe:	Not reported
EPA Region:	9
NFA Letter 1:	Not reported
NFA Letter 2:	Not reported
NFA Letter 3:	Not reported
NFA Letter 4:	Not reported
Closed With Residual Contaminate:	Not reported
Coordinate Source:	Geocode
X Coord:	-122.25281
Y Coord:	37.80798
Latitude:	37.80798
Longitude:	-122.252809999999

**AK177  
 NNW  
 1/4-1/2  
 0.396 mi.  
 2092 ft.**

**CITY OF OAKLAND FIRE STATION #10  
 172 SANTA CLARA  
 OAKLAND, CA 94610  
 Site 1 of 2 in cluster AK**

**UST FINDER RELEASE 1028936979  
 N/A**

**Relative:  
 Higher  
 Actual:  
 97 ft.**

<b>UST FINDER RELEASE:</b>	
Object ID:	41591
Facility ID:	Not reported
Lust ID:	CAT0600100575
Name:	CITY OF OAKLAND FIRE STATION #10
Address:	172 SANTA CLARA
City,State,Zip:	OAKLAND, CA 94610
Address Match Type:	PointAddress
Reported Date:	Not reported
Status:	No Further Action
Substance:	Not reported
Population within 1500ft:	6231
Domestic Wells within 1500ft:	0
Land Use:	Developed, Medium Intensity
Within SPA:	No
SPA PWS Facility ID:	Not reported
SPA Water Type:	Not reported
SPA Facility Type:	Not reported
SPA HUC12:	Not reported
Within WHPA:	No
WHPA PWS Facility ID:	Not reported
WHPA Water Type:	Not reported
WHPA Facility Type:	Not reported
WHPA HUC12:	Not reported
Within 100yr Floodplain:	No
Tribe:	Not reported
EPA Region:	9
NFA Letter 1:	Not reported
NFA Letter 2:	Not reported
NFA Letter 3:	Not reported
NFA Letter 4:	Not reported
Closed With Residual Contaminate:	Not reported
Coordinate Source:	Geocode
X Coord:	-122.2525
Y Coord:	37.8184900000001

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

CITY OF OAKLAND FIRE STATION #10 (Continued)

1028936979

Latitude: 37.8184899999999  
Longitude: -122.2524999999999

AK178  
NNW  
1/4-1/2  
0.396 mi.  
2092 ft.  
Relative:  
Higher

CITY OF OAKLAND ENVIR SCVS DIV  
172 SANTA CLARA  
OAKLAND, CA 94610  
Site 2 of 2 in cluster AK

LUST  
Alameda County CS  
Cortese  
EMI  
HIST CORTESE  
HWTS  
CERS

U003713805  
N/A

Actual:  
97 ft.

LUST:

Name: CITY OF OAKLAND FIRE STATION #10  
Address: 172 SANTA CLARA  
City,State,Zip: OAKLAND, CA 94610  
Lead Agency: ALAMEDA COUNTY LOP  
Case Type: LUST Cleanup Site  
Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0600100575](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600100575)  
Global Id: T0600100575  
Latitude: 37.81868  
Longitude: -122.252307  
Status: Completed - Case Closed  
Status Date: 09/30/1992  
Case Worker: Not reported  
RB Case Number: 01-0625  
Local Agency: Not reported  
File Location: All Files are on GeoTracker or in the Local Agency Database  
Local Case Number: RO0001115  
Potential Media Affect: Soil  
Potential Contaminants of Concern: Diesel  
EPA Region: 9  
Coordinate Source: Google Geocode  
Cuf Case: NO  
Quantity Released Gallons: 0  
Begin Date: 04/14/1989  
Leak Reported Date: 04/14/1989  
How Discovered: Other Means  
How Discovered Description: Not reported  
Discharge Source: Not reported  
Discharge Cause: Not reported  
Stop Method: Other Means  
Stop Description: Not reported  
No Further Action Date: 09/30/1992  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Not reported  
CA Enviroscreen 3 Score: 16-20%  
CA Enviroscreen 4 Score: 25-30%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Not reported

LUST:

Global Id: T0600100575  
Contact Type: Regional Board Caseworker  
Contact Name: Regional Water Board  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CITY OF OAKLAND ENVIR SCVS DIV (Continued)**

**U003713805**

Address: 1515 CLAY ST SUITE 1400  
City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

**LUST:**

Global Id: T0600100575  
Action Type: Other  
Date: 04/14/1989  
Action: Leak Reported

Global Id: T0600100575  
Action Type: REMEDIATION  
Date: 09/09/9999  
Action: Not reported

**LUST:**

Global Id: T0600100575  
Status: Open - Case Begin Date  
Status Date: 04/14/1989

Global Id: T0600100575  
Status: Completed - Case Closed  
Status Date: 09/30/1992

**LUST REG 2:**

Region: 2  
Facility Id: 01-0625  
Facility Status: Case Closed  
Case Number: 3661  
How Discovered: Tank Closure  
Leak Cause: Structure Failure  
Leak Source: Tank  
Date Leak Confirmed: Not reported  
Oversight Program: LUST  
Prelim. Site Assessment Workplan Submitted: Not reported  
Preliminary Site Assessment Began: 6/30/1989  
Pollution Characterization Began: Not reported  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

**Alameda County CS:**

Name: CITY OF OAKLAND FIRE STATION #10  
Address: 172 SANTA CLARA AVE  
City,State,Zip: OAKLAND, CA 94610  
Status: Case Closed  
Record Id: RO0001115  
PE: 5602  
Facility Status: Case Closed  
Latitude: 37.818884202  
Longitude: -122.25295791

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

CITY OF OAKLAND ENVIR SCVS DIV (Continued)

U003713805

CORTESE:

Name: CITY OF OAKLAND FIRE STATION #10  
Address: 172 SANTA CLARA  
City,State,Zip: OAKLAND, CA 94610  
Region: CORTESE  
Envirostor Id: Not reported  
Global ID: T0600100575  
Site/Facility Type: LUST CLEANUP SITE  
Cleanup Status: COMPLETED - CASE CLOSED  
Status Date: Not reported  
Site Code: Not reported  
Latitude: Not reported  
Longitude: Not reported  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: active  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported  
File Name: Active Open

EMI:

Name: CITY OF OAKLAND (FIRE STATION  
Address: 172 SANTA CLARA  
City,State,Zip: OAKLAND, CA 94610  
Year: 2007  
County Code: 1  
Air Basin: SF  
Facility ID: 14295  
Air District Name: BA  
SIC Code: 9224  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: .001  
Reactive Organic Gases Tons/Yr: .0008367  
Carbon Monoxide Emissions Tons/Yr: .002  
NOX - Oxides of Nitrogen Tons/Yr: .011  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: .001  
Part. Matter 10 Micrometers and Smlr Tons/Yr:.000976

Name: CITY OF OAKLAND ENVIR SCVS DIV  
Address: 172 SANTA CLARA  
City,State,Zip: OAKLAND, CA 94610  
Year: 2008  
County Code: 1  
Air Basin: SF  
Facility ID: 14295  
Air District Name: BA  
SIC Code: 9224

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

CITY OF OAKLAND ENVIR SCVS DIV (Continued)

U003713805

Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: .001  
Reactive Organic Gases Tons/Yr: .0008367  
Carbon Monoxide Emissions Tons/Yr: .006  
NOX - Oxides of Nitrogen Tons/Yr: .005  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: CITY OF OAKLAND ENVIR SCVS DIV  
Address: 172 SANTA CLARA  
City,State,Zip: OAKLAND, CA 94610  
Year: 2009  
County Code: 1  
Air Basin: SF  
Facility ID: 14295  
Air District Name: BA  
SIC Code: 9224  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0.001  
Reactive Organic Gases Tons/Yr: 8.3670000000000001E-4  
Carbon Monoxide Emissions Tons/Yr: 6.0000000000000001E-3  
NOX - Oxides of Nitrogen Tons/Yr: 5.0000000000000001E-3  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: CITY OF OAKLAND ENVIR SCVS DIV  
Address: 172 SANTA CLARA  
City,State,Zip: OAKLAND, CA 94610  
Year: 2010  
County Code: 1  
Air Basin: SF  
Facility ID: 14295  
Air District Name: BA  
SIC Code: 9224  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0.001  
Reactive Organic Gases Tons/Yr: 8.3670000000000001E-4  
Carbon Monoxide Emissions Tons/Yr: 8.0000000000000002E-3  
NOX - Oxides of Nitrogen Tons/Yr: 6.0000000000000001E-3  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: CITY OF OAKLAND ENVIR SCVS DIV  
Address: 172 SANTA CLARA  
City,State,Zip: OAKLAND, CA 94610  
Year: 2011  
County Code: 1  
Air Basin: SF

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

CITY OF OAKLAND ENVIR SCVS DIV (Continued)

U003713805

Facility ID: 14295  
Air District Name: BA  
SIC Code: 9224  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0  
Reactive Organic Gases Tons/Yr: 0  
Carbon Monoxide Emissions Tons/Yr: 0.002  
NOX - Oxides of Nitrogen Tons/Yr: 0.004  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: CITY OF OAKLAND ENVIR SCVS DIV  
Address: 172 SANTA CLARA  
City,State,Zip: OAKLAND, CA 94610  
Year: 2012  
County Code: 1  
Air Basin: SF  
Facility ID: 14295  
Air District Name: BA  
SIC Code: 9224  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0  
Reactive Organic Gases Tons/Yr: 0  
Carbon Monoxide Emissions Tons/Yr: 0.002  
NOX - Oxides of Nitrogen Tons/Yr: 0.004  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: CITY OF OAKLAND ENVIR SCVS DIV  
Address: 172 SANTA CLARA  
City,State,Zip: OAKLAND, CA 94610  
Year: 2013  
County Code: 1  
Air Basin: SF  
Facility ID: 14295  
Air District Name: BA  
SIC Code: 9224  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0  
Reactive Organic Gases Tons/Yr: 0  
Carbon Monoxide Emissions Tons/Yr: 0.002  
NOX - Oxides of Nitrogen Tons/Yr: 0.004  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: CITY OF OAKLAND ENVIR SCVS DIVISION  
Address: 172 SANTA CLARA  
City,State,Zip: OAKLAND, CA 94610

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

CITY OF OAKLAND ENVIR SCVS DIV (Continued)

U003713805

Year: 2014  
County Code: 1  
Air Basin: SF  
Facility ID: 14295  
Air District Name: BA  
SIC Code: 9224  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0.000249139  
Reactive Organic Gases Tons/Yr: 0  
Carbon Monoxide Emissions Tons/Yr: 0.002404253  
NOX - Oxides of Nitrogen Tons/Yr: 0.004222134  
SOX - Oxides of Sulphur Tons/Yr: 6.634e-006  
Particulate Matter Tons/Yr: 0.000145519  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0.000139698

Name: CITY OF OAKLAND ENVIR SCVS DIVISION  
Address: 172 SANTA CLARA  
City,State,Zip: OAKLAND, CA 94610  
Year: 2015  
County Code: 1  
Air Basin: SF  
Facility ID: 14295  
Air District Name: BA  
SIC Code: 9224  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0.000535037  
Reactive Organic Gases Tons/Yr: 0.000476606  
Carbon Monoxide Emissions Tons/Yr: 0.005163233  
NOX - Oxides of Nitrogen Tons/Yr: 0.009067202  
SOX - Oxides of Sulphur Tons/Yr: 1.4246e-005  
Particulate Matter Tons/Yr: 0.000312507  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0.000300007

Name: CITY OF OAKLAND ENVIR SCVS DIVISION  
Address: 172 SANTA CLARA  
City,State,Zip: OAKLAND, CA 94610  
Year: 2016  
County Code: 1  
Air Basin: SF  
Facility ID: 14295  
Air District Name: BA  
SIC Code: 9224  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0.000535037  
Reactive Organic Gases Tons/Yr: 0.0004700300045  
Carbon Monoxide Emissions Tons/Yr: 0.005163233  
NOX - Oxides of Nitrogen Tons/Yr: 0.009067202  
SOX - Oxides of Sulphur Tons/Yr: 1.4246e-005  
Particulate Matter Tons/Yr: 0.000312507  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0.000300007

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

CITY OF OAKLAND ENVIR SCVS DIV (Continued)

U003713805

Name: CITY OF OAKLAND ENVIR SCVS DIVISION  
Address: 172 SANTA CLARA  
City,State,Zip: OAKLAND, CA 94610  
Year: 2018  
County Code: 1  
Air Basin: SF  
Facility ID: 14295  
Air District Name: BA  
SIC Code: 9224  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0.000518172  
Reactive Organic Gases Tons/Yr: 0.000455214102  
Carbon Monoxide Emissions Tons/Yr: 0.005161862  
NOX - Oxides of Nitrogen Tons/Yr: 0.009053112  
SOX - Oxides of Sulphur Tons/Yr: 1.09e-005  
Particulate Matter Tons/Yr: 0.00028761368209  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0.000285888

Name: CITY OF OAKLAND ENVIR SCVS DIVISION  
Address: 172 SANTA CLARA  
City,State,Zip: OAKLAND, CA 94610  
Year: 2019  
County Code: 1  
Air Basin: SF  
Facility ID: 14295  
Air District Name: BA  
SIC Code: 9224  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0.001273471  
Reactive Organic Gases Tons/Yr: 0.0011187442735  
Carbon Monoxide Emissions Tons/Yr: 0.013795938  
NOX - Oxides of Nitrogen Tons/Yr: 0.024195953  
SOX - Oxides of Sulphur Tons/Yr: 2.9131e-005  
Particulate Matter Tons/Yr: 0.00079592  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0.000764083

Name: CITY OF OAKLAND ENVIR SCVS DIVISION  
Address: 172 SANTA CLARA  
City,State,Zip: OAKLAND, CA 94610  
Year: 2020  
County Code: 1  
Air Basin: SF  
Facility ID: 14295  
Air District Name: BA  
SIC Code: 9224  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0.001273471  
Reactive Organic Gases Tons/Yr: 0.0011187442735  
Carbon Monoxide Emissions Tons/Yr: 0.013795938  
NOX - Oxides of Nitrogen Tons/Yr: 0.024195953  
SOX - Oxides of Sulphur Tons/Yr: 2.9131e-005

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

CITY OF OAKLAND ENVIR SCVS DIV (Continued)

U003713805

Particulate Matter Tons/Yr: 0.00079592  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0.000764083

Name: CITY OF OAKLAND ENVIR SCVS DIVISION  
Address: 172 SANTA CLARA  
City,State,Zip: OAKLAND, CA 94610  
Year: 2021  
County Code: 1  
Air Basin: SF  
Facility ID: 14295  
Air District Name: BA  
SIC Code: 9224  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0.001273471  
Reactive Organic Gases Tons/Yr: 0.0011187442735  
Carbon Monoxide Emissions Tons/Yr: 0.013795938  
NOX - Oxides of Nitrogen Tons/Yr: 0.024218239  
SOX - Oxides of Sulphur Tons/Yr: 2.91e-005  
Particulate Matter Tons/Yr: 0.00079592  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0.00079592

HIST CORTESE:

edr\_fname: OAKLAND FIRE STATION #10  
edr\_fadd1: 172 SANTA CLARA  
City,State,Zip: OAKLAND, CA 94610  
Region: CORTESE  
Facility County Code: 1  
Reg By: LTNKA  
Reg Id: 01-0625

HWTS:

Name: CODY MESHBERGER  
Address: 172 SANTA CLARA AVENUE  
Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003246720  
Inactive Date: 11/13/2023  
Create Date: 08/14/2023  
Last Act Date: 11/14/2023  
Mailing Name: Not reported  
Mailing Address: 250 FRANK H. OGAWA PLAZA  
Mailing Address 2: SUITE4344  
Mailing City,State,Zip: OAKLAND, CA  
Owner Name: CODY MESHBERGER  
Owner Address: 250 FRANK H. OGAWA PLAZA  
Owner Address 2: SUITE4344  
Owner City,State,Zip: OAKLAND, CA 94612  
Owner Phone: 5102382979  
Owner Fax: Not reported  
Contact Name: CODY MESHBERGER  
Contact Address: 250 FRANK H. OGAWA PLAZA  
Contact Address 2: SUITE4344  
City,State,Zip: OAKLAND, CA 94612  
Contact Phone: 5102382979

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

CITY OF OAKLAND ENVIR SCVS DIV (Continued)

U003713805

Contact Fax: Not reported  
Facility Status: Not reported  
Facility Type: Not reported  
Category: Not reported  
Latitude: Not reported  
Longitude: Not reported

Name: CITY OF OAKLAND  
Address: 172 SANTA CLARA AVENUE  
Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94610  
EPA ID: CAC003246726  
Inactive Date: 11/13/2023  
Create Date: 08/14/2023  
Last Act Date: 11/14/2023  
Mailing Name: Not reported  
Mailing Address: 250 FRANK H. OGAWA PLAZA  
Mailing Address 2: SUITE4344  
Mailing City,State,Zip: OAKLAND, CA  
Owner Name: CITY OF OAKLAND  
Owner Address: 250 FRANK H. OGAWA PLAZA  
Owner Address 2: SUITE4344  
Owner City,State,Zip: OAKLAND, CA 94612  
Owner Phone: 5102382979  
Owner Fax: Not reported  
Contact Name: CITY OF OAKLAND  
Contact Address: 250 FRANK H. OGAWA PLAZA  
Contact Address 2: SUITE4344  
City,State,Zip: OAKLAND, CA 94612  
Contact Phone: 5102382979  
Contact Fax: Not reported  
Facility Status: Not reported  
Facility Type: Not reported  
Category: Not reported  
Latitude: Not reported  
Longitude: Not reported

CERS:

Name: CITY OF OAKLAND FIRE STATION #10  
Address: 172 SANTA CLARA  
City,State,Zip: OAKLAND, CA 94610  
Site ID: 722325  
CERS ID: T0600100575  
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:

Affiliation Type Desc: Regional Board Caseworker  
Entity Name: Regional Water Board - SAN FRANCISCO BAY RWQCB (REGION 2)  
Entity Title: Not reported  
Affiliation Address: 1515 CLAY ST SUITE 1400  
Affiliation City: OAKLAND  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: ,

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CITY OF OAKLAND ENVIR SCVS DIV (Continued)**

**U003713805**

Name: CITY OF OAKLAND  
Address: 172 SANTA CLARA  
City,State,Zip: OAKLAND, CA 94610  
Site ID: 460512  
CERS ID: 110054257228  
CERS Description: US EPA Air Emission Inventory System (EIS)

Affiliation:  
Affiliation Type Desc: Regional Board Caseworker  
Entity Name: CHERIE MCCAULOU SAN FRANCISCO BAY RWQCB REGN  
Entity Title: Not reported  
Affiliation Address: 1515 CLAY STREETNA SUITE 1400  
Affiliation City: OAKLAND  
Affiliation State: Not reported  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: ,

**AL179  
NW  
1/4-1/2  
0.407 mi.  
2150 ft.**

**ULIBARRI PROPERTY  
387 ORANGE ST  
OAKLAND, CA 94610  
Site 1 of 2 in cluster AL**

**Alameda County CS S107998234  
N/A**

**Relative:  
Higher**

Alameda County CS:  
Name: ULIBARRI PROPERTY  
Address: 387 ORANGE ST  
City,State,Zip: OAKLAND, CA 94610  
Status: Leak Confirmation  
Record Id: RO0002921  
PE: 5602  
Facility Status: Leak Confirmation  
Latitude: 37.816950685  
Longitude: -122.25523598

**Actual:  
108 ft.**

Name: ULIBARRI PROPERTY  
Address: 387 ORANGE ST  
City,State,Zip: OAKLAND, CA 94610  
Status: Preliminary Site Assessment Underway  
Record Id: RO0002921  
PE: 5602  
Facility Status: Preliminary Site Assessment Underway  
Latitude: 37.816950685  
Longitude: -122.25523598

Name: ULIBARRI PROPERTY  
Address: 387 ORANGE ST  
City,State,Zip: OAKLAND, CA 94610  
Status: Pollution Characterization  
Record Id: RO0002921  
PE: 5602  
Facility Status: Pollution Charaterization  
Latitude: 37.816950685  
Longitude: -122.25523598

Name: ULIBARRI PROPERTY  
Address: 387 ORANGE ST

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**ULIBARRI PROPERTY (Continued)**

**S107998234**

City,State,Zip: OAKLAND, CA 94610  
Status: Remediation Plan  
Record Id: RO0002921  
PE: 5602  
Facility Status: Remediation Plan  
Latitude: 37.816950685  
Longitude: -122.25523598

Name: ULIBARRI PROPERTY  
Address: 387 ORANGE ST  
City,State,Zip: OAKLAND, CA 94610  
Status: Remedial Action Underway  
Record Id: RO0002921  
PE: 5602  
Facility Status: Remedial Action Underway  
Latitude: 37.816950685  
Longitude: -122.25523598

Name: ULIBARRI PROPERTY  
Address: 387 ORANGE ST  
City,State,Zip: OAKLAND, CA 94610  
Status: Verificaiton Monitoring Underway  
Record Id: RO0002921  
PE: 5602  
Facility Status: Verification Monitoring Underway  
Latitude: 37.816950685  
Longitude: -122.25523598

Name: ULIBARRI PROPERTY  
Address: 387 ORANGE ST  
City,State,Zip: OAKLAND, CA 94610  
Status: Case Closed  
Record Id: RO0002921  
PE: 5602  
Facility Status: Case Closed  
Latitude: 37.816950685  
Longitude: -122.25523598

**AL180  
NW  
1/4-1/2  
0.411 mi.  
2168 ft.**

**PRIVATE RESIDENCE  
PRIVATE RESIDENCE  
OAKLAND, CA 94610**

**LUST S110654089  
N/A**

**Site 2 of 2 in cluster AL**

**Relative:  
Higher  
Actual:  
107 ft.**

LUST:  
Name: PRIVATE RESIDENCE  
Address: PRIVATE RESIDENCE  
City,State,Zip: OAKLAND, CA 94610  
Lead Agency: ALAMEDA COUNTY LOP  
Case Type: LUST Cleanup Site  
Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T06019730058](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T06019730058)  
Global Id: T06019730058  
Latitude: 37.816813  
Longitude: -122.255629  
Status: Completed - Case Closed  
Status Date: 08/24/2010  
Case Worker: Not reported  
RB Case Number: NA

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIVATE RESIDENCE (Continued)**

**S110654089**

Local Agency: Not reported  
File Location: All Files are on GeoTracker or in the Local Agency Database  
Local Case Number: RO0002921  
Potential Media Affect: Other Groundwater (uses other than drinking water)  
Potential Contaminants of Concern: Heating Oil / Fuel Oil  
EPA Region: 9  
Coordinate Source: Google Geocode  
Cuf Case: YES  
Quantity Released Gallons: 0  
Begin Date: 02/28/2006  
Leak Reported Date: 03/23/2006  
How Discovered: Site Assessment/Site Investigation  
How Discovered Description: PRELIMINARY SITE ASSESSMENT  
Discharge Source: Tank  
Discharge Cause: Physc / Mech Damage  
Stop Method: Close and Remove Tank  
Stop Description: CORROSION & HOLES & CRACKS  
No Further Action Date: 08/24/2010  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Not reported  
CA Enviroscreen 3 Score: 26-30%  
CA Enviroscreen 4 Score: 35-40%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: In February 2006, prior to the removal of the UST, a preliminary site assessment was completed and soil borings installed around the former tank location detected significantly elevated levels of hydrocarbon contamination in soil. In August 2007 one UST was removed and confirmation soil samples detected elevated levels of contamination beneath the tank. Remedial action was implemented in October 2008 and verification monitoring is currently in progress at the site.

**LUST:**

Global Id: T06019730058  
Action Type: ENFORCEMENT  
Date: 07/16/2007  
Action: \* No Action - #20071607

Global Id: T06019730058  
Action Type: ENFORCEMENT  
Date: 12/01/2009  
Action: File review

Global Id: T06019730058  
Action Type: ENFORCEMENT  
Date: 07/24/2009  
Action: Staff Letter

Global Id: T06019730058  
Action Type: ENFORCEMENT  
Date: 07/12/2010  
Action: Staff Letter - #20100712

Global Id: T06019730058  
Action Type: ENFORCEMENT  
Date: 08/24/2010

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIVATE RESIDENCE (Continued)**

**S110654089**

Action: Closure/No Further Action Letter - #20100824

Global Id: T06019730058  
Action Type: Other  
Date: 03/23/2006  
Action: Leak Reported

Global Id: T06019730058  
Action Type: RESPONSE  
Date: 09/10/2010  
Action: Well Destruction Report

Global Id: T06019730058  
Action Type: REMEDIATION  
Date: 12/01/2009  
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T06019730058  
Action Type: ENFORCEMENT  
Date: 07/14/2008  
Action: Staff Letter - #20080714

Global Id: T06019730058  
Action Type: ENFORCEMENT  
Date: 06/10/2010  
Action: Notification - Public Notice of Case Closure - #20100610

Global Id: T06019730058  
Action Type: Other  
Date: 02/28/2006  
Action: Leak Discovery

Global Id: T06019730058  
Action Type: Other  
Date: 08/27/2007  
Action: Leak Stopped

Global Id: T06019730058  
Action Type: RESPONSE  
Date: 08/15/2007  
Action: Tank Removal Report / UST Sampling Report

**LUST:**

Global Id: T06019730058  
Status: Open - Case Begin Date  
Status Date: 02/28/2006

Global Id: T06019730058  
Status: Open - Site Assessment  
Status Date: 02/28/2006

Global Id: T06019730058  
Status: Open - Site Assessment  
Status Date: 03/28/2006

Global Id: T06019730058  
Status: Open - Remediation

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIVATE RESIDENCE (Continued)**

**S110654089**

Status Date: 02/11/2008

Global Id: T06019730058  
Status: Open - Remediation  
Status Date: 07/14/2008

Global Id: T06019730058  
Status: Open - Verification Monitoring  
Status Date: 12/11/2008

Global Id: T06019730058  
Status: Completed - Case Closed  
Status Date: 08/24/2010

Name: PRIVATE RESIDENCE  
Address: PRIVATE RESIDENCE  
City,State,Zip: OAKLAND, CA 94610  
Lead Agency: ALAMEDA COUNTY LOP  
Case Type: LUST Cleanup Site  
Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0600100621](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600100621)  
Global Id: T0600100621  
Latitude: 37.8100382421902  
Longitude: -122.229402065277  
Status: Completed - Case Closed  
Status Date: 09/09/2014  
Case Worker: Not reported  
RB Case Number: 01-0676  
Local Agency: Not reported  
File Location: All Files are on GeoTracker or in the Local Agency Database  
Local Case Number: RO0003043  
Potential Media Affect: Under Investigation  
Potential Contaminants of Concern: Kerosene  
EPA Region: 9  
Coordinate Source: Manual Entry on Screens  
Cuf Case: NO  
Quantity Released Gallons: 0  
Begin Date: 08/17/1990  
Leak Reported Date: 08/17/1990  
How Discovered: Tank Closure  
How Discovered Description: Not reported  
Discharge Source: Other  
Discharge Cause: Unknown  
Stop Method: Other Means  
Stop Description: Not reported  
No Further Action Date: 09/09/2014  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Not reported  
Disadvantaged Community: Not reported  
CA Enviroscreen 3 Score: 11-15%  
CA Enviroscreen 4 Score: 5-10%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: UST removed from the site. Analytical data and/or Tank Removal Report received 7/13/2010; UST removal report dated circa August 17,1990 from Subsurface Consultants. Release from home heating oil UST.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIVATE RESIDENCE (Continued)**

**S110654089**

Initial soil sample 5,100 mg/kg TPH kerosene at 3 feet bgs - confirmation sample collected from base of UST overexcavation - 50 mg/kg TPH kerosene at 5 feet bgs. According to the LTCP, sites with soil that do not contain sufficient mobile constituents to cause groundwater to exceed the groundwater criteria in the policy shall be considered low threat sites for the groundwater medium.

LUST:

Global Id: T0600100621  
Contact Type: Regional Board Caseworker  
Contact Name: Regional Water Board  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY ST SUITE 1400  
City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

LUST:

Global Id: T0600100621  
Action Type: ENFORCEMENT  
Date: 08/05/2010  
Action: Other Report - #2010-08-05

Global Id: T0600100621  
Action Type: ENFORCEMENT  
Date: 09/09/2014  
Action: Closure/No Further Action Letter - #2014-09-09

Global Id: T0600100621  
Action Type: Other  
Date: 08/17/1990  
Action: Leak Discovery

Global Id: T0600100621  
Action Type: ENFORCEMENT  
Date: 09/09/2014  
Action: Notice of Responsibility - #2014-09-09

Global Id: T0600100621  
Action Type: ENFORCEMENT  
Date: 07/13/2010  
Action: Staff Letter - #20100713

Global Id: T0600100621  
Action Type: ENFORCEMENT  
Date: 03/02/2012  
Action: File review

Global Id: T0600100621  
Action Type: ENFORCEMENT  
Date: 12/20/2013  
Action: Notification - Public Participation Document

Global Id: T0600100621  
Action Type: Other  
Date: 08/17/1990  
Action: Leak Reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PRIVATE RESIDENCE (Continued)**

**S110654089**

Global Id: T0600100621  
Action Type: ENFORCEMENT  
Date: 08/05/2010  
Action: Technical Correspondence / Assistance / Other

Global Id: T0600100621  
Action Type: RESPONSE  
Date: 08/05/2010  
Action: Correspondence

**LUST:**

Global Id: T0600100621  
Status: Open - Case Begin Date  
Status Date: 08/17/1990

Global Id: T0600100621  
Status: Open - Site Assessment  
Status Date: 08/17/1990

Global Id: T0600100621  
Status: Open - Eligible for Closure  
Status Date: 07/25/2013

Global Id: T0600100621  
Status: Completed - Case Closed  
Status Date: 09/09/2014

**AM181**  
**SW**  
**1/4-1/2**  
**0.421 mi.**  
**2224 ft.**

**SHELL #13-5698 / DEVI OIL COMPANY**  
**350 GRAND**  
**OAKLAND, CA 94610**  
**Site 1 of 2 in cluster AM**

**LUST** **S102436885**  
**Alameda County CS** **N/A**  
**SWEEPS UST**  
**Cortese**  
**HIST CORTESE**  
**CERS**

**Relative:**  
**Lower**  
**Actual:**  
**26 ft.**

**LUST:**

Name: SHELL #13-5698 / DEVI OIL COMPANY  
Address: 350 GRAND  
City,State,Zip: OAKLAND, CA 94610  
Lead Agency: ALAMEDA COUNTY LOP  
Case Type: LUST Cleanup Site  
Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0600101255](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600101255)  
Global Id: T0600101255  
Latitude: 37.809096072  
Longitude: -122.255915  
Status: Completed - Case Closed  
Status Date: 06/12/2007  
Case Worker: Not reported  
RB Case Number: 01-1360  
Local Agency: Not reported  
File Location: All Files are on GeoTracker or in the Local Agency Database  
Local Case Number: RO0000428  
Potential Media Affect: Other Groundwater (uses other than drinking water)  
Potential Contaminants of Concern: Gasoline  
EPA Region: 9  
Coordinate Source: \* Historical Geocode - Exact Address Match  
Cuf Case: YES

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SHELL #13-5698 / DEVI OIL COMPANY (Continued)**

**S102436885**

Quantity Released Gallons: 0  
Begin Date: 01/23/1991  
Leak Reported Date: 08/14/1996  
How Discovered: Other Means  
How Discovered Description: Not reported  
Discharge Source: Not reported  
Discharge Cause: Not reported  
Stop Method: Other Means  
Stop Description: Not reported  
No Further Action Date: 06/12/2007  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Not reported  
CA Enviroscreen 3 Score: 26-30%  
CA Enviroscreen 4 Score: 25-30%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Not reported

LUST:

Global Id: T0600101255  
Contact Type: Regional Board Caseworker  
Contact Name: Regional Water Board  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY ST SUITE 1400  
City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

LUST:

Global Id: T0600101255  
Action Type: REMEDIATION  
Date: 09/16/2003  
Action: Soil Vapor Extraction (SVE)

Global Id: T0600101255  
Action Type: REMEDIATION  
Date: 10/01/2002  
Action: Pump & Treat (P&T) Groundwater

Global Id: T0600101255  
Action Type: REMEDIATION  
Date: 06/01/2001  
Action: Soil Vapor Extraction (SVE)

Global Id: T0600101255  
Action Type: Other  
Date: 08/14/1996  
Action: Leak Reported

Global Id: T0600101255  
Action Type: ENFORCEMENT  
Date: 06/12/2007  
Action: Closure/No Further Action Letter - #20070612

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SHELL #13-5698 / DEVI OIL COMPANY (Continued)**

**S102436885**

LUST:

Global Id:	T0600101255
Status:	Open - Case Begin Date
Status Date:	01/23/1991
Global Id:	T0600101255
Status:	Open - Verification Monitoring
Status Date:	01/23/1991
Global Id:	T0600101255
Status:	Open - Site Assessment
Status Date:	08/14/1996
Global Id:	T0600101255
Status:	Open - Site Assessment
Status Date:	09/15/1997
Global Id:	T0600101255
Status:	Open - Site Assessment
Status Date:	01/13/1998
Global Id:	T0600101255
Status:	Open - Site Assessment
Status Date:	05/31/1998
Global Id:	T0600101255
Status:	Open - Remediation
Status Date:	10/01/2002
Global Id:	T0600101255
Status:	Open - Remediation
Status Date:	09/16/2003
Global Id:	T0600101255
Status:	Completed - Case Closed
Status Date:	06/12/2007

LUST REG 2:

Region:	2
Facility Id:	01-1360
Facility Status:	Preliminary site assessment underway
Case Number:	3714
How Discovered:	Tank Closure
Leak Cause:	Structure Failure
Leak Source:	Tank
Date Leak Confirmed:	Not reported
Oversight Program:	LUST
Prelim. Site Assessment Workplan Submitted:	9/24/1990
Preliminary Site Assessment Began:	1/7/1991
Pollution Characterization Began:	Not reported
Pollution Remediation Plan Submitted:	Not reported
Date Remediation Action Underway:	Not reported
Date Post Remedial Action Monitoring Began:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SHELL #13-5698 / DEVI OIL COMPANY (Continued)**

**S102436885**

Alameda County CS:

Name: SHELL #13-5698 / DEVI OIL COMPANY  
Address: 350 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610  
Status: Leak Confirmation  
Record Id: RO0000428  
PE: 5602  
Facility Status: Leak Confirmation  
Latitude: 37.809097087  
Longitude: -122.25608448

Name: SHELL #13-5698 / DEVI OIL COMPANY  
Address: 350 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610  
Status: Preliminary Site Assessment Workplan Submitted  
Record Id: RO0000428  
PE: 5602  
Facility Status: Preliminary Site Assessment Workplan Submitted  
Latitude: 37.809097087  
Longitude: -122.25608448

Name: SHELL #13-5698 / DEVI OIL COMPANY  
Address: 350 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610  
Status: Preliminary Site Assessment Underway  
Record Id: RO0000428  
PE: 5602  
Facility Status: Preliminary Site Assessment Underway  
Latitude: 37.809097087  
Longitude: -122.25608448

Name: SHELL #13-5698 / DEVI OIL COMPANY  
Address: 350 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610  
Status: Pollution Characterization  
Record Id: RO0000428  
PE: 5602  
Facility Status: Pollution Characterization  
Latitude: 37.809097087  
Longitude: -122.25608448

Name: SHELL #13-5698 / DEVI OIL COMPANY  
Address: 350 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610  
Status: Remedial Action Underway  
Record Id: RO0000428  
PE: 5602  
Facility Status: Remedial Action Underway  
Latitude: 37.809097087  
Longitude: -122.25608448

Name: SHELL #13-5698 / DEVI OIL COMPANY  
Address: 350 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610  
Status: Verificaiton Monitoring Underway  
Record Id: RO0000428  
PE: 5602

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SHELL #13-5698 / DEVI OIL COMPANY (Continued)**

**S102436885**

Facility Status: Verification Monitoring Underway  
Latitude: 37.809097087  
Longitude: -122.25608448

Name: SHELL #13-5698 / DEVI OIL COMPANY  
Address: 350 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610  
Status: Case Closed  
Record Id: RO0000428  
PE: 5602  
Facility Status: Case Closed  
Latitude: 37.809097087  
Longitude: -122.25608448

**SWEEPS UST:**

Name: D. DEVI OIL INC.  
Address: 350 GRAND AVE  
City: OAKLAND  
Status: Active  
Comp Number: 56752  
Number: 1  
Board Of Equalization: 44-000074  
Referral Date: 12-14-93  
Action Date: 05-05-94  
Created Date: 02-29-88  
Owner Tank Id: 5510-02-RU-1  
SWRCB Tank Id: 01-000-056752-000001  
Tank Status: A  
Capacity: 12000  
Active Date: 12-13-93  
Tank Use: M.V. FUEL  
STG: P  
Content: REG UNLEADED  
Number Of Tanks: 4

Name: D. DEVI OIL INC.  
Address: 350 GRAND AVE  
City: OAKLAND  
Status: Active  
Comp Number: 56752  
Number: 1  
Board Of Equalization: 44-000074  
Referral Date: 12-14-93  
Action Date: 05-05-94  
Created Date: 02-29-88  
Owner Tank Id: 5510-02-PL-1  
SWRCB Tank Id: 01-000-056752-000002  
Tank Status: A  
Capacity: 12000  
Active Date: 12-13-93  
Tank Use: M.V. FUEL  
STG: P  
Content: PLUS UNLEADE  
Number Of Tanks: Not reported

Name: D. DEVI OIL INC.  
Address: 350 GRAND AVE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SHELL #13-5698 / DEVI OIL COMPANY (Continued)**

**S102436885**

City: OAKLAND  
Status: Active  
Comp Number: 56752  
Number: 1  
Board Of Equalization: 44-000074  
Referral Date: 12-14-93  
Action Date: 05-05-94  
Created Date: 02-29-88  
Owner Tank Id: 5510-02-SU-1  
SWRCB Tank Id: 01-000-056752-000003  
Tank Status: A  
Capacity: 12000  
Active Date: 12-14-93  
Tank Use: M.V. FUEL  
STG: P  
Content: PRM UNLEADED  
Number Of Tanks: Not reported

Name: D. DEVI OIL INC.  
Address: 350 GRAND AVE  
City: OAKLAND  
Status: Active  
Comp Number: 56752  
Number: 1  
Board Of Equalization: 44-000074  
Referral Date: 12-14-93  
Action Date: 05-05-94  
Created Date: 02-29-88  
Owner Tank Id: 5510-02-DSL-1  
SWRCB Tank Id: 01-000-056752-000004  
Tank Status: A  
Capacity: 12000  
Active Date: 12-13-93  
Tank Use: M.V. FUEL  
STG: P  
Content: DIESEL  
Number Of Tanks: Not reported

**CORTESE:**

Name: SHELL #13-5698 / DEVI OIL COMPANY  
Address: 350 GRAND  
City,State,Zip: OAKLAND, CA 94610  
Region: CORTESE  
Envirostor Id: Not reported  
Global ID: T0600101255  
Site/Facility Type: LUST CLEANUP SITE  
Cleanup Status: COMPLETED - CASE CLOSED  
Status Date: Not reported  
Site Code: Not reported  
Latitude: Not reported  
Longitude: Not reported  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: active  
Order No: Not reported  
Waste Discharge System No: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SHELL #13-5698 / DEVI OIL COMPANY (Continued)**

**S102436885**

Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported  
File Name: Active Open

**HIST CORTESE:**

edr\_fname: DEVI OIL COMPANY  
edr\_fadd1: 350 GRAND  
City,State,Zip: OAKLAND, CA 94610  
Region: CORTESE  
Facility County Code: 1  
Reg By: LTNKA  
Reg Id: 01-1360

**CERS:**

Name: SHELL #13-5698 / DEVI OIL COMPANY  
Address: 350 GRAND  
City,State,Zip: OAKLAND, CA 94610  
Site ID: 761106  
CERS ID: T0600101255  
CERS Description: Leaking Underground Storage Tank Cleanup Site

**Affiliation:**

Affiliation Type Desc: Regional Board Caseworker  
Entity Name: Regional Water Board - SAN FRANCISCO BAY RWQCB (REGION 2)  
Entity Title: Not reported  
Affiliation Address: 1515 CLAY ST SUITE 1400  
Affiliation City: OAKLAND  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: ,

**AM182**  
**SW**  
**1/4-1/2**  
**0.421 mi.**  
**2224 ft.**

**SHELL #13-5698 / DEVI OIL COMPANY**  
**350 GRAND**  
**OAKLAND, CA 94610**  
**Site 2 of 2 in cluster AM**

**UST FINDER RELEASE 1029104729**  
**N/A**

**Relative:**  
**Lower**

**UST FINDER RELEASE:**

**Actual:**  
**26 ft.**

Object ID: 41488  
Facility ID: Not reported  
Lust ID: CAT0600101255  
Name: SHELL #13-5698 / DEVI OIL COMPANY  
Address: 350 GRAND  
City,State,Zip: OAKLAND, CA 94610  
Address Match Type: PointAddress  
Reported Date: Not reported  
Status: No Further Action  
Substance: Not reported  
Population within 1500ft: 4640  
Domestic Wells within 1500ft: 0  
Land Use: Developed, Medium Intensity  
Within SPA: No

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**SHELL #13-5698 / DEVI OIL COMPANY (Continued)**

**1029104729**

SPA PWS Facility ID:	Not reported
SPA Water Type:	Not reported
SPA Facility Type:	Not reported
SPA HUC12:	Not reported
Within WHPA:	No
WHPA PWS Facility ID:	Not reported
WHPA Water Type:	Not reported
WHPA Facility Type:	Not reported
WHPA HUC12:	Not reported
Within 100yr Floodplain:	No
Tribe:	Not reported
EPA Region:	9
NFA Letter 1:	Not reported
NFA Letter 2:	Not reported
NFA Letter 3:	Not reported
NFA Letter 4:	Not reported
Closed With Residual Contaminate:	Not reported
Coordinate Source:	Geocode
X Coord:	-122.25569
Y Coord:	37.80893
Latitude:	37.8089299999999
Longitude:	-122.25569

**AH183  
 SW  
 1/4-1/2  
 0.422 mi.  
 2226 ft.**

**QUICK STOP #46  
 363 GRAND  
 OAKLAND, CA 94610  
 Site 4 of 5 in cluster AH**

**UST FINDER RELEASE 1029094709  
 N/A**

**Relative:  
 Lower  
 Actual:  
 22 ft.**

<b>UST FINDER RELEASE:</b>	
Object ID:	41496
Facility ID:	Not reported
Lust ID:	CAT0600101120
Name:	QUICK STOP #46
Address:	363 GRAND
City,State,Zip:	OAKLAND, CA 94610
Address Match Type:	PointAddress
Reported Date:	Not reported
Status:	No Further Action
Substance:	Not reported
Population within 1500ft:	4557
Domestic Wells within 1500ft:	0
Land Use:	Developed, High Intensity
Within SPA:	No
SPA PWS Facility ID:	Not reported
SPA Water Type:	Not reported
SPA Facility Type:	Not reported
SPA HUC12:	Not reported
Within WHPA:	No
WHPA PWS Facility ID:	Not reported
WHPA Water Type:	Not reported
WHPA Facility Type:	Not reported
WHPA HUC12:	Not reported
Within 100yr Floodplain:	No
Tribe:	Not reported
EPA Region:	9
NFA Letter 1:	Not reported
NFA Letter 2:	Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**QUICK STOP #46 (Continued)**

**1029094709**

NFA Letter 3: Not reported  
 NFA Letter 4: Not reported  
 Closed With Residual Contaminate: Not reported  
 Coordinate Source: Geocode  
 X Coord: -122.25524  
 Y Coord: 37.8088500000001  
 Latitude: 37.80885  
 Longitude: -122.25524

**AH184**  
**SW**  
**1/4-1/2**  
**0.422 mi.**  
**2226 ft.**  
  
**Relative:**  
**Lower**  
  
**Actual:**  
**22 ft.**

**QUICK STOP #46**  
**363 GRAND**  
**OAKLAND, CA 94610**  
  
**Site 5 of 5 in cluster AH**

**LUST**  
**Alameda County CS**  
**SWEEPS UST**  
**CA FID UST**  
**Cortese**  
**HIST CORTESE**  
**CERS**

**S101624561**  
**N/A**

**LUST:**  
 Name: QUICK STOP #46  
 Address: 363 GRAND  
 City,State,Zip: OAKLAND, CA 94610  
 Lead Agency: ALAMEDA COUNTY LOP  
 Case Type: LUST Cleanup Site  
 Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0600101120](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600101120)  
 Global Id: T0600101120  
 Latitude: 37.8086569  
 Longitude: -122.255276  
 Status: Completed - Case Closed  
 Status Date: 10/29/1999  
 Case Worker: Not reported  
 RB Case Number: 01-1218  
 Local Agency: Not reported  
 File Location: All Files are on GeoTracker or in the Local Agency Database  
 Local Case Number: RO0000806  
 Potential Media Affect: Other Groundwater (uses other than drinking water)  
 Potential Contaminants of Concern: Gasoline  
 EPA Region: 9  
 Coordinate Source: Google Geocode  
 Cuf Case: NO  
 Quantity Released Gallons: 0  
 Begin Date: 06/15/1988  
 Leak Reported Date: 06/15/1988  
 How Discovered: Other Means  
 How Discovered Description: Not reported  
 Discharge Source: Not reported  
 Discharge Cause: Not reported  
 Stop Method: Other Means  
 Stop Description: Not reported  
 No Further Action Date: 10/29/1999  
 CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
 Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
 Disadvantaged Community: Not reported  
 CA Enviroscreen 3 Score: 26-30%  
 CA Enviroscreen 4 Score: 25-30%  
 Military DOD Site: No  
 Facility Project Subtype: Not reported  
 RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
 Site History: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**QUICK STOP #46 (Continued)**

**S101624561**

LUST:

Global Id: T0600101120  
Contact Type: Regional Board Caseworker  
Contact Name: Regional Water Board  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY ST SUITE 1400  
City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

LUST:

Global Id: T0600101120  
Action Type: REMEDIATION  
Date: 09/30/1992  
Action: Excavation

Global Id: T0600101120  
Action Type: Other  
Date: 06/15/1988  
Action: Leak Reported

LUST:

Global Id: T0600101120  
Status: Open - Case Begin Date  
Status Date: 06/15/1988

Global Id: T0600101120  
Status: Completed - Case Closed  
Status Date: 10/29/1999

LUST REG 2:

Region: 2  
Facility Id: 01-1218  
Facility Status: Remedial action (cleanup) Underway  
Case Number: 3798  
How Discovered: Tank Closure  
Leak Cause: UNK  
Leak Source: Tank  
Date Leak Confirmed: 3/17/1992  
Oversight Program: LUST  
Prelim. Site Assesment Wokplan Submitted: 10/16/1990  
Preliminary Site Assesment Began: 11/29/1988  
Pollution Characterization Began: 3/23/1990  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: 1/2/1965  
Date Post Remedial Action Monitoring Began: Not reported

Alameda County CS:

Name: QUICK STOP #46  
Address: 363 GRAND AVE  
City,State,Zip: OAKLAND, CA 94610  
Status: Case Closed  
Record Id: RO0000806  
PE: 5602

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**QUICK STOP #46 (Continued)**

**S101624561**

Facility Status: Case Closed  
Latitude: 37.808761314  
Longitude: -122.25539355

**SWEEPS UST:**

Name: QUIK STOP #46  
Address: 363 GRAND AVE  
City: OAKLAND  
Status: Not reported  
Comp Number: 6262  
Number: Not reported  
Board Of Equalization: 44-000098  
Referral Date: Not reported  
Action Date: Not reported  
Created Date: Not reported  
Owner Tank Id: Not reported  
SWRCB Tank Id: 01-000-006262-000001  
Tank Status: Not reported  
Capacity: 10000  
Active Date: Not reported  
Tank Use: M.V. FUEL  
STG: PRODUCT  
Content: LEADED  
Number Of Tanks: 2

Name: QUIK STOP #46  
Address: 363 GRAND AVE  
City: OAKLAND  
Status: Not reported  
Comp Number: 6262  
Number: Not reported  
Board Of Equalization: 44-000098  
Referral Date: Not reported  
Action Date: Not reported  
Created Date: Not reported  
Owner Tank Id: Not reported  
SWRCB Tank Id: 01-000-006262-000002  
Tank Status: Not reported  
Capacity: 10000  
Active Date: Not reported  
Tank Use: M.V. FUEL  
STG: PRODUCT  
Content: REG UNLEADED  
Number Of Tanks: Not reported

**CA FID UST:**

Facility ID: 01001335  
Regulated By: UTKNI  
Regulated ID: 00006262  
Cortese Code: Not reported  
SIC Code: Not reported  
Facility Phone: 4154447629  
Mail To: Not reported  
Mailing Address: P O BOX  
Mailing Address 2: Not reported  
Mailing City,St,Zip: OAKLAND 94670

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**QUICK STOP #46 (Continued)**

**S101624561**

Contact: Not reported  
Contact Phone: Not reported  
DUNS Number: Not reported  
NPDES Number: Not reported  
EPA ID: Not reported  
Comments: Not reported  
Status: Inactive

**CORTESE:**

Name: QUICK STOP #46  
Address: 363 GRAND  
City,State,Zip: OAKLAND, CA 94610  
Region: CORTESE  
Envirostor Id: Not reported  
Global ID: T0600101120  
Site/Facility Type: LUST CLEANUP SITE  
Cleanup Status: COMPLETED - CASE CLOSED  
Status Date: Not reported  
Site Code: Not reported  
Latitude: Not reported  
Longitude: Not reported  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: active  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported  
File Name: Active Open

**HIST CORTESE:**

edr\_fname: QUIK STOP  
edr\_fadd1: 363 GRAND  
City,State,Zip: OAKLAND, CA 94538  
Region: CORTESE  
Facility County Code: 1  
Reg By: LTNKA  
Reg Id: 01-1218

**CERS:**

Name: QUICK STOP #46  
Address: 363 GRAND  
City,State,Zip: OAKLAND, CA 94610  
Site ID: 755055  
CERS ID: T0600101120  
CERS Description: Leaking Underground Storage Tank Cleanup Site

**Affiliation:**

Affiliation Type Desc: Regional Board Caseworker  
Entity Name: Regional Water Board - SAN FRANCISCO BAY RWQCB (REGION 2)  
Entity Title: Not reported  
Affiliation Address: 1515 CLAY ST SUITE 1400

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**QUICK STOP #46 (Continued)**

**S101624561**

Affiliation City: OAKLAND  
 Affiliation State: CA  
 Affiliation Country: Not reported  
 Affiliation Zip: Not reported  
 Affiliation Phone: ,

**AI185**  
**WSW**  
 1/4-1/2  
 0.434 mi.  
 2291 ft.

**SUSAN MENDELSON**  
**431 LEE ST.**  
**OAKLAND, CA 94610**  
 Site 2 of 2 in cluster AI

**HWTS** **S100179333**  
**HAZNET** **N/A**  
**Notify 65**

**Relative:**  
**Lower**  
**Actual:**  
**41 ft.**

**HWTS:**  
 Name: SUSAN MENDELSON  
 Address: 431 LEE ST.  
 Address 2: Not reported  
 City,State,Zip: OAKLAND, CA 94610  
 EPA ID: CAC003078456  
 Inactive Date: 11/09/2020  
 Create Date: 08/10/2020  
 Last Act Date: Not reported  
 Mailing Name: Not reported  
 Mailing Address: 431 LEE ST.  
 Mailing Address 2: Not reported  
 Mailing City,State,Zip: OAKLAND, CA 94610  
 Owner Name: SUSAN MENDELSON  
 Owner Address: 431 LEE ST.  
 Owner Address 2: Not reported  
 Owner City,State,Zip: OAKLAND, CA 94610  
 Owner Phone: Not reported  
 Owner Fax: Not reported  
 Contact Name: SUSAN MENDELSON  
 Contact Address: 431 LEE ST.  
 Contact Address 2: Not reported  
 City,State,Zip: OAKLAND, CA 94610  
 Contact Phone: Not reported  
 Contact Fax: Not reported  
 Facility Status: Inactive  
 Facility Type: TEMPORARY  
 Category: STATE  
 Latitude: 37.81035698  
 Longitude: -122.25701999

**HAZNET:**  
 Name: SUSAN MENDELSON  
 Address: 431 LEE ST.  
 Address 2: Not reported  
 City,State,Zip: OAKLAND, CA 94610  
 Contact: SUSAN MENDELSON  
 Telephone: 9258764078  
 Mailing Name: Not reported  
 Mailing Address: 431 LEE ST.  
 Year: 2020  
 Gepaid: CAC003078456  
 TSD EPA ID: CAD028409019

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SUSAN MENDELSON (Continued)**

**S100179333**

CA Waste Code: 352 - Other organic solids  
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)  
Tons: 0.04

Additional Info:

Year: 2020  
Gen EPA ID: CAC003078456

Shipment Date: 8/7/2020  
Creation Date: 9/15/2020  
Receipt Date: 8/14/2020  
Manifest ID: 013457353JJK  
Trans EPA ID: CAL000291177  
Trans Name: SYNERGY ENTERPRISES INC  
Trans 2 EPA ID: CAR000183152  
Trans 2 Name: LD TRANSPORTATION LLC  
TSDf EPA ID: CAD028409019  
Trans Name: CROSBY & OVERTON  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 352 - Other organic solids  
RCRA Code: D008  
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)  
Quantity Tons: 0.04  
Waste Quantity: 80  
Quantity Unit: P  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Detail Two:

Year: 2020  
EM Manifest ID: 9e85c98e-a61c-4ae0-a173-79da32ddf5d2  
Shipment Date: 8/7/2020  
Receipt Date: 8/14/2020  
Manifest Number: 013457353JJK  
Generator EPA ID: CAC003078456  
Name: SUSAN MENDELSON  
Address: 431 LEE ST.  
Address 2: Not reported  
City: OAKLAND  
Zip: 94610  
Telephone: 800-424-9300  
Contact: SUSAN MENDELSON  
Contact Telephone: 925-876-4078  
Transporter 1 EPA ID: CAL000291177  
Transporter 1 Emergency Number: Not reported  
Transporter 2 EPA ID: CAR000183152  
Transporter 2 Emergency Number: Not reported  
TSDf EPA ID: CAD028409019  
TSDf Name: CROSBY & OVERTON

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SUSAN MENDELSON (Continued)**

**S100179333**

TSDf Address 1: W. 17TH STREET  
TSDf Address 2: Not reported  
TSDf City: LONG BEACH  
TSDf Zip: 90813-0000  
TSDf Telephone: Not reported

Federal:  
Year: 2020  
EM Manifest ID: 9e85c98e-a61c-4ae0-a173-79da32ddf5d2  
Generator EPA ID: CAC003078456  
Shipment Date: 2020-08-07  
Manifest Number: 013457353JJK  
Line Number: 1  
Method Code: H141  
Quantity Tons: 0.04000  
Quantity Waste: 80.000000  
Quantity Unit: P  
Number of Containers: 1  
Type of Container: Metal drums, barrels, kegs  
Quantity Type: Pounds  
Federal Code: D008

State:  
Year: 2020  
EM Manifest ID: 9e85c98e-a61c-4ae0-a173-79da32ddf5d2  
Generator EPA ID: CAC003078456  
Shipment Date: 2020-08-07  
Manifest Number: 013457353JJK  
Line Number: 1  
Method Code: H141  
Quantity Tons: 0.04000  
Quantity Waste: 80.000000  
Quantity Unit: P  
Number of Containers: 1  
Type of Container: Metal drums, barrels, kegs  
Quantity Type: Pounds  
State Code: 352

NOTIFY 65:  
Name: LAWLER APARTMENTS  
Address: 431 LEE STREET  
City,State,Zip: OAKLAND, CA 92626  
Date Reported: Not reported  
Staff Initials: Not reported  
Board File Number: Not reported  
Facility Type: Not reported  
Discharge Date: Not reported  
Issue Date: Not reported  
Incident Description: Not reported  
Global ID: Not reported  
Status: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**AN186**      **CHAMPLIN FAMILY TRUST**  
**SW**         **485 ELLITA**  
**1/4-1/2**      **OAKLAND, CA 94610**  
**0.462 mi.**  
**2441 ft.**     **Site 1 of 2 in cluster AN**

**LUST**      **S103723099**  
**Alameda County CS**      **N/A**  
**Cortese**  
**HIST CORTESE**  
**CERS**

**Relative:**  
**Lower**  
**Actual:**  
**16 ft.**

LUST:

Name: CHAMPLIN FAMILY TRUST  
Address: 485 ELLITA  
City,State,Zip: OAKLAND, CA 94610  
Lead Agency: ALAMEDA COUNTY LOP  
Case Type: LUST Cleanup Site  
Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0600102270](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600102270)  
Global Id: T0600102270  
Latitude: 37.807965  
Longitude: -122.255247  
Status: Completed - Case Closed  
Status Date: 01/29/1999  
Case Worker: Not reported  
RB Case Number: 01-2462  
Local Agency: Not reported  
File Location: All Files are on GeoTracker or in the Local Agency Database  
Local Case Number: RO0000816  
Potential Media Affect: Other Groundwater (uses other than drinking water)  
Potential Contaminants of Concern: Heating Oil / Fuel Oil  
EPA Region: 9  
Coordinate Source: \* Historical Geocode - Exact Address Match  
Cuf Case: YES  
Quantity Released Gallons: 0  
Begin Date: 08/24/1998  
Leak Reported Date: 08/24/1998  
How Discovered: Other Means  
How Discovered Description: Not reported  
Discharge Source: Not reported  
Discharge Cause: Not reported  
Stop Method: Other Means  
Stop Description: Not reported  
No Further Action Date: 01/29/1999  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Not reported  
CA Enviroscreen 3 Score: 26-30%  
CA Enviroscreen 4 Score: 25-30%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Not reported

LUST:

Global Id: T0600102270  
Contact Type: Regional Board Caseworker  
Contact Name: Regional Water Board  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY ST SUITE 1400  
City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

LUST:

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHAMPLIN FAMILY TRUST (Continued)**

**S103723099**

Global Id: T0600102270  
Action Type: Other  
Date: 08/24/1998  
Action: Leak Reported

Global Id: T0600102270  
Action Type: REMEDIATION  
Date: 09/09/9999  
Action: Excavation

**LUST:**

Global Id: T0600102270  
Status: Open - Case Begin Date  
Status Date: 08/24/1998

Global Id: T0600102270  
Status: Completed - Case Closed  
Status Date: 01/29/1999

**LUST REG 2:**

Region: 2  
Facility Id: 01-2462  
Facility Status: Case Closed  
Case Number: 6609  
How Discovered: Tank Closure  
Leak Cause: Corrosion  
Leak Source: Tank  
Date Leak Confirmed: Not reported  
Oversight Program: LUST  
Prelim. Site Assessment Workplan Submitted: Not reported  
Preliminary Site Assessment Began: Not reported  
Pollution Characterization Began: Not reported  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

**Alameda County CS:**

Name: CHAMPLIN FAMILY TRUST  
Address: 485 ELLITA AVE  
City,State,Zip: OAKLAND, CA 94610  
Status: Case Closed  
Record Id: RO0000816  
PE: 5602  
Facility Status: Case Closed  
Latitude: 37.807905111  
Longitude: -122.25528541

**CORTESE:**

Name: CHAMPLIN FAMILY TRUST  
Address: 485 ELLITA  
City,State,Zip: OAKLAND, CA 94610  
Region: CORTESE  
Envirostor Id: Not reported  
Global ID: T0600102270

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHAMPLIN FAMILY TRUST (Continued)**

**S103723099**

Site/Facility Type: LUST CLEANUP SITE  
Cleanup Status: COMPLETED - CASE CLOSED  
Status Date: Not reported  
Site Code: Not reported  
Latitude: Not reported  
Longitude: Not reported  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: active  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported  
File Name: Active Open

**HIST CORTESE:**

edr\_fname: CHAMPLIN FAMILY TRUST  
edr\_fadd1: 485 ELLITA  
City,State,Zip: OAKLAND, CA 94610  
Region: CORTESE  
Facility County Code: 1  
Reg By: LTNKA  
Reg Id: 01-2462

**CERS:**

Name: CHAMPLIN FAMILY TRUST  
Address: 485 ELLITA  
City,State,Zip: OAKLAND, CA 94610  
Site ID: 719251  
CERS ID: T0600102270  
CERS Description: Leaking Underground Storage Tank Cleanup Site

**Affiliation:**

Affiliation Type Desc: Regional Board Caseworker  
Entity Name: Regional Water Board - SAN FRANCISCO BAY RWQCB (REGION 2)  
Entity Title: Not reported  
Affiliation Address: 1515 CLAY ST SUITE 1400  
Affiliation City: OAKLAND  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: ,



Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BP (Continued)**

**S101580086**

Latitude: 37.8194124253144  
Longitude: -122.253434658051  
Status: Completed - Case Closed  
Status Date: 07/31/2014  
Case Worker: Not reported  
RB Case Number: 01-0985  
Local Agency: Not reported  
File Location: All Files are on GeoTracker or in the Local Agency Database  
Local Case Number: RO000456  
Potential Media Affect: Other Groundwater (uses other than drinking water)  
Potential Contaminants of Concern: Waste Oil / Motor / Hydraulic / Lubricating  
EPA Region: 9  
Coordinate Source: Google Map Move  
Cuf Case: YES  
Quantity Released Gallons: 0  
Begin Date: 09/19/1988  
Leak Reported Date: 10/26/1988  
How Discovered: Other Means  
How Discovered Description: Not reported  
Discharge Source: Not reported  
Discharge Cause: Not reported  
Stop Method: Other Means  
Stop Description: Not reported  
No Further Action Date: 07/31/2014  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Not reported  
CA EnviroScreen 3 Score: 16-20%  
CA EnviroScreen 4 Score: 10-15%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Closure Status: The SWRCB issued a Notice of Opportunity for Public Comment dated 7/15/2013 on the proposed underground storage tank case closure as recommended in the SWRCB UST Case Closure Review Summary Report dated 7/16/2013. ACEH is not in agreement with the SWRCB's recommendation for closure as documented in an email correspondence dated 5/14/2012. Subsequent to the end of the Public Comment Period on 9/13/2013, the SWQCB issued ORDER WQ 2013-097-UST dated 9/30/2013 ordering closure of the case after completion of monitoring well destruction and waste removal activities. The Order requires the following: 1) RP submittal of well destruction and waste removal documentation to the Alameda County Environmental Health's Local Oversight Agency within six month from the date of the Order (March 30, 2014). 2) ACEH notification to the SWRCB within 30 days of receipt of well destruction and waste removal documentation that the tasks have been satisfactorily completed. 3) SWRCB issuance of a closure letter within 30 days of notification from ACEH of completion of the well destruction and waste removal activities. Site History Summary: In September 1988, one 550-gallon steel waste oil UST was removed from the site by Kaprealian Engineering. In October 1989, Alton Geoscience oversaw the installation of three GW monitoring wells (MW-1 through MW-3) to verify potential impacts to GW following the removal the WO UST. In 1990, new USTs, dispenser islands, and canopy were installed at the site. In November 1994, EMCON conducted a site assessment that consisted of collecting two discrete soil samples (TD-1 and TD-3). In May 1999, Cambria performed a well

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BP (Continued)**

**S101580086**

recovery test. In July 2005, five borings (SB-4 through SB-8) were installed by URS to further characterize the subsurface hydrocarbon contamination at the site. In October 2007, URS advanced three off-site borings (SB-1, SB-2, and SB-3) between the site and the storm drain under MacArthur Boulevard, and one on-site soil boring (SB-4A). In September 2010 ARCADIS installed one downgradient monitoring well (MW-4). Currently, downgradient extent of contamination has not been assessed.

LUST:

Global Id: T0600100908  
Contact Type: Regional Board Caseworker  
Contact Name: Regional Water Board  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY ST SUITE 1400  
City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

LUST:

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 10/14/2007  
Action: \* No Action - #20071410

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 07/15/2009  
Action: Meeting - #20090715

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 07/27/1994  
Action: Notice of Responsibility - #19940727

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 07/12/2005  
Action: Technical Correspondence / Assistance / Other - #20050712

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 05/04/2005  
Action: Technical Correspondence / Assistance / Other - #20050504

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 09/14/2012  
Action: Meeting - #20120914

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 08/23/2012  
Action: Meeting - #20120823

Global Id: T0600100908  
Action Type: ENFORCEMENT

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BP (Continued)**

**S101580086**

Date: 09/30/2013  
Action: State Water Board - Closure Order

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 07/16/2013  
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 07/09/2009  
Action: Staff Letter - #20090709

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 07/13/2014  
Action: Email Correspondence - #20140713

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 07/31/2014  
Action: Closure/No Further Action Letter

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 07/28/2009  
Action: Staff Letter - #20090728

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 08/21/2009  
Action: Staff Letter - #20090821

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 07/15/2014  
Action: Email Correspondence - #20140715

Global Id: T0600100908  
Action Type: Other  
Date: 09/19/1988  
Action: Leak Discovery

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 04/24/2009  
Action: Staff Letter - #20090424

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 01/08/2009  
Action: Technical Correspondence / Assistance / Other - #20090108

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 07/09/2009  
Action: Staff Letter - #20090709

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BP (Continued)**

**S101580086**

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 03/28/2012  
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Global Id: T0600100908  
Action Type: Other  
Date: 10/26/1988  
Action: Leak Reported

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 11/19/2009  
Action: Soil and Water Investigation Report

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 05/04/2005  
Action: Staff Letter - #20050504

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 09/06/2012  
Action: Meeting - #20120906

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 06/27/2012  
Action: File review

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 02/13/2013  
Action: Staff Letter - #20130213

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 09/28/2012  
Action: Meeting - #20120928

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 12/18/2009  
Action: Technical Correspondence / Assistance / Other - #20091218

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 03/23/2010  
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 09/25/2012  
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Global Id: T0600100908  
Action Type: RESPONSE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BP (Continued)**

**S101580086**

Date: 08/25/2010  
Action: Soil and Water Investigation Report

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 05/27/2010  
Action: Staff Letter - #20100527

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 06/22/2012  
Action: Staff Letter - #20120622

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 09/10/2012  
Action: Meeting - #20120910

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 07/16/2013  
Action: Clean Up Fund - Letter to RP

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 08/29/2012  
Action: Meeting - #20120829

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 06/22/2012  
Action: Staff Letter

Global Id: T0600100908  
Action Type: ENFORCEMENT  
Date: 07/13/2014  
Action: Staff Letter - #20140713

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 06/05/2009  
Action: Soil and Water Investigation Workplan - Addendum

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 10/24/2007  
Action: Interim Remedial Action Report

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 01/29/2009  
Action: Other Report / Document

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 02/01/2010  
Action: Correspondence

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BP (Continued)**

**S101580086**

Global Id:	T0600100908
Action Type:	RESPONSE
Date:	11/30/2010
Action:	Well Installation Report
Global Id:	T0600100908
Action Type:	RESPONSE
Date:	01/07/1988
Action:	Soil and Water Investigation Report
Global Id:	T0600100908
Action Type:	RESPONSE
Date:	12/20/1989
Action:	Preliminary Site Assessment Report
Global Id:	T0600100908
Action Type:	RESPONSE
Date:	12/17/2009
Action:	Correspondence
Global Id:	T0600100908
Action Type:	RESPONSE
Date:	02/24/2000
Action:	Soil and Water Investigation Report
Global Id:	T0600100908
Action Type:	RESPONSE
Date:	04/28/2005
Action:	Soil and Water Investigation Workplan - Addendum
Global Id:	T0600100908
Action Type:	RESPONSE
Date:	04/16/2004
Action:	Soil and Water Investigation Workplan
Global Id:	T0600100908
Action Type:	RESPONSE
Date:	10/29/2009
Action:	Correspondence
Global Id:	T0600100908
Action Type:	RESPONSE
Date:	06/26/2009
Action:	Correspondence
Global Id:	T0600100908
Action Type:	RESPONSE
Date:	08/24/2009
Action:	Correspondence
Global Id:	T0600100908
Action Type:	RESPONSE
Date:	09/18/2009
Action:	Correspondence
Global Id:	T0600100908
Action Type:	RESPONSE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BP (Continued)**

**S101580086**

Date: 10/19/2000  
Action: Sensitive Receptor Survey Report

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 10/16/1989  
Action: Soil and Water Investigation Workplan

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 07/11/1998  
Action: Soil and Water Investigation Workplan

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 04/16/2004  
Action: Soil and Water Investigation Workplan

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 07/23/2003  
Action: Other Report / Document

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 08/05/1997  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 11/15/2000  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 01/03/1992  
Action: Monitoring Report - Quarterly

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 12/13/1990  
Action: Monitoring Report - Quarterly

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 09/12/1991  
Action: Monitoring Report - Quarterly

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 03/31/2003  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 06/04/2004  
Action: Monitoring Report - Quarterly

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BP (Continued)**

**S101580086**

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 12/10/2004  
Action: Monitoring Report - Quarterly

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 08/25/2005  
Action: Monitoring Report - Quarterly

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 09/27/1990  
Action: Monitoring Report - Quarterly

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 04/21/1999  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 02/12/1998  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 08/28/1998  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 05/15/2000  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 04/11/2001  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 10/29/2001  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 05/02/1990  
Action: Monitoring Report - Quarterly

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 04/09/1992  
Action: Monitoring Report - Quarterly

Global Id: T0600100908  
Action Type: RESPONSE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BP (Continued)**

**S101580086**

Date: 07/06/1992  
Action: Monitoring Report - Quarterly

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 01/27/1994  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 08/18/1994  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 08/02/1995  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 03/08/1996  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 07/21/1992  
Action: Monitoring Report - Other

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 09/10/2003  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 08/20/1996  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 11/06/2002  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 11/05/1999  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 10/29/2001  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 02/16/2004  
Action: Monitoring Report - Quarterly

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BP (Continued)**

**S101580086**

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 08/27/2004  
Action: Monitoring Report - Quarterly

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 08/29/1992  
Action: Monitoring Report - Quarterly

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 01/06/1993  
Action: Monitoring Report - Quarterly

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 08/16/1993  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 03/10/1995  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 01/13/1997  
Action: Monitoring Report - Semi-Annually

Global Id: T0600100908  
Action Type: RESPONSE  
Date: 04/30/2002  
Action: Monitoring Report - Semi-Annually

**LUST:**

Global Id: T0600100908  
Status: Open - Case Begin Date  
Status Date: 09/19/1988

Global Id: T0600100908  
Status: Open - Site Assessment  
Status Date: 10/26/1988

Global Id: T0600100908  
Status: Open - Site Assessment  
Status Date: 12/20/1989

Global Id: T0600100908  
Status: Open - Eligible for Closure  
Status Date: 04/23/2013

Global Id: T0600100908  
Status: Open - Eligible for Closure  
Status Date: 07/15/2013

Global Id: T0600100908

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BP (Continued)**

**S101580086**

Status: Completed - Case Closed  
Status Date: 07/31/2014

LUST REG 2:

Region: 2  
Facility Id: 01-0985  
Facility Status: Preliminary site assessment underway  
Case Number: 1108  
How Discovered: Tank Closure  
Leak Cause: Structure Failure  
Leak Source: Tank  
Date Leak Confirmed: Not reported  
Oversight Program: LUST  
Prelim. Site Assessment Workplan Submitted: Not reported  
Preliminary Site Assessment Began: 10/25/1989  
Pollution Characterization Began: Not reported  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

Alameda County CS:

Name: BP #11102  
Address: 100 MACARTHUR BLVD  
City,State,Zip: OAKLAND, CA 94610  
Status: Leak Confirmation  
Record Id: RO0000456  
PE: 5602  
Facility Status: Leak Confirmation  
Latitude: 37.819241595  
Longitude: -122.25333609

Name: BP #11102  
Address: 100 MACARTHUR BLVD  
City,State,Zip: OAKLAND, CA 94610  
Status: Pollution Characterization  
Record Id: RO0000456  
PE: 5602  
Facility Status: Pollution Characterization  
Latitude: 37.819241595  
Longitude: -122.25333609

Name: BP #11102  
Address: 100 MACARTHUR BLVD  
City,State,Zip: OAKLAND, CA 94610  
Status: Case Closed  
Record Id: RO0000456  
PE: 5602  
Facility Status: Case Closed  
Latitude: 37.819241595  
Longitude: -122.25333609

SWEEPS UST:

Name: BP OIL CO FACILITY NO 11102  
Address: 100 MACARTHUR BLVD  
City: OAKLAND

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BP (Continued)**

**S101580086**

Status: Active  
Comp Number: 39623  
Number: 1  
Board Of Equalization: 44-000400  
Referral Date: 05-08-92  
Action Date: 05-08-92  
Created Date: 02-29-88  
Owner Tank Id: Not reported  
SWRCB Tank Id: 01-000-039623-000001  
Tank Status: A  
Capacity: 1000  
Active Date: 05-08-92  
Tank Use: OIL  
STG: W  
Content: WASTE OIL  
Number Of Tanks: 4

Name: BP OIL CO FACILITY NO 11102  
Address: 100 MACARTHUR BLVD  
City: OAKLAND  
Status: Active  
Comp Number: 39623  
Number: 1  
Board Of Equalization: 44-000400  
Referral Date: 05-08-92  
Action Date: 05-08-92  
Created Date: 02-29-88  
Owner Tank Id: Not reported  
SWRCB Tank Id: 01-000-039623-000002  
Tank Status: A  
Capacity: 12000  
Active Date: 05-08-92  
Tank Use: M.V. FUEL  
STG: P  
Content: REG UNLEADED  
Number Of Tanks: Not reported

Name: BP OIL CO FACILITY NO 11102  
Address: 100 MACARTHUR BLVD  
City: OAKLAND  
Status: Active  
Comp Number: 39623  
Number: 1  
Board Of Equalization: 44-000400  
Referral Date: 05-08-92  
Action Date: 05-08-92  
Created Date: 02-29-88  
Owner Tank Id: Not reported  
SWRCB Tank Id: 01-000-039623-000003  
Tank Status: A  
Capacity: 10000  
Active Date: 05-08-92  
Tank Use: M.V. FUEL  
STG: P  
Content: LEADED  
Number Of Tanks: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BP (Continued)**

**S101580086**

Name: BP OIL CO FACILITY NO 11102  
Address: 100 MACARTHUR BLVD  
City: OAKLAND  
Status: Active  
Comp Number: 39623  
Number: 1  
Board Of Equalization: 44-000400  
Referral Date: 05-08-92  
Action Date: 05-08-92  
Created Date: 02-29-88  
Owner Tank Id: Not reported  
SWRCB Tank Id: 01-000-039623-000004  
Tank Status: A  
Capacity: 6000  
Active Date: 05-08-92  
Tank Use: M.V. FUEL  
STG: P  
Content: REG UNLEADED  
Number Of Tanks: Not reported

**CA FID UST:**

Facility ID: 01001106  
Regulated By: UTNKA  
Regulated ID: 00039623  
Cortese Code: Not reported  
SIC Code: Not reported  
Facility Phone: 5105231419  
Mail To: Not reported  
Mailing Address: 2868 PROSPECT DR  
Mailing Address 2: Not reported  
Mailing City,St,Zip: OAKLAND 94501  
Contact: Not reported  
Contact Phone: Not reported  
DUNs Number: Not reported  
NPDES Number: Not reported  
EPA ID: Not reported  
Comments: Not reported  
Status: Active

**CORTESE:**

Name: BP #11102  
Address: 100 MACARTHUR  
City,State,Zip: OAKLAND, CA 94610  
Region: CORTESE  
Envirostor Id: Not reported  
Global ID: T0600100908  
Site/Facility Type: LUST CLEANUP SITE  
Cleanup Status: COMPLETED - CASE CLOSED  
Status Date: Not reported  
Site Code: Not reported  
Latitude: Not reported  
Longitude: Not reported  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: active

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BP (Continued)**

**S101580086**

Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported  
File Name: Active Open

**HIST CORTESE:**

edr\_fname: BP  
edr\_fadd1: 100 MACARTHUR  
City,State,Zip: OAKLAND, CA 90017  
Region: CORTESE  
Facility County Code: 1  
Reg By: LTNKA  
Reg Id: 01-0985

**CERS:**

Name: BP #11102  
Address: 100 MACARTHUR  
City,State,Zip: OAKLAND, CA 94610  
Site ID: 715220  
CERS ID: T0600100908  
CERS Description: Leaking Underground Storage Tank Cleanup Site

**Affiliation:**

Affiliation Type Desc: Regional Board Caseworker  
Entity Name: Regional Water Board - SAN FRANCISCO BAY RWQCB (REGION 2)  
Entity Title: Not reported  
Affiliation Address: 1515 CLAY ST SUITE 1400  
Affiliation City: OAKLAND  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: ,

**AO189  
NNW  
1/4-1/2  
0.476 mi.  
2513 ft.**

**BP #11102  
100 MACARTHUR  
OAKLAND, CA 94610**

**UST FINDER RELEASE 1028926571  
N/A**

**Site 2 of 3 in cluster AO**

**Relative:  
Higher  
Actual:  
89 ft.**

**UST FINDER RELEASE:**

Object ID: 41549  
Facility ID: Not reported  
Lust ID: CAT0600100908  
Name: BP #11102  
Address: 100 MACARTHUR  
City,State,Zip: OAKLAND, CA 94610  
Address Match Type: PointAddress  
Reported Date: Not reported  
Status: No Further Action  
Substance: Not reported  
Population within 1500ft: 6081  
Domestic Wells within 1500ft: 0

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**BP #11102 (Continued)**

**1028926571**

Land Use:	Developed, High Intensity
Within SPA:	No
SPA PWS Facility ID:	Not reported
SPA Water Type:	Not reported
SPA Facility Type:	Not reported
SPA HUC12:	Not reported
Within WHPA:	No
WHPA PWS Facility ID:	Not reported
WHPA Water Type:	Not reported
WHPA Facility Type:	Not reported
WHPA HUC12:	Not reported
Within 100yr Floodplain:	No
Tribe:	Not reported
EPA Region:	9
NFA Letter 1:	Not reported
NFA Letter 2:	Not reported
NFA Letter 3:	Not reported
NFA Letter 4:	Not reported
Closed With Residual Contaminate:	Not reported
Coordinate Source:	Geocode
X Coord:	-122.25364
Y Coord:	37.81935
Latitude:	37.81935
Longitude:	-122.25364

**AP190**  
**NNE**  
**1/4-1/2**  
**0.486 mi.**  
**2565 ft.**

**SHELL OIL CO**  
**29 WILDWOOD**  
**PIEDMONT, CA 94610**

**RCRA-SQG** **1000288636**  
**LUST** **CAD981402076**  
**HIST CORTESE**

**Site 1 of 4 in cluster AP**

**Relative:**  
**Lower**  
**Actual:**  
**44 ft.**

RCRA Listings:	19980408
Date Form Received by Agency:	Shell Oil Co
Handler Name:	29 Wildwood
Handler Address:	PIEDMONT, CA 94610
Handler City,State,Zip:	CAD981402076
EPA ID:	SONDRA BIENVENU
Contact Name:	P O BOX 4453
Contact Address:	HOUSTON, TX 77210-4453
Contact City,State,Zip:	713-241-2258
Contact Telephone:	Not reported
Contact Fax:	Not reported
Contact Email:	Not reported
Contact Title:	Not reported
EPA Region:	09
Land Type:	Private
Federal Waste Generator Description:	Small Quantity Generator
Non-Notifier:	X
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	P O BOX 4453
Mailing City,State,Zip:	HOUSTON, TX 77210-4453
Owner Name:	Equilon Enterprises Llc
Owner Type:	Private
Operator Name:	Not Required

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SHELL OIL CO (Continued)**

**1000288636**

Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20021007
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

**Hazardous Waste Summary:**

Waste Code:	D001
Waste Description:	Ignitable Waste
Waste Code:	D018
Waste Description:	Benzene

**Handler - Owner Operator:**

Owner/Operator Indicator:	Owner
Owner/Operator Name:	EQUILON ENTERPRISES LLC
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SHELL OIL CO (Continued)**

**1000288636**

Owner/Operator Address: P O BOX 4453  
Owner/Operator City,State,Zip: HOUSTON, TX 77210-4453  
Owner/Operator Telephone: 713-241-2258  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator  
Owner/Operator Name: NOT REQUIRED  
Legal Status: Private  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: NOT REQUIRED  
Owner/Operator City,State,Zip: NOT REQUIRED, ME 99999  
Owner/Operator Telephone: 415-555-1212  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:  
Receive Date: 19980408  
Handler Name: SHELL OIL CO  
Federal Waste Generator Description: Small Quantity Generator  
State District Owner: Not reported  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:  
NAICS Codes: No NAICS Codes Found

Facility Has Received Notices of Violations:  
Violations: No Violations Found

Evaluation Action Summary:  
Evaluations: No Evaluations Found

LUST REG 2:  
Region: 2  
Facility Id: 01-1351  
Facility Status: Pollution Characterization  
Case Number: 1107  
How Discovered: Tank Closure  
Leak Cause: Structure Failure  
Leak Source: Tank  
Date Leak Confirmed: Not reported  
Oversight Program: LUST  
Prelim. Site Assessment Wokplan Submitted: Not reported  
Preliminary Site Assesment Began: 7/12/1989

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SHELL OIL CO (Continued)**

**1000288636**

Pollution Characterization Began: 4/27/1990  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

**HIST CORTESE:**

edr\_fname: SHELL  
edr\_fadd1: 29 WILDWOOD  
City,State,Zip: PIEDMONT, CA 94610  
Region: CORTESE  
Facility County Code: 1  
Reg By: LTNKA  
Reg Id: 01-1351

**AP191  
NNE  
1/4-1/2  
0.486 mi.  
2565 ft.**

**SHELL #13-5765  
29 WILDWOOD  
PIEDMONT, CA 94610**

**UST FINDER RELEASE 1029104733  
N/A**

**Site 2 of 4 in cluster AP**

**Relative:  
Lower  
Actual:  
44 ft.**

**UST FINDER RELEASE:**

Object ID: 41781  
Facility ID: Not reported  
Lust ID: CAT0600101246  
Name: SHELL #13-5765  
Address: 29 WILDWOOD  
City,State,Zip: PIEDMONT, CA 94610  
Address Match Type: PointAddress  
Reported Date: Not reported  
Status: No Further Action  
Substance: Not reported  
Population within 1500ft: 3133  
Domestic Wells within 1500ft: 0  
Land Use: Developed, Low Intensity  
Within SPA: No  
SPA PWS Facility ID: Not reported  
SPA Water Type: Not reported  
SPA Facility Type: Not reported  
SPA HUC12: Not reported  
Within WHPA: No  
WHPA PWS Facility ID: Not reported  
WHPA Water Type: Not reported  
WHPA Facility Type: Not reported  
WHPA HUC12: Not reported  
Within 100yr Floodplain: No  
Tribe: Not reported  
EPA Region: 9  
NFA Letter 1: Not reported  
NFA Letter 2: Not reported  
NFA Letter 3: Not reported  
NFA Letter 4: Not reported  
Closed With Residual Contaminate: Not reported  
Coordinate Source: Geocode  
X Coord: -122.24412  
Y Coord: 37.8191100000001  
Latitude: 37.81911  
Longitude: -122.244119999999

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**AP192**     **PIEDMONT SHELL SERV.**  
**NNE**       **29 WILDWOOD AVE**  
**1/4-1/2**    **PIEDMONT, CA 94610**  
**0.486 mi.**  
**2565 ft.**    **Site 3 of 4 in cluster AP**

**CPS-SLIC**    **S101624468**  
**HIST UST**     **N/A**  
**CA FID UST**  
**EMI**  
**HWTS**  
**HAZNET**  
**CERS**

**Relative:**  
**Lower**

**Actual:**  
**44 ft.**

**CPS-SLIC:**  
 Name: SHELL REDEVELOPMENT  
 Address: 29 WILDWOOD AVENUE  
 City,State,Zip: PIEDMONT, CA 94610  
 Region: STATE  
**Facility Status: Completed - Case Closed**  
 Status Date: 05/04/2021  
 Global Id: T10000007222  
 Lead Agency: ALAMEDA COUNTY LOP  
 Lead Agency Case Number: RO0003154  
 Latitude: 37.81921  
 Longitude: -122.24424  
 Case Type: Cleanup Program Site  
 Case Worker: JES  
 Local Agency: ALAMEDA COUNTY LOP  
 RB Case Number: Not reported  
 File Location: All Files are on GeoTracker or in the Local Agency Database  
 Potential Media Affected: Soil, Soil Vapor  
 Potential Contaminants of Concern: Gasoline  
 EPA Region: 9  
 Coordinate Source: Not reported  
 Cuf Case: NO  
 Quantity Released Gallons: Not reported  
 Begin Date: 12/10/2012  
 Leak Reported Date: 06/19/1990  
 How Discovered: Site Assessment/Site Investigation  
 How Discovered Description: Not reported  
 Discharge Source: Dispenser, Piping, Tank  
 Discharge Cause: Unknown  
 Stop Method: Not reported  
 Stop Description: Not reported  
 No Further Action Date: 05/04/2021  
 CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
 Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
 Disadvantaged Community: Not reported  
 CA Enviroscreen 3 Score: 1-5% (lowest scores)  
 CA Enviroscreen 4 Score: 10-15%  
 Military DOD Site: No  
 Facility Project Subtype: Not reported  
 RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
 Site History: A fuel leak case (former Alameda County Environmental Health case RO000495) was closed for this site on August 6, 2010. Due to residual contamination, the case was closed with site management requirements that limit future use land use to commercial land use. Redevelopment of the site is in the planning phase. ACEH has opened this case with the current property owner to evaluate the site for the planned development. Additional site assessment activities are planned. The current property owner confirmed in a May 4, 2021 email that redevelopment is not proposed and the site will remain an active service station at this time. Therefore, ACDEH has administratively closed the open Cleanup Program site associated with proposed

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PIEDMONT SHELL SERV. (Continued)**

**S101624468**

redevelopment. Should a change in land-use or redevelopment be proposed, ACDEH will re-open this case to assess environmental conditions at that time.

[Click here to access the California GeoTracker records for this facility:](#)

**HIST UST:**

Name: PIEDMONT AND HELL SERV  
Address: 29 WILDWOOD AVE  
City,State,Zip: PIEDMONT, CA 94610  
File Number: 00021c98  
URL: <https://documents.geotracker.waterboards.ca.gov/ustpdfs/pdf/00021c98.pdf>  
Region: Not reported  
Facility ID: Not reported  
Facility Type: Not reported  
Other Type: Not reported  
Contact Name: Not reported  
Telephone: Not reported  
Owner Name: Not reported  
Owner Address: Not reported  
Owner City,St,Zip: Not reported  
Total Tanks: Not reported

Tank Num: Not reported  
Container Num: Not reported  
Year Installed: Not reported  
Tank Capacity: Not reported  
Tank Used for: Not reported  
Type of Fuel: Not reported  
Container Construction Thickness: Not reported  
Leak Detection: Not reported

Tank Num: Not reported  
Container Num: Not reported  
Year Installed: Not reported  
Tank Capacity: Not reported  
Tank Used for: Not reported  
Type of Fuel: Not reported  
Container Construction Thickness: Not reported  
Leak Detection: Not reported

[Click here for Geo Tracker PDF:](#)

**CA FID UST:**

Facility ID: 01001463  
Regulated By: UTNKA  
Regulated ID: 00057650  
Cortese Code: Not reported  
SIC Code: Not reported  
Facility Phone: 4156540512  
Mail To: Not reported  
Mailing Address: 29 WILDWOOD AVE  
Mailing Address 2: Not reported  
Mailing City,St,Zip: PIEDMONT 94610  
Contact: Not reported  
Contact Phone: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PIEDMONT SHELL SERV. (Continued)**

**S101624468**

DUNs Number: Not reported  
NPDES Number: Not reported  
EPA ID: Not reported  
Comments: Not reported  
Status: Active

**EMI:**

Name: PIEDMONT SHELL #135765  
Address: 29 WILDWOOD AVE  
City,State,Zip: PIEDMONT, CA 94610  
Year: 2019  
County Code: 1  
Air Basin: SF  
Facility ID: 112467  
Air District Name: BA  
SIC Code: 5411  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0.154745742  
Reactive Organic Gases Tons/Yr: 0.154745742  
Carbon Monoxide Emissions Tons/Yr: Not reported  
NOX - Oxides of Nitrogen Tons/Yr: Not reported  
SOX - Oxides of Sulphur Tons/Yr: Not reported  
Particulate Matter Tons/Yr: Not reported  
Part. Matter 10 Micrometers and Smlr Tons/Yr: Not reported

Name: PIEDMONT SHELL #135765  
Address: 29 WILDWOOD AVE  
City,State,Zip: PIEDMONT, CA 94610  
Year: 2020  
County Code: 1  
Air Basin: SF  
Facility ID: 112467  
Air District Name: BA  
SIC Code: 5411  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0.154745742  
Reactive Organic Gases Tons/Yr: 0.154745742  
Carbon Monoxide Emissions Tons/Yr: Not reported  
NOX - Oxides of Nitrogen Tons/Yr: Not reported  
SOX - Oxides of Sulphur Tons/Yr: Not reported  
Particulate Matter Tons/Yr: Not reported  
Part. Matter 10 Micrometers and Smlr Tons/Yr: Not reported

Name: PIEDMONT SHELL #135765  
Address: 29 WILDWOOD AVE  
City,State,Zip: PIEDMONT, CA 94610  
Year: 2021  
County Code: 1  
Air Basin: SF  
Facility ID: 112467  
Air District Name: BA  
SIC Code: 5411  
Air District Name: BAY AREA AQMD

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PIEDMONT SHELL SERV. (Continued)**

**S101624468**

Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0.359633573  
Reactive Organic Gases Tons/Yr: 0.359633573  
Carbon Monoxide Emissions Tons/Yr: Not reported  
NOX - Oxides of Nitrogen Tons/Yr: Not reported  
SOX - Oxides of Sulphur Tons/Yr: Not reported  
Particulate Matter Tons/Yr: Not reported  
Part. Matter 10 Micrometers and Smllr Tons/Yr:Not reported

**HWTS:**

Name: PIEDMONT AUTO CARE  
Address: 29 WILDWOOD AVE  
Address 2: Not reported  
City,State,Zip: PIEDMONT, CA 94610  
EPA ID: CAL000320538  
Inactive Date: Not reported  
Create Date: 06/08/2007  
Last Act Date: Not reported  
Mailing Name: Not reported  
Mailing Address: 29 WILDWOOD AVE  
Mailing Address 2: Not reported  
Mailing City,State,Zip: PIEDMONT, CA 946101043  
Owner Name: JEFFREY HANSEN  
Owner Address: 4335 BRIAR CLIFF RD  
Owner Address 2: Not reported  
Owner City,State,Zip: OAKLAND, CA 946054622  
Owner Phone: Not reported  
Owner Fax: Not reported  
Contact Name: JEFFREY HANSEN  
Contact Address: 29 WILDWOOD AVE  
Contact Address 2: Not reported  
City,State,Zip: PIEDMONT, CA 946101043  
Contact Phone: Not reported  
Contact Fax: Not reported  
Facility Status: Active  
Facility Type: PERMANENT  
Category: STATE  
Latitude: 37.819277  
Longitude: -122.24368

**NAICS:**

EPA ID: CAL000320538  
Create Date: 2007-06-08 09:16:51.400  
NAICS Code: 44719  
NAICS Description: Other Gasoline Stations  
Issued EPA ID Date: 2007-06-08 09:16:51.38300  
Inactive Date: 2020-06-30 00:00:00  
Facility Name: PIEDMONT SHELL AUTO CARE  
Facility Address: 29 WILDWOOD AVE  
Facility Address 2: Not reported  
Facility City: PIEDMONT  
Facility County: Not reported  
Facility State: CA  
Facility Zip: 946101043

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PIEDMONT SHELL SERV. (Continued)**

**S101624468**

HAZNET:

Name: PIEDMONT SHELL AUTO CARE  
Address: 29 WILDWOOD AVE  
Address 2: Not reported  
City,State,Zip: PIEDMONT, CA 946101043  
Contact: JEFFREY HANSEN  
Telephone: 5106540512  
Mailing Name: Not reported  
Mailing Address: 29 WILDWOOD AVE  
  
Year: 2017  
Gepaid: CAL000320538  
TSD EPA ID: CAD044003556  
CA Waste Code: 223 - Unspecified oil-containing waste  
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No  
Treatment/Reovery (H010-H129) Or (H131-H135)  
Tons: 0.3336

Additional Info:

Year: 2017  
Gen EPA ID: CAL000320538  
  
Shipment Date: 20171005  
Creation Date: 6/20/2018 18:32:00  
Receipt Date: 20171006  
Manifest ID: 011252455FLE  
Trans EPA ID: CAL000346010  
Trans Name: BIG SKY ENVIRONMENTAL SOLUTIONS  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSD EPA ID: CAD044003556  
Trans Name: RAMOS ENVIRONMENTAL  
TSD EPA ID: Not reported  
TSD EPA Name: Not reported  
Waste Code Description: 223 - Unspecified oil-containing waste  
RCRA Code: Not reported  
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No  
Treatment/Reovery (H010-H129) Or (H131-H135)  
Quantity Tons: 0.3336  
Waste Quantity: 80  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

CERS:

Name: SHELL REDEVELOPMENT  
Address: 29 WILDWOOD AVENUE  
City,State,Zip: PIEDMONT, CA 94610  
Site ID: 761638  
CERS ID: T10000007222  
CERS Description: Cleanup Program Site

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**PIEDMONT SHELL SERV. (Continued)**

**S101624468**

**Affiliation:**

Affiliation Type Desc: Regional Board Caseworker  
 Entity Name: Regional Water Board - SAN FRANCISCO BAY RWQCB (REGION 2)  
 Entity Title: Not reported  
 Affiliation Address: 1515 CLAY ST SUITE 1400  
 Affiliation City: OAKLAND  
 Affiliation State: CA  
 Affiliation Country: Not reported  
 Affiliation Zip: Not reported  
 Affiliation Phone: ,

Affiliation Type Desc: Local Agency Caseworker  
 Entity Name: JONATHAN SANDERS - ALAMEDA COUNTY LOP  
 Entity Title: Not reported  
 Affiliation Address: 1131 Harbor Bay Pkwy  
 Affiliation City: ALAMEDA  
 Affiliation State: CA  
 Affiliation Country: Not reported  
 Affiliation Zip: Not reported  
 Affiliation Phone: 5105676791,

**AP193 SHELL OIL CO**  
**NNE 29 WILDWOOD**  
**1/4-1/2 PIEDMONT, CA 94610**  
**0.486 mi.**  
**2565 ft. Site 4 of 4 in cluster AP**

**LUST 1008153030**  
**Alameda County CS N/A**  
**FINDS**  
**ECHO**  
**Cortese**  
**CERS**

**Relative:**  
**Lower**

**LUST:**

**Actual:** Name: SHELL #13-5765  
 44 ft. Address: 29 WILDWOOD  
 City,State,Zip: PIEDMONT, CA 94610  
 Lead Agency: ALAMEDA COUNTY LOP  
 Case Type: LUST Cleanup Site  
 Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0600101246](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600101246)  
 Global Id: T0600101246  
 Latitude: 37.818942108  
 Longitude: -122.244595  
 Status: Completed - Case Closed  
 Status Date: 08/06/2010  
 Case Worker: Not reported  
 RB Case Number: 01-1351  
 Local Agency: Not reported  
 File Location: All Files are on GeoTracker or in the Local Agency Database  
 Local Case Number: RO0000495  
 Potential Media Affect: Other Groundwater (uses other than drinking water)  
 Potential Contaminants of Concern: Gasoline  
 EPA Region: 9  
 Coordinate Source: \* Historical Geocode - Exact Address Match  
 Cuf Case: YES  
 Quantity Released Gallons: 0  
 Begin Date: 09/20/1984  
 Leak Reported Date: 09/20/1984  
 How Discovered: Tank Closure  
 How Discovered Description: Not reported  
 Discharge Source: Not reported

MAP FINDINGS

**SHELL OIL CO (Continued)**

**1008153030**

Discharge Cause: Stop Method: Stop Description: No Further Action Date: CA Water Watershed Name: Dwr Groundwater Subbasin Name: Disadvantaged Community: CA Enviroscreen 3 Score: CA Enviroscreen 4 Score: Military DOD Site: Facility Project Subtype: RWQCB Region: Site History:	Not reported Close and Remove Tank Not reported 08/06/2010 South Bay - East Bay Cities (204.20) Santa Clara Valley - East Bay Plain (2-009.04) Not reported 16-20% 15-20% No Not reported SAN FRANCISCO BAY RWQCB (REGION 2) The site is currently an operating gasoline service station located in a mixed commercial and residential area of Oakland, California. The triangular-shaped site is located at the former confluence of Pleasant Valley Creek and Bushy Dell Creek. Both creeks are currently channeled in underground culverts beneath Grand Avenue (former Pleasant Valley Creek) and Wildwood Avenue (former Bushy Dell Creek). Drainage flows south through the culverts to discharge to Lake Merritt approximately 4,000 feet to the south. Following the removal and replacement of underground storage tanks (USTs) in August 1984, four soil borings (E-1 through E-4) were advanced at the site on August 6, 2008. Petroleum hydrocarbons were observed at approximately 5 feet bgs in three of the borings completed within the tank backfill. In June 1987, a 550-gallon waste oil tank was replaced. Soil samples collected during the waste oil tank removal did not contain petroleum hydrocarbons or volatile organic compounds at concentrations above reporting limits. In August 1988, five soil borings (B-1 through B-5) were advanced to 15.5 feet bgs adjacent to the USTs. Up to 6,500 ppm of total petroleum hydrocarbons as gasoline (TPHg) was detected in boring B-3 and up to 750 ppm of TPHg was detected in B-4. In July 1989, six soil borings were advanced (BH-D through BH-I) and three groundwater monitoring wells were installed (MW-1 through MW-3). Up to 710 ppm of TPHg was detected in soil samples collected from four of the borings. Petroleum hydrocarbons were detected in the initial groundwater samples collected from wells MW-2 and MW-3. In January 1990, three soil borings (BH-J through BH-L) were advanced and two groundwater monitoring wells were installed (MW-4 and MW-5). Petroleum hydrocarbons were not detected in soil samples collected from the three soil borings. On June 16, 1995, monitoring well MW-4, which was a flowing artesian well installed in a lower water-bearing zone, was decommissioned. The dispensers and piping were upgraded in March 1998. Petroleum hydrocarbons were detected in the soil sample collected beneath the northwestern dispenser at concentrations of 1,600 TPHg and 6.3 ppm benzene (D-2 at 2 feet bgs). The dispensers and piping were again upgraded in April 2005. Soil samples collected beneath the dispensers contained up to 610 ppm of TPHg and 890 ppm of TPHd. One 550-gallon waste oil tank was removed on May 9, 2007. Quarterly groundwater monitoring has been conducted at the site since July 1989. During the third quarter 2009 groundwater sampling event, groundwater from MW-3 contained 1,800 ppb TPHg, 21 ppb benzene, 17 ppb MTBE, and 53 ppb TBA. Groundwater samples were analyzed for halogenated VOCs from May 1998 through July 2001. Halogenated VOCs were detected in groundwater from off-site wells MW-4 and MW-5, which are located on the opposite side of Grand Avenue from the site, but were not detected in the on-site monitoring wells. The halogenated VOCs are likely from an off-site source.
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Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SHELL OIL CO (Continued)**

**1008153030**

LUST:

Global Id: T0600101246  
Contact Type: Regional Board Caseworker  
Contact Name: Regional Water Board  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY ST SUITE 1400  
City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

LUST:

Global Id: T0600101246  
Action Type: ENFORCEMENT  
Date: 02/02/2010  
Action: File Review - Closure

Global Id: T0600101246  
Action Type: ENFORCEMENT  
Date: 03/31/2010  
Action: Notification - Fee Title Owners Notice - #20100331

Global Id: T0600101246  
Action Type: ENFORCEMENT  
Date: 04/28/2010  
Action: Staff Letter - #20100428

Global Id: T0600101246  
Action Type: ENFORCEMENT  
Date: 05/21/2010  
Action: Staff Letter - #20100521

Global Id: T0600101246  
Action Type: ENFORCEMENT  
Date: 03/31/2010  
Action: Notification - Public Notice of Case Closure - #20100331

Global Id: T0600101246  
Action Type: ENFORCEMENT  
Date: 05/21/2009  
Action: Technical Correspondence / Assistance / Other

Global Id: T0600101246  
Action Type: ENFORCEMENT  
Date: 07/24/2009  
Action: Staff Letter - #20090724

Global Id: T0600101246  
Action Type: Other  
Date: 09/20/1984  
Action: Leak Reported

Global Id: T0600101246  
Action Type: RESPONSE  
Date: 06/29/2010  
Action: Well Destruction Report

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SHELL OIL CO (Continued)**

**1008153030**

Global Id: T0600101246  
Action Type: ENFORCEMENT  
Date: 08/06/2010  
Action: Closure/No Further Action Letter - #20100806

Global Id: T0600101246  
Action Type: ENFORCEMENT  
Date: 03/22/2010  
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Global Id: T0600101246  
Action Type: Other  
Date: 05/18/2007  
Action: Leak Discovery

Global Id: T0600101246  
Action Type: Other  
Date: 05/09/2007  
Action: Leak Stopped

**LUST:**

Global Id: T0600101246  
Status: Open - Case Begin Date  
Status Date: 09/20/1984

Global Id: T0600101246  
Status: Open - Site Assessment  
Status Date: 09/20/1984

Global Id: T0600101246  
Status: Open - Site Assessment  
Status Date: 09/19/1989

Global Id: T0600101246  
Status: Completed - Case Closed  
Status Date: 08/06/2010

**Alameda County CS:**

Name: SHELL #13-5765  
Address: 29 WILDWOOD AVE  
City,State,Zip: PIEDMONT, CA 94610  
Status: Leak Confirmation  
Record Id: RO0000495  
PE: 5602  
Facility Status: Leak Confirmation  
Latitude: 37.819265713  
Longitude: -122.24401396

Name: SHELL #13-5765  
Address: 29 WILDWOOD AVE  
City,State,Zip: PIEDMONT, CA 94610  
Status: Pollution Characterization  
Record Id: RO0000495  
PE: 5602  
Facility Status: Pollution Characterization

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SHELL OIL CO (Continued)**

**1008153030**

Latitude: 37.819265713  
Longitude: -122.24401396

Name: SHELL #13-5765  
Address: 29 WILDWOOD AVE  
City,State,Zip: PIEDMONT, CA 94610  
Status: Case Closed  
Record Id: RO0000495  
PE: 5602  
Facility Status: Case Closed  
Latitude: 37.819265713  
Longitude: -122.24401396

Name: SHELL WILDWOOD REDEVELOPMENT  
Address: 29 WILDWOOD AVE  
City,State,Zip: PIEDMONT, CA 94610-  
Status: Pollution Characterization  
Record Id: RO0003154  
PE: 5502  
Facility Status: Pollution Charaterization  
Latitude: Not reported  
Longitude: Not reported

**FINDS:**

Registry ID: 110018974573

[Click Here for FRS Facility Detail Report:](#)

**Environmental Interest/Information System:**

The Resource Conservation and Recovery Act Information System (RCRAInfo) is EPA's comprehensive information system in support of the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. It tracks many types of information about generators, transporters, treaters, storers, and disposers of hazardous waste.

California's Hazardous Waste Tracking System Data Mart (HWTS-DATAMART) provides information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

**ECHO:**

Envid: 1008153030  
Registry ID: 110018974573  
DFR URL: <http://echo.epa.gov/detailed-facility-report?fid=110018974573>  
Name: SHELL OIL CO  
Address: 29 WILDWOOD  
City,State,Zip: PIEDMONT, CA 94610

**CORTESE:**

Name: SHELL #13-5765  
Address: 29 WILDWOOD  
City,State,Zip: PIEDMONT, CA 94610  
Region: CORTESE  
Envirostor Id: Not reported  
Global ID: T0600101246

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**SHELL OIL CO (Continued)**

**1008153030**

Site/Facility Type: LUST CLEANUP SITE  
 Cleanup Status: COMPLETED - CASE CLOSED  
 Status Date: Not reported  
 Site Code: Not reported  
 Latitude: Not reported  
 Longitude: Not reported  
 Owner: Not reported  
 Enf Type: Not reported  
 Swat R: Not reported  
 Flag: active  
 Order No: Not reported  
 Waste Discharge System No: Not reported  
 Effective Date: Not reported  
 Region 2: Not reported  
 WID Id: Not reported  
 Solid Waste Id No: Not reported  
 Waste Management Uit Name: Not reported  
 File Name: Active Open

**CERS:**

Name: SHELL #13-5765  
 Address: 29 WILDWOOD  
 City,State,Zip: PIEDMONT, CA 94610  
 Site ID: 761110  
 CERS ID: T0600101246  
 CERS Description: Leaking Underground Storage Tank Cleanup Site

**Affiliation:**

Affiliation Type Desc: Regional Board Caseworker  
 Entity Name: Regional Water Board - SAN FRANCISCO BAY RWQCB (REGION 2)  
 Entity Title: Not reported  
 Affiliation Address: 1515 CLAY ST SUITE 1400  
 Affiliation City: OAKLAND  
 Affiliation State: CA  
 Affiliation Country: Not reported  
 Affiliation Zip: Not reported  
 Affiliation Phone: ,

**AO194  
 NNW  
 1/4-1/2  
 0.496 mi.  
 2618 ft.**

**UNOCAL  
 96 MACARTHUR BLVD  
 OAKLAND, CA 94610  
 Site 3 of 3 in cluster AO**

**LUST  
 Alameda County CS  
 SWEEPS UST  
 HIST UST  
 CA FID UST  
 HIST CORTESE**

**1000167106  
 N/A**

**Relative:  
 Higher**

**LUST REG 2:**

**Actual:  
 80 ft.**

Region: 2  
 Facility Id: 01-1618  
 Facility Status: Preliminary site assessment underway  
 Case Number: 1120  
 How Discovered: Tank Closure  
 Leak Cause: Structure Failure  
 Leak Source: Tank  
 Date Leak Confirmed: 9/21/1994  
 Oversight Program: LUST  
 Prelim. Site Assesment Wokplan Submitted: Not reported  
 Preliminary Site Assesment Began: 1/2/1965

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNOCAL (Continued)**

**1000167106**

Pollution Characterization Began: Not reported  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

Alameda County CS:

Name: UNOCAL #1871  
Address: 96 MACARTHUR BLVD  
City,State,Zip: OAKLAND, CA 94610  
Status: Leak Confirmation  
Record Id: RO0000455  
PE: 5602  
Facility Status: Leak Confirmation  
Latitude: 37.819501635  
Longitude: -122.2536031

Name: UNOCAL #1871  
Address: 96 MACARTHUR BLVD  
City,State,Zip: OAKLAND, CA 94610  
Status: Preliminary Site Assessment Workplan Submitted  
Record Id: RO0000455  
PE: 5602  
Facility Status: Preliminary Site Assessment Workplan Submitted  
Latitude: 37.819501635  
Longitude: -122.2536031

Name: UNOCAL #1871  
Address: 96 MACARTHUR BLVD  
City,State,Zip: OAKLAND, CA 94610  
Status: Preliminary Site Assessment Underway  
Record Id: RO0000455  
PE: 5602  
Facility Status: Preliminary Site Assessment Underway  
Latitude: 37.819501635  
Longitude: -122.2536031

Name: UNOCAL #1871  
Address: 96 MACARTHUR BLVD  
City,State,Zip: OAKLAND, CA 94610  
Status: Pollution Characterization  
Record Id: RO0000455  
PE: 5602  
Facility Status: Pollution Charaterization  
Latitude: 37.819501635  
Longitude: -122.2536031

SWEEPS UST:

Name: UNOCAL  
Address: 96 MACARTHUR BLVD  
City: OAKLAND  
Status: Active  
Comp Number: 60230  
Number: 1  
Board Of Equalization: 44-008001  
Referral Date: 03-04-92  
Action Date: 04-13-93

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNOCAL (Continued)**

**1000167106**

Created Date: 02-29-88  
Owner Tank Id: 1871-1-1  
SWRCB Tank Id: 01-000-060230-000001  
Tank Status: A  
Capacity: 12000  
Active Date: 03-04-92  
Tank Use: M.V. FUEL  
STG: P  
Content: REG UNLEADED  
Number Of Tanks: 5

Name: UNOCAL  
Address: 96 MACARTHUR BLVD  
City: OAKLAND  
Status: Active  
Comp Number: 60230  
Number: 1  
Board Of Equalization: 44-008001  
Referral Date: 03-04-92  
Action Date: 04-13-93  
Created Date: 02-29-88  
Owner Tank Id: 1871-2-1  
SWRCB Tank Id: 01-000-060230-000002  
Tank Status: A  
Capacity: 12000  
Active Date: 03-04-92  
Tank Use: M.V. FUEL  
STG: P  
Content: PRM UNLEADED  
Number Of Tanks: Not reported

Name: UNOCAL  
Address: 96 MACARTHUR BLVD  
City: OAKLAND  
Status: Active  
Comp Number: 60230  
Number: 1  
Board Of Equalization: 44-008001  
Referral Date: 03-04-92  
Action Date: 04-13-93  
Created Date: 02-29-88  
Owner Tank Id: 1871-1-1  
SWRCB Tank Id: 01-000-060230-000003  
Tank Status: A  
Capacity: 7500  
Active Date: 07-01-85  
Tank Use: M.V. FUEL  
STG: P  
Content: REG UNLEADED  
Number Of Tanks: Not reported

Name: UNOCAL  
Address: 96 MACARTHUR BLVD  
City: OAKLAND  
Status: Active  
Comp Number: 60230  
Number: 1

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNOCAL (Continued)**

**1000167106**

Board Of Equalization: 44-008001  
Referral Date: 03-04-92  
Action Date: 04-13-93  
Created Date: 02-29-88  
Owner Tank Id: 1871-2-1  
SWRCB Tank Id: 01-000-060230-000004  
Tank Status: A  
Capacity: 7500  
Active Date: 07-01-85  
Tank Use: M.V. FUEL  
STG: P  
Content: REG UNLEADED  
Number Of Tanks: Not reported

Name: UNOCAL  
Address: 96 MACARTHUR BLVD  
City: OAKLAND  
Status: Active  
Comp Number: 60230  
Number: 1  
Board Of Equalization: 44-008001  
Referral Date: 03-04-92  
Action Date: 04-13-93  
Created Date: 02-29-88  
Owner Tank Id: 1871-34  
SWRCB Tank Id: 01-000-060230-000005  
Tank Status: A  
Capacity: 280  
Active Date: 11-11-92  
Tank Use: OIL  
STG: W  
Content: WASTE OIL  
Number Of Tanks: Not reported

**HIST UST:**

Name: UNION OIL SS 1871  
Address: 96 MACARTHUR BLVD  
City,State,Zip: OAKLAND, CA 94610  
File Number: 0003645c  
URL: <https://documents.geotracker.waterboards.ca.gov/ustpdfs/pdf/0003645c.pdf>  
Region: STATE  
Facility ID: 00000060230  
Facility Type: Gas Station  
Other Type: Not reported  
Contact Name: TONY K. LEE  
Telephone: 4156553670  
Owner Name: UNION OIL CO.  
Owner Address: 1 CALIFORNIA ST. SUITE 2700  
Owner City,St,Zip: SAN FRANCISCO, CA 94111  
Total Tanks: 0002  
  
Tank Num: 001  
Container Num: 1871-1-1  
Year Installed: 1984  
Tank Capacity: 00012000  
Tank Used for: PRODUCT  
Type of Fuel: UNLEADED

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**UNOCAL (Continued)**

**1000167106**

Container Construction Thickness: Not reported  
 Leak Detection: Stock Inventor

Tank Num: 002  
 Container Num: 1871-2-1  
 Year Installed: 1984  
 Tank Capacity: 00012000  
 Tank Used for: PRODUCT  
 Type of Fuel: PREMIUM  
 Container Construction Thickness: Not reported  
 Leak Detection: Stock Inventor

Click here for Geo Tracker PDF:

**CA FID UST:**

Facility ID: 01001726  
 Regulated By: UTNKA  
 Regulated ID: 00060230  
 Cortese Code: Not reported  
 SIC Code: Not reported  
 Facility Phone: 4156553670  
 Mail To: Not reported  
 Mailing Address: 2000 CROW CANYON PL  
 Mailing Address 2: Not reported  
 Mailing City,St,Zip: OAKLAND 94610  
 Contact: Not reported  
 Contact Phone: Not reported  
 DUNs Number: Not reported  
 NPDES Number: Not reported  
 EPA ID: Not reported  
 Comments: Not reported  
 Status: Active

**HIST CORTESE:**

edr\_fname: UNOCAL  
 edr\_fadd1: 96 MACARTHUR  
 City,State,Zip: OAKLAND, CA 94611  
 Region: CORTESE  
 Facility County Code: 1  
 Reg By: LTNKA  
 Reg Id: 01-1618

**195  
 SE  
 1/4-1/2  
 0.500 mi.  
 2638 ft.**

**ARCO  
 731 MACARTHUR  
 OAKLAND, CA 94609**

**LUST S104162485  
 HIST CORTESE N/A**

**Relative:  
 Higher  
 Actual:  
 109 ft.**

**LUST REG 2:**  
 Region: 2  
 Facility Id: 01-0118  
 Facility Status: Remedial action (cleanup) Underway  
 Case Number: 3874  
 How Discovered: OM  
 Leak Cause: Overfill  
 Leak Source: Other Source  
 Date Leak Confirmed: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**ARCO (Continued)**

**S104162485**

Oversight Program: LUST  
Prelim. Site Assessment Workplan Submitted: Not reported  
Preliminary Site Assessment Began: 3/30/1983  
Pollution Characterization Began: 12/16/1987  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: 1/1/1996  
Date Post Remedial Action Monitoring Began: Not reported

**HIST CORTESE:**

edr\_fname: ARCO  
edr\_fadd1: 731 MACARTHUR  
City,State,Zip: OAKLAND, CA 94609  
Region: CORTESE  
Facility County Code: 1  
Reg By: LTNKA  
Reg Id: 01-0118

196  
West  
1/2-1  
0.772 mi.  
4078 ft.

**CROWLEY MARITIME CORP.  
PAC. DRY DOCK YARDS 1&2  
OAKLAND, CA 92626**

**Notify 65 S100179670  
N/A**

**Relative:  
Lower  
Actual:  
22 ft.**

**NOTIFY 65:**  
Name: CROWLEY MARITIME CORP.  
Address: PAC. DRY DOCK YARDS 1&2  
City,State,Zip: OAKLAND, CA 92626  
Date Reported: Not reported  
Staff Initials: Not reported  
Board File Number: Not reported  
Facility Type: Not reported  
Discharge Date: Not reported  
Issue Date: Not reported  
Incident Description: Not reported  
Global ID: Not reported  
Status: Not reported

197  
WNW  
1/2-1  
0.794 mi.  
4194 ft.

**EUROPEAN MOTORS  
2915 BROADWAY  
OAKLAND, CA 94611**

**RCRA-LQG 1000340156  
LUST CAD982486714  
Alameda County CS  
SWEEPS UST  
HIST UST  
CA FID UST  
Cortese  
Notify 65  
CERS**

**Relative:  
Lower  
Actual:  
46 ft.**

**RCRA Listings:**  
Date Form Received by Agency: 19900423  
Handler Name: European Motors  
Handler Address: 2915 Broadway  
Handler City,State,Zip: OAKLAND, CA 94611  
EPA ID: CAD982486714  
Contact Name: ENVIRONMENTAL MANAGER  
Contact Address: 2915 BROADWAY  
Contact City,State,Zip: OAKLAND, CA 94611

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**EUROPEAN MOTORS (Continued)**

**1000340156**

Contact Telephone:	415-832-6030
Contact Fax:	Not reported
Contact Email:	Not reported
Contact Title:	Not reported
EPA Region:	09
Land Type:	Other
Federal Waste Generator Description:	Large Quantity Generator
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Ca
State District:	2
Mailing Address:	2915 BROADWAY
Mailing City, State, Zip:	OAKLAND, CA 94611
Owner Name:	European Motors Ltd
Owner Type:	Private
Operator Name:	Not reported
Operator Type:	Not reported
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRC Permit Baseline:	Not on the Baseline
2018 GPRC Renewals Baseline:	Not on the Baseline
202 GPRC Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20020627
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EUROPEAN MOTORS (Continued)**

**1000340156**

Manifest Broker: No  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Owner  
Owner/Operator Name: EUROPEAN MOTORS LTD  
Legal Status: Private  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: NOT REQUIRED  
Owner/Operator City,State,Zip: NOT REQUIRED, ME 99999  
Owner/Operator Telephone: 415-555-1212  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 19900423  
Handler Name: EUROPEAN MOTORS  
Federal Waste Generator Description: Large Quantity Generator  
State District Owner: Ca  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Codes: No NAICS Codes Found

Has the Facility Received Notices of Violations:

Found Violation: No  
Agency Which Determined Violation: Not reported  
Violation Short Description: Not reported  
Date Violation was Determined: Not reported  
Actual Return to Compliance Date: Not reported  
Return to Compliance Qualifier: Not reported  
Violation Responsible Agency: Not reported  
Scheduled Compliance Date: Not reported  
Enforcement Identifier: Not reported  
Date of Enforcement Action: Not reported  
Enforcement Responsible Agency: Not reported  
Enforcement Docket Number: Not reported  
Enforcement Attorney: Not reported  
Corrective Action Component: Not reported  
Appeal Initiated Date: Not reported  
Appeal Resolution Date: Not reported  
Disposition Status Date: Not reported  
Disposition Status: Not reported  
Disposition Status Description: Not reported  
Consent/Final Order Sequence Number: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EUROPEAN MOTORS (Continued)**

**1000340156**

Consent/Final Order Respondent Name: Not reported  
Consent/Final Order Lead Agency: Not reported  
Enforcement Type: Not reported  
Enforcement Responsible Person: Not reported  
Enforcement Responsible Sub-Organization: Not reported  
SEP Sequence Number: Not reported  
SEP Expenditure Amount: Not reported  
SEP Scheduled Completion Date: Not reported  
SEP Actual Date: Not reported  
SEP Defaulted Date: Not reported  
SEP Type: Not reported  
SEP Type Description: Not reported  
Proposed Amount: Not reported  
Final Monetary Amount: Not reported  
Paid Amount: Not reported  
Final Count: Not reported  
Final Amount: Not reported

Evaluation Action Summary:

Evaluation Date: 19930324  
Evaluation Responsible Agency: State Contractor/Grantee  
Found Violation: No  
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION  
Evaluation Responsible Person Identifier: R9  
Evaluation Responsible Sub-Organization: Not reported  
Actual Return to Compliance Date: Not reported  
Scheduled Compliance Date: Not reported  
Date of Request: Not reported  
Date Response Received: Not reported  
Request Agency: Not reported  
Former Citation: Not reported

LUST:

Name: EUROPEAN MOTORS LTD  
Address: 2915 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
Lead Agency: ALAMEDA COUNTY LOP  
Case Type: LUST Cleanup Site  
Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0600100528](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600100528)  
Global Id: T0600100528  
Latitude: 37.8179879331178  
Longitude: -122.263247619678  
Status: Completed - Case Closed  
Status Date: 09/03/1992  
Case Worker: Not reported  
RB Case Number: 01-0575  
Local Agency: Not reported  
File Location: All Files are on GeoTracker or in the Local Agency Database  
Local Case Number: RO0000702  
Potential Media Affect: Soil  
Potential Contaminants of Concern: Waste Oil / Motor / Hydraulic / Lubricating  
EPA Region: 9  
Coordinate Source: Google Map Move  
Cuf Case: NO  
Quantity Released Gallons: 0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EUROPEAN MOTORS (Continued)**

**1000340156**

Begin Date: 11/20/1989  
Leak Reported Date: 11/20/1989  
How Discovered: Other Means  
How Discovered Description: Not reported  
Discharge Source: Not reported  
Discharge Cause: Not reported  
Stop Method: Other Means  
Stop Description: Not reported  
No Further Action Date: 09/03/1992  
CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Severely Disadvantaged Community  
CA Enviroscreen 3 Score: 71-75%  
CA Enviroscreen 4 Score: 80-85%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Not reported

LUST:

Global Id: T0600100528  
Contact Type: Regional Board Caseworker  
Contact Name: Regional Water Board  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY ST SUITE 1400  
City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

LUST:

Global Id: T0600100528  
Action Type: ENFORCEMENT  
Date: 03/24/1993  
Action: Staff Letter

Global Id: T0600100528  
Action Type: ENFORCEMENT  
Date: 05/27/1992  
Action: Closure/No Further Action Letter

Global Id: T0600100528  
Action Type: Other  
Date: 11/20/1989  
Action: Leak Reported

Global Id: T0600100528  
Action Type: RESPONSE  
Date: 01/13/1992  
Action: Monitoring Report - Quarterly

Global Id: T0600100528  
Action Type: REMEDIATION  
Date: 09/09/9999  
Action: Excavation

Global Id: T0600100528  
Action Type: RESPONSE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EUROPEAN MOTORS (Continued)**

**1000340156**

Date: 04/02/1990  
Action: Soil and Water Investigation Report

Global Id: T0600100528  
Action Type: ENFORCEMENT  
Date: 03/17/1992  
Action: Notice of Responsibility

**LUST:**

Global Id: T0600100528  
Status: Open - Case Begin Date  
Status Date: 11/20/1989

Global Id: T0600100528  
Status: Completed - Case Closed  
Status Date: 09/03/1992

**Alameda County CS:**

Name: EUROPEAN MOTORS LTD  
Address: 2915 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
Status: Case Closed  
Record Id: RO0000702  
PE: 5602  
Facility Status: Case Closed  
Latitude: 37.817677032  
Longitude: -122.26302865

**SWEEPS UST:**

Name: EUROPEAN MOTORS, LTD  
Address: 2915 BROADWAY  
City: OAKLAND  
Status: Not reported  
Comp Number: 14124  
Number: Not reported  
Board Of Equalization: 44-000206  
Referral Date: Not reported  
Action Date: Not reported  
Created Date: Not reported  
Owner Tank Id: Not reported  
SWRCB Tank Id: 01-000-014124-000001  
Tank Status: Not reported  
Capacity: 1000  
Active Date: Not reported  
Tank Use: M.V. FUEL  
STG: PRODUCT  
Content: REG UNLEADED  
Number Of Tanks: 4

Name: EUROPEAN MOTORS, LTD  
Address: 2915 BROADWAY  
City: OAKLAND  
Status: Not reported  
Comp Number: 14124  
Number: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EUROPEAN MOTORS (Continued)**

**1000340156**

Board Of Equalization: 44-000206  
Referral Date: Not reported  
Action Date: Not reported  
Created Date: Not reported  
Owner Tank Id: Not reported  
SWRCB Tank Id: 01-000-014124-000002  
Tank Status: Not reported  
Capacity: 500  
Active Date: Not reported  
Tank Use: M.V. FUEL  
STG: PRODUCT  
Content: LEADED  
Number Of Tanks: Not reported

Name: EUROPEAN MOTORS, LTD  
Address: 2915 BROADWAY  
City: OAKLAND  
Status: Not reported  
Comp Number: 14124  
Number: Not reported  
Board Of Equalization: 44-000206  
Referral Date: Not reported  
Action Date: Not reported  
Created Date: Not reported  
Owner Tank Id: Not reported  
SWRCB Tank Id: 01-000-014124-000003  
Tank Status: Not reported  
Capacity: 500  
Active Date: Not reported  
Tank Use: OIL  
STG: WASTE  
Content: WASTE OIL  
Number Of Tanks: 4

Name: EUROPEAN MOTORS, LTD  
Address: 2915 BROADWAY  
City: OAKLAND  
Status: Not reported  
Comp Number: 14124  
Number: Not reported  
Board Of Equalization: 44-000206  
Referral Date: Not reported  
Action Date: Not reported  
Created Date: Not reported  
Owner Tank Id: Not reported  
SWRCB Tank Id: 01-000-014124-000004  
Tank Status: Not reported  
Capacity: 4000  
Active Date: Not reported  
Tank Use: M.V. FUEL  
STG: PRODUCT  
Content: DIESEL  
Number Of Tanks: Not reported

Name: EUROPEAN MOTORS LTD  
Address: 2915 BROADWAY  
City: OAKLAND

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EUROPEAN MOTORS (Continued)**

**1000340156**

Status: Active  
Comp Number: 14124  
Number: 9  
Board Of Equalization: 44-000206  
Referral Date: 06-04-93  
Action Date: 11-22-93  
Created Date: 02-29-88  
Owner Tank Id: Not reported  
SWRCB Tank Id: Not reported  
Tank Status: Not reported  
Capacity: Not reported  
Active Date: Not reported  
Tank Use: Not reported  
STG: Not reported  
Content: Not reported  
Number Of Tanks: Not reported

**HIST UST:**

Name: EUROPEAN MOTORS LTD  
Address: 2915 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
File Number: 00035f75  
URL: <https://documents.geotracker.waterboards.ca.gov/ustpdfs/pdf/00035f75.pdf>  
Region: STATE  
Facility ID: 00000014124  
Facility Type: Other  
Other Type: NEW CAR DEALER  
Contact Name: JOHN SANBORN  
Telephone: 4158326030  
Owner Name: EUROPEAN MOTORS, LTD.  
Owner Address: 2915 BROADWAY  
Owner City,St,Zip: OAKLAND, CA 94611  
Total Tanks: 0004

Tank Num: 001  
Container Num: 1  
Year Installed: 1974  
Tank Capacity: 00001000  
Tank Used for: PRODUCT  
Type of Fuel: UNLEADED  
Container Construction Thickness: Not reported  
Leak Detection: Stock Inventor

Tank Num: 002  
Container Num: 2  
Year Installed: Not reported  
Tank Capacity: 00000500  
Tank Used for: PRODUCT  
Type of Fuel: REGULAR  
Container Construction Thickness: Not reported  
Leak Detection: Stock Inventor

Tank Num: 003  
Container Num: 4  
Year Installed: Not reported  
Tank Capacity: 00000500  
Tank Used for: WASTE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EUROPEAN MOTORS (Continued)**

**1000340156**

Type of Fuel: WASTE OIL  
Container Construction Thickness: Not reported  
Leak Detection: None  
  
Tank Num: 004  
Container Num: 3  
Year Installed: Not reported  
Tank Capacity: 00004000  
Tank Used for: PRODUCT  
Type of Fuel: DIESEL  
Container Construction Thickness: Not reported  
Leak Detection: Stock Inventor

[Click here for Geo Tracker PDF:](#)

**CA FID UST:**

Facility ID: 01002006  
Regulated By: UTKNI  
Regulated ID: 00014124  
Cortese Code: Not reported  
SIC Code: Not reported  
Facility Phone: 4158326030  
Mail To: Not reported  
Mailing Address: 2915 BROADWAY  
Mailing Address 2: Not reported  
Mailing City,St,Zip: OAKLAND 94611  
Contact: Not reported  
Contact Phone: Not reported  
DUNs Number: Not reported  
NPDES Number: Not reported  
EPA ID: Not reported  
Comments: Not reported  
Status: Inactive

**CORTESE:**

Name: EUROPEAN MOTORS LTD  
Address: 2915 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
Region: CORTESE  
Envirostor Id: Not reported  
Global ID: T0600100528  
Site/Facility Type: LUST CLEANUP SITE  
Cleanup Status: COMPLETED - CASE CLOSED  
Status Date: Not reported  
Site Code: Not reported  
Latitude: Not reported  
Longitude: Not reported  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: active  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**EUROPEAN MOTORS (Continued)**

**1000340156**

Solid Waste Id No: Not reported  
 Waste Management Uit Name: Not reported  
 File Name: Active Open

**NOTIFY 65:**

Name: EUROPEAN MOTORS  
 Address: 2915 BROADWAY  
 City,State,Zip: OAKLAND, CA 92626  
 Date Reported: Not reported  
 Staff Initials: Not reported  
 Board File Number: Not reported  
 Facility Type: Not reported  
 Discharge Date: Not reported  
 Issue Date: Not reported  
 Incident Description: Not reported  
 Global ID: Not reported  
 Status: Not reported

**CERS:**

Name: EUROPEAN MOTORS LTD  
 Address: 2915 BROADWAY  
 City,State,Zip: OAKLAND, CA 94611  
 Site ID: 728871  
 CERS ID: T0600100528  
 CERS Description: Leaking Underground Storage Tank Cleanup Site

**Affiliation:**

Affiliation Type Desc: Regional Board Caseworker  
 Entity Name: Regional Water Board - SAN FRANCISCO BAY RWQCB (REGION 2)  
 Entity Title: Not reported  
 Affiliation Address: 1515 CLAY ST SUITE 1400  
 Affiliation City: OAKLAND  
 Affiliation State: CA  
 Affiliation Country: Not reported  
 Affiliation Zip: Not reported  
 Affiliation Phone: ,

**198  
 NW  
 1/2-1  
 0.798 mi.  
 4212 ft.**

**THE ECHO MIXED USE HOUSING DEVELOPMENT  
 3300 BROADWAY  
 OAKLAND, CA 94611**

**ENVIROSTOR S131461973  
 VCP N/A**

**Relative:  
 Higher  
 Actual:  
 55 ft.**

**ENVIROSTOR:**  
 Name: THE ECHO MIXED USE HOUSING DEVELOPMENT  
 Address: 3300 BROADWAY  
 City,State,Zip: OAKLAND, CA 94611  
 Facility ID: 60003563  
 Status: Active  
 Status Date: 09/11/2023  
 Site Code: 202460  
 Site Type: Voluntary Cleanup  
 Site Type Detailed: Voluntary Agreement  
 Acres: Not reported  
 NPL: NO  
 Regulatory Agencies: SMBRP

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**THE ECHO MIXED USE HOUSING DEVELOPMENT (Continued)**

**S131461973**

Lead Agency: SMBRP  
Program Manager: Abraham Serrato  
Supervisor: Steven Becker  
Division Branch: Cleanup Sacramento  
Assembly: 18  
Senate: 09  
Special Program: Not reported  
Restricted Use: NO  
Site Mgmt Req: NONE SPECIFIED  
Funding: Responsible Party  
Latitude: 0  
Longitude: 0  
APN: NONE SPECIFIED  
Past Use: NONE SPECIFIED  
Potential COC: NONE SPECIFIED  
Confirmed COC: NONE SPECIFIED  
Potential Description: NONE SPECIFIED  
Alias Name: 202460  
Alias Type: Project Code (Site Code)  
Alias Name: 60003563  
Alias Type: Envirostor ID Number

**Completed Info:**

Completed Area Name: Not reported  
Completed Sub Area Name: Not reported  
Completed Document Type: Not reported  
Completed Date: Not reported  
Comments: Not reported

Future Area Name: Not reported  
Future Sub Area Name: Not reported  
Future Document Type: Not reported  
Future Due Date: Not reported  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

**VCP:**

Name: THE ECHO MIXED USE HOUSING DEVELOPMENT  
Address: 3300 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
Facility ID: 60003563  
Site Type: Voluntary Cleanup  
Site Type Detail: Voluntary Agreement  
Site Mgmt. Req.: NONE SPECIFIED  
Acres: Not reported  
National Priorities List: NO  
Cleanup Oversight Agencies: SMBRP  
Lead Agency: SMBRP  
Lead Agency Description: DTSC - Site Cleanup Program  
Project Manager: Abraham Serrato  
Supervisor: Steven Becker  
Division Branch: Cleanup Sacramento  
Site Code: 202460  
Assembly: 18

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**THE ECHO MIXED USE HOUSING DEVELOPMENT (Continued)**

**S131461973**

Senate: 09  
Special Programs Code: Not reported  
Status: Active  
Status Date: 09/11/2023  
Restricted Use: NO  
Funding: Responsible Party  
Lat/Long: 0 / 0  
APN: NONE SPECIFIED  
Past Use: NONE SPECIFIED  
Potential COC: NONE SPECIFIED  
Confirmed COC: NONE SPECIFIED  
Potential Description: NONE SPECIFIED  
Alias Name: 202460  
Alias Type: Project Code (Site Code)  
Alias Name: 60003563  
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: Not reported  
Completed Sub Area Name: Not reported  
Completed Document Type: Not reported  
Completed Date: Not reported  
Comments: Not reported

Future Area Name: Not reported  
Future Sub Area Name: Not reported  
Future Document Type: Not reported  
Future Due Date: Not reported  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

199  
WNW  
1/2-1  
0.811 mi.  
4283 ft.

**BROADWAY VOLKSWAGON  
2749 BROADWAY  
OAKLAND, CA 92626**

**Notify 65 S100178913  
N/A**

**Relative:  
Lower  
Actual:  
35 ft.**

NOTIFY 65:  
Name: BROADWAY VOLKSWAGON  
Address: 2749 BROADWAY  
City,State,Zip: OAKLAND, CA 92626  
Date Reported: Not reported  
Staff Initials: Not reported  
Board File Number: Not reported  
Facility Type: Not reported  
Discharge Date: Not reported  
Issue Date: Not reported  
Incident Description: Not reported  
Global ID: Not reported  
Status: Not reported

MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Site

Database(s)

EDR ID Number  
 EPA ID Number

**200**  
**NW**  
**1/2-1**  
**0.844 mi.**  
**4457 ft.**  
  
**Relative:**  
**Higher**  
  
**Actual:**  
**63 ft.**

**CONNELL OLDS**  
**3093 BROADWAY**  
**OAKLAND, CA 94611**

**RCRA-SQG** **1000312755**  
**LUST** **CAD981973365**  
**Alameda County CS**  
**SWEEPS UST**  
**HIST UST**  
**CA FID UST**  
**FINDS**  
**ECHO**  
**Cortese**  
**EMI**  
**HIST CORTESE**  
**HWTS**  
**HAZNET**  
**Notify 65**  
**CERS**

RCRA Listings:

Date Form Received by Agency:	19870511
Handler Name:	Connell Olds
Handler Address:	3093 Broadway
Handler City,State,Zip:	OAKLAND, CA 94611
EPA ID:	CAD981973365
Contact Name:	ENVIRONMENTAL MANAGER
Contact Address:	3093 BROADWAY
Contact City,State,Zip:	OAKLAND, CA 94611
Contact Telephone:	415-893-9110
Contact Fax:	Not reported
Contact Email:	Not reported
Contact Title:	Not reported
EPA Region:	09
Land Type:	Other
Federal Waste Generator Description:	Small Quantity Generator
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Ca
State District:	2
Mailing Address:	3093 BROADWAY
Mailing City,State,Zip:	OAKLAND, CA 94611
Owner Name:	Dean Weaver
Owner Type:	Private
Operator Name:	Not Required
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Hazardous Secondary Material Indicator: NN  
Sub-Part K Indicator: Not reported  
2018 GPRAs Permit Baseline: Not on the Baseline  
2018 GPRAs Renewals Baseline: Not on the Baseline  
202 GPRAs Corrective Action Baseline: No  
Subject to Corrective Action Universe: No  
Non-TSDFs Where RCRA CA has Been Imposed Universe: No  
Corrective Action Priority Ranking: No NCAPS ranking  
Environmental Control Indicator: No  
Institutional Control Indicator: No  
Human Exposure Controls Indicator: N/A  
Groundwater Controls Indicator: N/A  
Significant Non-Complier Universe: No  
Unaddressed Significant Non-Complier Universe: No  
Addressed Significant Non-Complier Universe: No  
Significant Non-Complier With a Compliance Schedule Universe: No  
Financial Assurance Required: Not reported  
Handler Date of Last Change: 20020627  
Recognized Trader-Importer: No  
Recognized Trader-Exporter: No  
Importer of Spent Lead Acid Batteries: No  
Exporter of Spent Lead Acid Batteries: No  
Recycler Activity Without Storage: Not reported  
Manifest Broker: Not reported  
Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Operator  
Owner/Operator Name: NOT REQUIRED  
Legal Status: Private  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: NOT REQUIRED  
Owner/Operator City,State,Zip: NOT REQUIRED, ME 99999  
Owner/Operator Telephone: 415-555-1212  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner  
Owner/Operator Name: DEAN WEAVER  
Legal Status: Private  
Date Became Current: Not reported  
Date Ended Current: Not reported  
Owner/Operator Address: NOT REQUIRED  
Owner/Operator City,State,Zip: NOT REQUIRED, ME 99999  
Owner/Operator Telephone: 415-555-1212  
Owner/Operator Telephone Ext: Not reported  
Owner/Operator Fax: Not reported  
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 19870511  
Handler Name: CONNELL OLDS  
Federal Waste Generator Description: Small Quantity Generator

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

State District Owner: Ca  
Large Quantity Handler of Universal Waste: No  
Recognized Trader Importer: No  
Recognized Trader Exporter: No  
Spent Lead Acid Battery Importer: No  
Spent Lead Acid Battery Exporter: No  
Current Record: Yes  
Non Storage Recycler Activity: Not reported  
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Code: 44111  
NAICS Description: NEW CAR DEALERS

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

LUST:

Name: CONNELL OLDSMOBILE  
Address: 3093 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
Lead Agency: ALAMEDA COUNTY LOP  
Case Type: LUST Cleanup Site  
Geo Track: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T0600100406](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600100406)  
Global Id: T0600100406  
Latitude: 37.8208404852541  
Longitude: -122.262071371079  
Status: Completed - Case Closed  
Status Date: 06/12/2020  
Case Worker: Not reported  
RB Case Number: 01-0447  
Local Agency: Not reported  
File Location: All Files are on GeoTracker or in the Local Agency Database  
Local Case Number: RO0000199  
Potential Media Affect: Other Groundwater (uses other than drinking water)  
Potential Contaminants of Concern: Benzene, Diesel, Ethylbenzene, Gasoline, Naphthalene, Polynuclear aromatic hydrocarbons (PAHs), Toluene, Waste Oil / Motor / Hydraulic / Lubricating, Xylene  
EPA Region: 9  
Coordinate Source: Google Map Move  
Cuf Case: YES  
Quantity Released Gallons: 0  
Begin Date: 10/03/1989  
Leak Reported Date: 10/03/1989  
How Discovered: Other Means  
How Discovered Description: Not reported  
Discharge Source: Not reported  
Discharge Cause: Not reported  
Stop Method: Other Means  
Stop Description: Not reported  
No Further Action Date: 06/12/2020

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

CA Water Watershed Name: South Bay - East Bay Cities (204.20)  
Dwr Groundwater Subbasin Name: Santa Clara Valley - East Bay Plain (2-009.04)  
Disadvantaged Community: Severely Disadvantaged Community  
CA Enviroscreen 3 Score: 71-75%  
CA Enviroscreen 4 Score: 80-85%  
Military DOD Site: No  
Facility Project Subtype: Not reported  
RWQCB Region: SAN FRANCISCO BAY RWQCB (REGION 2)  
Site History: Unauthorized release of petroleum hydrocarbons from historic automotive dealership land use at the site. Three USTs removed in December 1989. Site investigations conducted from 1989 to 2018 to investigate impacts to soil, groundwater and soil gas. Corrections actions implemented at the site include SVE system operation (1996 to March 1998) and gypsum injection and soil excavation (2016 through 2018) in conjunction with site redevelopment activities consisting of construction of mixed use commercial and residential project. Currently in verification monitoring for groundwater and vapor intrusion.

LUST:

Global Id: T0600100406  
Contact Type: Regional Board Caseworker  
Contact Name: Regional Water Board  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY ST SUITE 1400  
City: OAKLAND  
Email: Not reported  
Phone Number: Not reported

LUST:

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 03/20/2008  
Action: Staff Letter - #20080320

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 03/20/2008  
Action: Staff Letter - #20080320B

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 06/06/2008  
Action: Staff Letter - #20080606

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 02/10/2010  
Action: Notice to Comply - #20100107

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 06/06/2008  
Action: Staff Letter

Global Id: T0600100406  
Action Type: ENFORCEMENT

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Date: 03/20/2008  
Action: Staff Letter

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 10/11/2013  
Action: Meeting - #20131011

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 07/21/2015  
Action: Meeting - #20150721

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 10/25/2013  
Action: Staff Letter - #20131025

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 04/07/2015  
Action: Notice of Responsibility - #2015-04-07

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 04/14/2017  
Action: Meeting - #20170414

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 04/21/2016  
Action: Email Correspondence - #20160421

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 02/23/2017  
Action: Meeting - #20170223

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 06/30/2020  
Action: Closure/No Further Action Letter - #20200630

Global Id: T0600100406  
Action Type: Other  
Date: 10/03/1989  
Action: Leak Discovery

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 07/24/2009  
Action: Staff Letter - #20090724

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 12/04/2014  
Action: Staff Letter - #20141204

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Global Id:	T0600100406
Action Type:	ENFORCEMENT
Date:	12/04/2014
Action:	Staff Letter - #20141204
Global Id:	T0600100406
Action Type:	ENFORCEMENT
Date:	07/31/2015
Action:	Staff Letter - #20150731
Global Id:	T0600100406
Action Type:	ENFORCEMENT
Date:	07/29/2015
Action:	Staff Letter - #20150729
Global Id:	T0600100406
Action Type:	ENFORCEMENT
Date:	12/12/2014
Action:	Meeting - #20141212
Global Id:	T0600100406
Action Type:	ENFORCEMENT
Date:	04/05/2016
Action:	Meeting - #20160405
Global Id:	T0600100406
Action Type:	ENFORCEMENT
Date:	09/25/2019
Action:	Staff Letter - #20190925
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	10/28/2014
Action:	Other Workplan - Regulator Responded
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	04/23/2015
Action:	Pilot Study / Treatability Workplan - Regulator Responded
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	03/09/2016
Action:	Soil and Water Investigation Report - Regulator Responded
Global Id:	T0600100406
Action Type:	ENFORCEMENT
Date:	05/14/2015
Action:	Staff Letter - #20150514
Global Id:	T0600100406
Action Type:	ENFORCEMENT
Date:	09/16/2016
Action:	Meeting - #20160916
Global Id:	T0600100406
Action Type:	ENFORCEMENT

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Date: 09/27/2018  
Action: Meeting - #20180927

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 12/04/2018  
Action: Meeting - #20181204

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 09/24/2018  
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 10/16/2018  
Action: Staff Letter - #20181016

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 06/13/2018  
Action: Email Correspondence - #20180613

Global Id: T0600100406  
Action Type: Other  
Date: 10/03/1989  
Action: Leak Reported

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 10/02/2019  
Action: Other Report / Document

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 07/17/2019  
Action: Soil Vapor Intrusion Investigation Report

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 02/02/2016  
Action: Soil and Water Investigation Report

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 02/02/2016  
Action: Pilot Study/ Treatability Report

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 04/21/2017  
Action: Other Report / Document

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 10/28/2014  
Action: Conceptual Site Model

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 08/01/2016  
Action: Other Report / Document

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 02/02/2016  
Action: Other Report / Document

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 12/21/2018  
Action: Monitoring Report - Other

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 12/31/2018  
Action: Monitoring Report - Other

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 03/20/2013  
Action: Operation and Maintenance Plan/Monitoring Report

Global Id: T0600100406  
Action Type: REMEDIATION  
Date: 12/12/1989  
Action: Excavation

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 09/13/1988  
Action: Staff Letter

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 09/04/2015  
Action: Staff Letter - #20150904

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 09/03/2015  
Action: Meeting - #20150903

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 03/11/2016  
Action: Staff Letter - #20160311

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 07/29/2016  
Action: Email Correspondence - #20160729

Global Id: T0600100406  
Action Type: ENFORCEMENT

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Date: 07/18/2016  
Action: Staff Letter - #20160718

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 12/15/2015  
Action: Meeting - #20151215

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 10/04/2018  
Action: Meeting - #20181004

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 03/23/2010  
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 09/19/2019  
Action: Meeting - #20190919

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 12/21/2018  
Action: Deed Restriction / Land Use Restriction / Covenant - #20181221

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 09/15/2010  
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 01/30/2009  
Action: Monitoring Report - Quarterly

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 04/30/2010  
Action: Interim Remedial Action Report

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 05/18/2016  
Action: Soil and Water Investigation Report

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 05/18/2016  
Action: Soil and Water Investigation Report

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 11/06/2015  
Action: Other Workplan

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Global Id:	T0600100406
Action Type:	RESPONSE
Date:	04/21/2017
Action:	Work Plan
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	02/03/2016
Action:	Other Report / Document
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	09/13/2018
Action:	Other Report / Document
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	02/03/2016
Action:	Correspondence
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	11/02/2012
Action:	Monitoring Report - Semi-Annually
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	10/28/2014
Action:	Monitoring Report - Other
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	08/23/2013
Action:	Monitoring Report - Semi-Annually
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	05/26/2015
Action:	Feasibility Study Report
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	10/29/2015
Action:	Other Report / Document
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	03/20/2013
Action:	Operation and Maintenance Plan/Monitoring Report
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	02/02/2016
Action:	Monitoring Report - Quarterly
Global Id:	T0600100406
Action Type:	RESPONSE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Date: 04/21/2017  
Action: Other Report / Document

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 10/26/2018  
Action: Email Correspondence

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 12/09/2016  
Action: Other Report / Document

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 07/25/2016  
Action: Closure Report

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 09/13/2018  
Action: Other Report / Document

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 04/03/2015  
Action: Staff Letter - #20150403

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 04/22/2014  
Action: Meeting - #20140422

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 11/04/2014  
Action: Staff Letter - #20141104

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 04/23/2018  
Action: Staff Letter - #20180423

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 11/06/2018  
Action: Meeting - #20181106

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 10/03/1989  
Action: Unauthorized Release Form - #19891003

Global Id: T0600100406  
Action Type: ENFORCEMENT  
Date: 10/07/2019  
Action: Meeting - #20191007

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Global Id:	T0600100406
Action Type:	RESPONSE
Date:	04/28/2008
Action:	Soil and Water Investigation Report
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	04/30/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	07/30/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	10/30/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	08/27/2008
Action:	Soil and Water Investigation Report
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	03/01/2012
Action:	Monitoring Report - Semi-Annually
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	12/23/1997
Action:	Soil and Water Investigation Workplan
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	04/28/2011
Action:	Other Report / Document
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	03/22/1990
Action:	Tank Removal Report / UST Sampling Report
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	05/08/2000
Action:	Soil and Water Investigation Workplan - Addendum
Global Id:	T0600100406
Action Type:	RESPONSE
Date:	03/16/1990
Action:	Soil and Water Investigation Workplan
Global Id:	T0600100406
Action Type:	RESPONSE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Date: 08/22/1990  
Action: Soil and Water Investigation Workplan

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 07/15/1992  
Action: Soil and Water Investigation Workplan

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 04/15/1999  
Action: Soil and Water Investigation Workplan

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 04/17/1986  
Action: Correspondence

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 07/27/2004  
Action: Correspondence

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 02/03/1994  
Action: Soil and Water Investigation Report

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 03/16/2001  
Action: CAP/RAP - Feasibility Study Report

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 01/09/2006  
Action: Corrective Action Plan / Remedial Action Plan - Addendum

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 11/11/2004  
Action: Interim Remedial Action Report

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 03/30/2000  
Action: Sensitive Receptor Survey Report

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 12/12/1990  
Action: Preliminary Site Assessment Report

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 06/03/1991  
Action: Soil and Water Investigation Report

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 12/14/1995  
Action: Other Report / Document

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 11/06/1995  
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 04/10/2015  
Action: Pilot Study / Treatability Workplan

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 12/15/2014  
Action: Other Report / Document

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 12/15/2014  
Action: Other Report / Document

Global Id: T0600100406  
Action Type: RESPONSE  
Date: 02/06/2015  
Action: Soil and Water Investigation Report

**LUST:**

Global Id: T0600100406  
Status: Open - Case Begin Date  
Status Date: 10/03/1989

Global Id: T0600100406  
Status: Open - Site Assessment  
Status Date: 10/03/1989

Global Id: T0600100406  
Status: Open - Site Assessment  
Status Date: 03/22/1990

Global Id: T0600100406  
Status: Open - Site Assessment  
Status Date: 07/19/1990

Global Id: T0600100406  
Status: Open - Site Assessment  
Status Date: 12/07/1990

Global Id: T0600100406  
Status: Open - Assessment & Interim Remedial Action  
Status Date: 03/17/2006

Global Id: T0600100406  
Status: Open - Verification Monitoring

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Status Date: 12/04/2018  
  
Global Id: T0600100406  
Status: Open - Eligible for Closure  
Status Date: 09/23/2019  
  
Global Id: T0600100406  
Status: Completed - Case Closed  
Status Date: 06/12/2020

**LUST REG 2:**

Region: 2  
Facility Id: 01-0447  
Facility Status: Preliminary site assessment underway  
Case Number: 469  
How Discovered: Tank Closure  
Leak Cause: Structure Failure  
Leak Source: Tank  
Date Leak Confirmed: Not reported  
Oversight Program: LUST  
Prelim. Site Assessment Workplan Submitted: Not reported  
Preliminary Site Assessment Began: 1/7/1991  
Pollution Characterization Began: Not reported  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

**Alameda County CS:**

Name: CONNELL OLDSMOBILE  
Address: 3093 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
Status: Leak Confirmation  
Record Id: RO0000199  
PE: 5602  
Facility Status: Leak Confirmation  
Latitude: 37.819397352  
Longitude: -122.26196553

Name: CONNELL OLDSMOBILE  
Address: 3093 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
Status: Preliminary Site Assessment Workplan Submitted  
Record Id: RO0000199  
PE: 5602  
Facility Status: Preliminary Site Assessment Workplan Submitted  
Latitude: 37.819397352  
Longitude: -122.26196553

Name: CONNELL OLDSMOBILE  
Address: 3093 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
Status: Preliminary Site Assessment Underway  
Record Id: RO0000199  
PE: 5602  
Facility Status: Preliminary Site Assessment Underway

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Latitude: 37.819397352  
Longitude: -122.26196553  
  
Name: CONNELL OLDSMOBILE  
Address: 3093 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
Status: Pollution Characterization  
Record Id: RO0000199  
PE: 5602  
Facility Status: Pollution Charaterization  
Latitude: 37.819397352  
Longitude: -122.26196553

**SWEEPS UST:**

Name: CONNELL OLDSMOBILE  
Address: 3093 BROADWAY  
City: OAKLAND  
Status: Not reported  
Comp Number: 9788  
Number: Not reported  
Board Of Equalization: 44-000144  
Referral Date: Not reported  
Action Date: Not reported  
Created Date: Not reported  
Owner Tank Id: Not reported  
SWRCB Tank Id: 01-000-009788-000001  
Tank Status: Not reported  
Capacity: 1  
Active Date: Not reported  
Tank Use: M.V. FUEL  
STG: PRODUCT  
Content: REG UNLEADED  
Number Of Tanks: 3

Name: CONNELL OLDSMOBILE  
Address: 3093 BROADWAY  
City: OAKLAND  
Status: Not reported  
Comp Number: 9788  
Number: Not reported  
Board Of Equalization: 44-000144  
Referral Date: Not reported  
Action Date: Not reported  
Created Date: Not reported  
Owner Tank Id: Not reported  
SWRCB Tank Id: 01-000-009788-000002  
Tank Status: Not reported  
Capacity: 1  
Active Date: Not reported  
Tank Use: M.V. FUEL  
STG: PRODUCT  
Content: DIESEL  
Number Of Tanks: Not reported

Name: CONNELL OLDSMOBILE  
Address: 3093 BROADWAY  
City: OAKLAND

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Status: Not reported  
Comp Number: 9788  
Number: Not reported  
Board Of Equalization: 44-000144  
Referral Date: Not reported  
Action Date: Not reported  
Created Date: Not reported  
Owner Tank Id: Not reported  
SWRCB Tank Id: 01-000-009788-000003  
Tank Status: Not reported  
Capacity: 500  
Active Date: Not reported  
Tank Use: OIL  
STG: WASTE  
Content: WASTE OIL  
Number Of Tanks: Not reported

**HIST UST:**

Name: CONNELL OLDSMOBILE  
Address: 3093 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
File Number: 00035eb1  
URL: <https://documents.geotracker.waterboards.ca.gov/ustpdfs/pdf/00035eb1.pdf>  
Region: STATE  
Facility ID: 00000009788  
Facility Type: Other  
Other Type: AUTOMOBILE DEALER  
Contact Name: S. DEAN WEAVER  
Telephone: 4158939110  
Owner Name: CONNELL MOTOR CO.  
Owner Address: 3093 BROADWAY  
Owner City,St,Zip: OAKLAND, CA 94611  
Total Tanks: 0003

Tank Num: 001  
Container Num: 1  
Year Installed: 1947  
Tank Capacity: 00000000  
Tank Used for: PRODUCT  
Type of Fuel: UNLEADED  
Container Construction Thickness: Not reported  
Leak Detection: Stock Inventor

Tank Num: 002  
Container Num: 2  
Year Installed: 1947  
Tank Capacity: 00000000  
Tank Used for: PRODUCT  
Type of Fuel: DIESEL  
Container Construction Thickness: Not reported  
Leak Detection: Stock Inventor

Tank Num: 003  
Container Num: 3  
Year Installed: 1947  
Tank Capacity: 00000500  
Tank Used for: WASTE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Type of Fuel: WASTE OIL  
Container Construction Thickness: Not reported  
Leak Detection: None

[Click here for Geo Tracker PDF:](#)

**CA FID UST:**

Facility ID: 01000582  
Regulated By: UTKNI  
Regulated ID: 00009788  
Cortese Code: Not reported  
SIC Code: Not reported  
Facility Phone: 4158939110  
Mail To: Not reported  
Mailing Address: P O BOX  
Mailing Address 2: Not reported  
Mailing City,St,Zip: OAKLAND 94611  
Contact: Not reported  
Contact Phone: Not reported  
DUNS Number: Not reported  
NPDES Number: Not reported  
EPA ID: Not reported  
Comments: Not reported  
Status: Inactive

**FINDS:**

Registry ID: 110002761100

[Click Here for FRS Facility Detail Report:](#)

**Environmental Interest/Information System:**

The California Environmental Protection Agency (CalEPA) has recently implemented a new data warehouse system (nSite). This data warehouse combines and merges facility and site information from five different systems managed within CalEPA. The five systems are: California Environmental Reporting System (CERS), EnviroStor, GeoTracker, California Integrated Water Quality System (CIWQS), and Toxic Release Inventory (TRI).

The Resource Conservation and Recovery Act Information System (RCRAInfo) is EPA's comprehensive information system in support of the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. It tracks many types of information about generators, transporters, treaters, storers, and disposers of hazardous waste.

Registry ID: 110071418455

[Click Here for FRS Facility Detail Report:](#)

**Environmental Interest/Information System:**

The Resource Conservation and Recovery Act Information System (RCRAInfo) is EPA's comprehensive information system in support of the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. It tracks many types of information about generators, transporters, treaters, storers, and disposers of hazardous waste.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

**ECHO:**

Envid: 1000312755  
Registry ID: 110002761100  
DFR URL: <http://echo.epa.gov/detailed-facility-report?fid=110002761100>  
Name: CONNELL OLDS  
Address: 3093 BROADWAY  
City,State,Zip: OAKLAND, CA 94611

**CORTESE:**

Name: CONNELL OLDSMOBILE  
Address: 3093 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
Region: CORTESE  
Envirostor Id: Not reported  
Global ID: T0600100406  
Site/Facility Type: LUST CLEANUP SITE  
Cleanup Status: COMPLETED - CASE CLOSED  
Status Date: Not reported  
Site Code: Not reported  
Latitude: Not reported  
Longitude: Not reported  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: active  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported  
File Name: Active Open

**EMI:**

Name: CONNELL TRUST C/O SUBSURFACE C  
Address: 3093 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
Year: 1997  
County Code: 1  
Air Basin: SF  
Facility ID: 11066  
Air District Name: BA  
SIC Code: 4953  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0  
Reactive Organic Gases Tons/Yr: 0  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

1000312755

Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: CONNELL AUTO CENTER  
Address: 3093 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
Year: 2001  
County Code: 1  
Air Basin: SF  
Facility ID: 12394  
Air District Name: BA  
SIC Code: 5511  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0  
Reactive Organic Gases Tons/Yr: 0  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: CONNELL AUTO CENTER  
Address: 3093 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
Year: 2002  
County Code: 1  
Air Basin: SF  
Facility ID: 12394  
Air District Name: BA  
SIC Code: 5511  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0  
Reactive Organic Gases Tons/Yr: 0  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: OAKLAND AUTOMOTIVE CENTER  
Address: 3093 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
Year: 2003  
County Code: 1  
Air Basin: SF  
Facility ID: 16503  
Air District Name: BA  
SIC Code: 5511  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0  
Reactive Organic Gases Tons/Yr: 0  
Carbon Monoxide Emissions Tons/Yr: 0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: OAKLAND AUTOMOTIVE CENTER  
Address: 3093 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
Year: 2004  
County Code: 1  
Air Basin: SF  
Facility ID: 16503  
Air District Name: BA  
SIC Code: 5511  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0.132  
Reactive Organic Gases Tons/Yr: 0.132  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: OAKLAND AUTOMOTIVE CENTER  
Address: 3093 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
Year: 2005  
County Code: 1  
Air Basin: SF  
Facility ID: 16503  
Air District Name: BA  
SIC Code: 5511  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: .132  
Reactive Organic Gases Tons/Yr: .132  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: CONNELL AUTOMOBILE CENTER  
Address: 3093 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
Year: 2006  
County Code: 1  
Air Basin: SF  
Facility ID: 16503  
Air District Name: BA  
SIC Code: 5511  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Total Organic Hydrocarbon Gases Tons/Yr: .132  
Reactive Organic Gases Tons/Yr: .132  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: CONNELL AUTOMOBILE CENTER  
Address: 3093 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
Year: 2007  
County Code: 1  
Air Basin: SF  
Facility ID: 16503  
Air District Name: BA  
SIC Code: 5511  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: .33  
Reactive Organic Gases Tons/Yr: .33  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: CONNELL AUTOMOBILE CENTER  
Address: 3093 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
Year: 2008  
County Code: 1  
Air Basin: SF  
Facility ID: 16503  
Air District Name: BA  
SIC Code: 5511  
Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: .33  
Reactive Organic Gases Tons/Yr: .33  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

Name: CONNELL AUTOMOBILE CENTER  
Address: 3093 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
Year: 2009  
County Code: 1  
Air Basin: SF  
Facility ID: 16503  
Air District Name: BA  
SIC Code: 5511

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Air District Name: BAY AREA AQMD  
Community Health Air Pollution Info System: Not reported  
Consolidated Emission Reporting Rule: Not reported  
Total Organic Hydrocarbon Gases Tons/Yr: 0.33000000000000002  
Reactive Organic Gases Tons/Yr: 0.33000000000000002  
Carbon Monoxide Emissions Tons/Yr: 0  
NOX - Oxides of Nitrogen Tons/Yr: 0  
SOX - Oxides of Sulphur Tons/Yr: 0  
Particulate Matter Tons/Yr: 0  
Part. Matter 10 Micrometers and Smlr Tons/Yr:0

**HIST CORTESE:**

edr\_fname: CONNELL OLDSMOBILE  
edr\_fadd1: 3093 BROADWAY  
City,State,Zip: OAKLAND, CA 469  
Region: CORTESE  
Facility County Code: 1  
Reg By: LTNKA  
Reg Id: 01-0447

**HWTS:**

Name: CONNELL OLDS  
Address: 3093 BROADWAY  
Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94611  
EPA ID: CAD981973365  
Inactive Date: 06/30/1999  
Create Date: 07/03/1987  
Last Act Date: Not reported  
Mailing Name: Not reported  
Mailing Address: 3093 BROADWAY  
Mailing Address 2: Not reported  
Mailing City,State,Zip: OAKLAND, CA 946115712  
Owner Name: DEAN WEAVER  
Owner Address: 3093 BROADWAY  
Owner Address 2: Not reported  
Owner City,State,Zip: OAKLAND, CA 946115712  
Owner Phone: Not reported  
Owner Fax: Not reported  
Contact Name: Not reported  
Contact Address: INACTIVE PER VQ01 - BMI  
Contact Address 2: Not reported  
City,State,Zip: Not reported  
Contact Phone: Not reported  
Contact Fax: Not reported  
Facility Status: Inactive  
Facility Type: PERMANENT  
Category: FEDERAL  
Latitude: 37.820442  
Longitude: -122.261181

**HAZNET:**

Name: CONNELL OLDS  
Address: 3093 BROADWAY  
Address 2: Not reported  
City,State,Zip: OAKLAND, CA 946110000

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Contact:	--
Telephone:	--
Mailing Name:	Not reported
Mailing Address:	3093 BROADWAY
Year:	2008
Gepaid:	CAD981973365
TSD EPA ID:	CAD980887418
CA Waste Code:	223 - Unspecified oil-containing waste
Disposal Method:	H135 - Discharge To Sewer/Potw Or Npdes(With Prior Storage--With Or Without Treatment)
Tons:	1.48035
Year:	2002
Gepaid:	CAD981973365
TSD EPA ID:	CAD009452657
CA Waste Code:	343 - Unspecified organic liquid mixture
Disposal Method:	R01 - Recycler
Tons:	5.236
Year:	2001
Gepaid:	CAD981973365
TSD EPA ID:	CAD009452657
CA Waste Code:	343 - Unspecified organic liquid mixture
Disposal Method:	R01 - Recycler
Tons:	10.438
Year:	2000
Gepaid:	CAD981973365
TSD EPA ID:	CAD009452657
CA Waste Code:	343 - Unspecified organic liquid mixture
Disposal Method:	-
Tons:	0.68
Year:	2000
Gepaid:	CAD981973365
TSD EPA ID:	CAD009452657
CA Waste Code:	343 - Unspecified organic liquid mixture
Disposal Method:	R01 - Recycler
Tons:	4.573
Year:	2000
Gepaid:	CAD981973365
TSD EPA ID:	CAD982446874
CA Waste Code:	134 - Aqueous solution with total organic residues less than 10 percent
Disposal Method:	R01 - Recycler
Tons:	1.05
Year:	1999
Gepaid:	CAD981973365
TSD EPA ID:	CAD009452657
CA Waste Code:	343 - Unspecified organic liquid mixture
Disposal Method:	R01 - Recycler
Tons:	5.236
Year:	1999

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Gepaid:	CAD981973365
TSD EPA ID:	CAD982446874
CA Waste Code:	134 - Aqueous solution with total organic residues less than 10 percent
Disposal Method:	H01 - Transfer Station
Tons:	2.625
Year:	1998
Gepaid:	CAD981973365
TSD EPA ID:	CAD982446874
CA Waste Code:	134 - Aqueous solution with total organic residues less than 10 percent
Disposal Method:	H01 - Transfer Station
Tons:	0.42
Year:	1998
Gepaid:	CAD981973365
TSD EPA ID:	CAD009452657
CA Waste Code:	343 - Unspecified organic liquid mixture
Disposal Method:	R01 - Recycler
Tons:	1.156

[Click this hyperlink](#) while viewing on your computer to access 56 additional CA HAZNET: record(s) in the EDR Site Report.

Additional Info:

Year:	2008
Gen EPA ID:	CAD981973365
Shipment Date:	20080305
Creation Date:	4/22/2008 18:30:43
Receipt Date:	20080305
Manifest ID:	002476856JJK
Trans EPA ID:	CAD982413262
Trans Name:	EVERGREEN ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD980887418
Trans Name:	EVERGREEN OIL INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H135 - Discharge To Sewer/Potw Or Npdes(With Prior Storage--With Or Without Treatment)
Quantity Tons:	1.48035
Waste Quantity:	355
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Year:	2002
Gen EPA ID:	CAD981973365
Shipment Date:	20020604
Creation Date:	7/19/2002 15:54:46
Receipt Date:	20020604
Manifest ID:	21821641
Trans EPA ID:	CAD009452657
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD009452657
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.374
Waste Quantity:	110
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20020522
Creation Date:	7/19/2002 16:09:28
Receipt Date:	20020522
Manifest ID:	21602480
Trans EPA ID:	CAD009452657
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD009452657
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.714
Waste Quantity:	210
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20020501
Creation Date:	1/8/2003 18:32:09
Receipt Date:	20020501
Manifest ID:	21601270
Trans EPA ID:	CAD009452657
Trans Name:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0.442  
Waste Quantity: 130  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20020417  
Creation Date: 7/17/2002 18:34:07  
Receipt Date: 20020417  
Manifest ID: 21545534  
Trans EPA ID: CAD009452657  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0.476  
Waste Quantity: 140  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20020404  
Creation Date: 7/22/2002 18:32:38  
Receipt Date: 20020404  
Manifest ID: 21545248  
Trans EPA ID: CAD009452657  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: R01 - Recycler

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Quantity Tons:	0.578
Waste Quantity:	170
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20020314
Creation Date:	7/17/2002 18:31:10
Receipt Date:	20020314
Manifest ID:	21602309
Trans EPA ID:	CAD009452657
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD009452657
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.68
Waste Quantity:	200
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20020227
Creation Date:	7/2/2002 18:31:06
Receipt Date:	20020227
Manifest ID:	21681260
Trans EPA ID:	CAD009452657
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD009452657
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.85
Waste Quantity:	250
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Shipment Date: 20020201  
Creation Date: 3/7/2002 0:00:00  
Receipt Date: 20020201  
Manifest ID: 21683827  
Trans EPA ID: CAD009452657  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0.68  
Waste Quantity: 200  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20020109  
Creation Date: 2/20/2002 0:00:00  
Receipt Date: 20020109  
Manifest ID: 21683578  
Trans EPA ID: CAD009452657  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0.442  
Waste Quantity: 130  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Additional Info:  
Year: 2001  
Gen EPA ID: CAD981973365

Shipment Date: 20011219  
Creation Date: 2/13/2002 0:00:00  
Receipt Date: 20011219  
Manifest ID: 21685011  
Trans EPA ID: CAD009452657

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0.612  
Waste Quantity: 180  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20011128  
Creation Date: 1/16/2002 0:00:00  
Receipt Date: 20011128  
Manifest ID: 21299257  
Trans EPA ID: CAD009452657  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0.476  
Waste Quantity: 140  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20011107  
Creation Date: 12/17/2001 0:00:00  
Receipt Date: 20011107  
Manifest ID: 21423898  
Trans EPA ID: CAD009452657  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Meth Code:	R01 - Recycler
Quantity Tons:	0.748
Waste Quantity:	220
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20011010
Creation Date:	12/17/2001 0:00:00
Receipt Date:	20011011
Manifest ID:	21063314
Trans EPA ID:	CAD009452657
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD009452657
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.476
Waste Quantity:	140
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20010927
Creation Date:	12/17/2001 0:00:00
Receipt Date:	20010927
Manifest ID:	21427813
Trans EPA ID:	CAD009452657
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD009452657
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.748
Waste Quantity:	220
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Shipment Date: 20010821  
Creation Date: 10/3/2001 0:00:00  
Receipt Date: 20010822  
Manifest ID: 21236393  
Trans EPA ID: CAD009452657  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 1.19  
Waste Quantity: 350  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20010626  
Creation Date: 8/24/2001 0:00:00  
Receipt Date: 20010626  
Manifest ID: 20714111  
Trans EPA ID: CAD009452657  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0.68  
Waste Quantity: 200  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20010605  
Creation Date: 7/30/2001 0:00:00  
Receipt Date: 20010606  
Manifest ID: 21060072  
Trans EPA ID: CAD009452657  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0.34  
Waste Quantity: 100  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20010516  
Creation Date: 7/10/2001 0:00:00  
Receipt Date: 20010518  
Manifest ID: 21071750  
Trans EPA ID: CAD009452657  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0.51  
Waste Quantity: 150  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20010418  
Creation Date: 6/20/2001 0:00:00  
Receipt Date: 20010424  
Manifest ID: 20973584  
Trans EPA ID: CAD009452657  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0.51  
Waste Quantity: 150  
Quantity Unit: G

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Additional Info:

Year: 2000  
Gen EPA ID: CAD981973365

Shipment Date: 20001229  
Creation Date: 3/22/2001 0:00:00  
Receipt Date: 20010103  
Manifest ID: 20876572  
Trans EPA ID: CAD009452657  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 1.36  
Waste Quantity: 400  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20001025  
Creation Date: 1/9/2001 0:00:00  
Receipt Date: 20001030  
Manifest ID: 99545685  
Trans EPA ID: CAD009452657  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0.578  
Waste Quantity: 170  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Shipment Date: 20000803  
Creation Date: 9/11/2000 0:00:00  
Receipt Date: 20000804  
Manifest ID: 99824995  
Trans EPA ID: CAD009452657  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0.51  
Waste Quantity: 150  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20000707  
Creation Date: 8/14/2000 0:00:00  
Receipt Date: 20000710  
Manifest ID: 99823299  
Trans EPA ID: CAD009452657  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0.68  
Waste Quantity: 200  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 20000605  
Creation Date: 8/1/2000 0:00:00  
Receipt Date: 20000610  
Manifest ID: 20068956  
Trans EPA ID: CAD009452657  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.51
Waste Quantity:	150
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20000510
Creation Date:	7/12/2000 0:00:00
Receipt Date:	20000510
Manifest ID:	99888954
Trans EPA ID:	CAD982413262
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982446874
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	1.05
Waste Quantity:	250
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20000121
Creation Date:	3/22/2000 0:00:00
Receipt Date:	20000121
Manifest ID:	99549778
Trans EPA ID:	CAD009452657
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD009452657
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.935
Waste Quantity:	275
Quantity Unit:	G

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Additional Info:

Year: 1999  
Gen EPA ID: CAD981973365

Shipment Date: 19991118  
Creation Date: 2/15/2000 0:00:00  
Receipt Date: 19991118  
Manifest ID: 99590684  
Trans EPA ID: CAD009452657  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0.68  
Waste Quantity: 200  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19991026  
Creation Date: 1/11/2000 0:00:00  
Receipt Date: 19991026  
Manifest ID: 99594863  
Trans EPA ID: CAD009452657  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0.612  
Waste Quantity: 180  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Shipment Date:	19991001
Creation Date:	11/22/1999 0:00:00
Receipt Date:	19991001
Manifest ID:	99077245
Trans EPA ID:	CAD009452657
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD009452657
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.51
Waste Quantity:	150
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19990907
Creation Date:	10/27/1999 0:00:00
Receipt Date:	19990910
Manifest ID:	99474972
Trans EPA ID:	CAD982413262
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD982446874
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.42
Waste Quantity:	100
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19990903
Creation Date:	11/18/1999 0:00:00
Receipt Date:	19990903
Manifest ID:	99594232
Trans EPA ID:	CAD009452657
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD009452657

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.782
Waste Quantity:	230
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19990721
Creation Date:	9/1/1999 0:00:00
Receipt Date:	19990726
Manifest ID:	98651709
Trans EPA ID:	CAD982413262
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982446874
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	1.05
Waste Quantity:	250
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19990602
Creation Date:	7/30/1999 0:00:00
Receipt Date:	19990603
Manifest ID:	99150178
Trans EPA ID:	CAD009452657
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD009452657
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.425
Waste Quantity:	125
Quantity Unit:	G

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19990512
Creation Date:	7/13/1999 0:00:00
Receipt Date:	19990512
Manifest ID:	99075494
Trans EPA ID:	CAD009452657
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD009452657
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	1.275
Waste Quantity:	375
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19990308
Creation Date:	5/17/1999 0:00:00
Receipt Date:	19990309
Manifest ID:	96748736
Trans EPA ID:	CAD009452657
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD009452657
Trans Name:	Not reported
TSDf Alt EPA ID:	CAD009452657
TSDf Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0
Waste Quantity:	170
Quantity Unit:	*
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19990208
Creation Date:	4/5/1999 0:00:00
Receipt Date:	19990210

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Manifest ID: 98835547  
Trans EPA ID: CAD981694664  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0.952  
Waste Quantity: 280  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Additional Info:

Year: 1998  
Gen EPA ID: CAD981973365

Shipment Date: 19981110  
Creation Date: 1/5/1999 0:00:00  
Receipt Date: 19981110  
Manifest ID: 98055978  
Trans EPA ID: CAD981694664  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0.17  
Waste Quantity: 50  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19981106  
Creation Date: 1/13/1999 0:00:00  
Receipt Date: 19981106  
Manifest ID: 98527069  
Trans EPA ID: CAD982413262  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

TSDF EPA ID: CAD982446874  
Trans Name: Not reported  
TSDF Alt EPA ID: Not reported  
TSDF Alt Name: Not reported  
Waste Code Description: 134 - Aqueous solution with <10% total organic residues  
RCRA Code: Not reported  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.42  
Waste Quantity: 100  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19981020  
Creation Date: 12/10/1998 0:00:00  
Receipt Date: 19981020  
Manifest ID: 98266734  
Trans EPA ID: CAD982413262  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDF EPA ID: CAD980887418  
Trans Name: Not reported  
TSDF Alt EPA ID: Not reported  
TSDF Alt Name: Not reported  
Waste Code Description: 134 - Aqueous solution with <10% total organic residues  
RCRA Code: Not reported  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.756  
Waste Quantity: 180  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19980914  
Creation Date: 11/5/1998 0:00:00  
Receipt Date: 19980914  
Manifest ID: 98265303  
Trans EPA ID: CAD982413262  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDF EPA ID: CAD980887418  
Trans Name: Not reported  
TSDF Alt EPA ID: Not reported  
TSDF Alt Name: Not reported  
Waste Code Description: 134 - Aqueous solution with <10% total organic residues  
RCRA Code: Not reported  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.546  
Waste Quantity: 130

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19980817
Creation Date:	11/2/1998 0:00:00
Receipt Date:	19980817
Manifest ID:	98265363
Trans EPA ID:	CAD982413262
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD980887418
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.504
Waste Quantity:	120
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19980724
Creation Date:	9/15/1998 0:00:00
Receipt Date:	19980724
Manifest ID:	98171885
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD053044053
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	213 - Hydrocarbon solvents (benzene, hexane, Stoddard, etc.
RCRA Code:	D039
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.3544
Waste Quantity:	85
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19980724
Creation Date:	9/15/1998 0:00:00

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Receipt Date: 19980728  
Manifest ID: 98171279  
Trans EPA ID: ILD984908202  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CA0000084517  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: D006  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.025  
Waste Quantity: 6  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19980716  
Creation Date: 9/22/1998 0:00:00  
Receipt Date: 19980716  
Manifest ID: 97391514  
Trans EPA ID: CAD982413262  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD980887418  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 134 - Aqueous solution with <10% total organic residues  
RCRA Code: Not reported  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.84  
Waste Quantity: 200  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19980626  
Creation Date: 9/3/1998 0:00:00  
Receipt Date: 19980629  
Manifest ID: 98174645  
Trans EPA ID: ILD984908202  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD053044053  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

TSDF Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: D001  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.0208  
Waste Quantity: 5  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19980603  
Creation Date: 8/3/1998 0:00:00  
Receipt Date: 19980604  
Manifest ID: 98050408  
Trans EPA ID: CAD981694664  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDF EPA ID: CAD009452657  
Trans Name: Not reported  
TSDF Alt EPA ID: Not reported  
TSDF Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0.272  
Waste Quantity: 80  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Additional Info:

Year: 1997  
Gen EPA ID: CAD981973365

Shipment Date: 19971215  
Creation Date: 7/23/1998 0:00:00  
Receipt Date: 19971215  
Manifest ID: 97207896  
Trans EPA ID: CAD982413262  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDF EPA ID: CAD980887418  
Trans Name: Not reported  
TSDF Alt EPA ID: Not reported  
TSDF Alt Name: Not reported  
Waste Code Description: 134 - Aqueous solution with <10% total organic residues  
RCRA Code: Not reported  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.588

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Waste Quantity:	140
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19971120
Creation Date:	7/23/1998 0:00:00
Receipt Date:	19971120
Manifest ID:	97349074
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD053044053
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0208
Waste Quantity:	5
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19971120
Creation Date:	7/23/1998 0:00:00
Receipt Date:	19971120
Manifest ID:	97349074
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD053044053
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	D006
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.025
Waste Quantity:	6
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19971029

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Creation Date:	7/23/1998 0:00:00
Receipt Date:	19971029
Manifest ID:	96720104
Trans EPA ID:	CAD982413262
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD980887418
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.84
Waste Quantity:	200
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19970930
Creation Date:	7/23/1998 0:00:00
Receipt Date:	19970930
Manifest ID:	96786921
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD053044053
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	213 - Hydrocarbon solvents (benzene, hexane, Stoddard, etc.
RCRA Code:	D039
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.2585
Waste Quantity:	62
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19970930
Creation Date:	7/23/1998 0:00:00
Receipt Date:	19970930
Manifest ID:	96786921
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD053044053
Trans Name:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

TSDF Alt EPA ID: Not reported  
TSDF Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: D001  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.0208  
Waste Quantity: 5  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19970922  
Creation Date: 7/23/1998 0:00:00  
Receipt Date: 19970922  
Manifest ID: 96725577  
Trans EPA ID: CAD982413262  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDF EPA ID: CAD980887418  
Trans Name: Not reported  
TSDF Alt EPA ID: Not reported  
TSDF Alt Name: Not reported  
Waste Code Description: 134 - Aqueous solution with <10% total organic residues  
RCRA Code: Not reported  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.84  
Waste Quantity: 200  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19970829  
Creation Date: 7/23/1998 0:00:00  
Receipt Date: Not reported  
Manifest ID: 96855380  
Trans EPA ID: ILD984908202  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDF EPA ID: CAD053044053  
Trans Name: Not reported  
TSDF Alt EPA ID: Not reported  
TSDF Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: D006  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.025  
Waste Quantity: 6  
Quantity Unit: G  
Additional Code 1: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19970806  
Creation Date: 12/4/1997 0:00:00  
Receipt Date: 19970806  
Manifest ID: 96752571  
Trans EPA ID: CAD981694664  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 0.459  
Waste Quantity: 135  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19970805  
Creation Date: 12/4/1997 0:00:00  
Receipt Date: 19970805  
Manifest ID: 96846679  
Trans EPA ID: ILD984908202  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD053044053  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: D001  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.0208  
Waste Quantity: 5  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Additional Info:  
Year: 1996  
Gen EPA ID: CAD981973365

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Shipment Date:	19961219
Creation Date:	5/20/1997 0:00:00
Receipt Date:	19961219
Manifest ID:	96276266
Trans EPA ID:	CAD981694664
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD009452657
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.255
Waste Quantity:	75
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19961219
Creation Date:	5/30/1997 0:00:00
Receipt Date:	19961220
Manifest ID:	96471798
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD053044053
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0208
Waste Quantity:	5
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19961206
Creation Date:	5/20/1997 0:00:00
Receipt Date:	19961206
Manifest ID:	96338328
Trans EPA ID:	CAD982413262
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD980887418

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

CONNELL OLDS (Continued)

1000312755

Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.63
Waste Quantity:	150
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19961029
Creation Date:	5/20/1997 0:00:00
Receipt Date:	19961029
Manifest ID:	96272335
Trans EPA ID:	CAD981694664
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD009452657
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.204
Waste Quantity:	60
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19961025
Creation Date:	5/21/1997 0:00:00
Receipt Date:	19961025
Manifest ID:	96491769
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD053044053
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0208
Waste Quantity:	5
Quantity Unit:	G

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19961025
Creation Date:	5/21/1997 0:00:00
Receipt Date:	19961025
Manifest ID:	96491769
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD053044053
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	213 - Hydrocarbon solvents (benzene, hexane, Stoddard, etc.
RCRA Code:	D039
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.2585
Waste Quantity:	62
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19961016
Creation Date:	5/20/1997 0:00:00
Receipt Date:	19961016
Manifest ID:	96331705
Trans EPA ID:	CAD982413262
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD980887418
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.84
Waste Quantity:	200
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19961009
Creation Date:	5/30/1997 0:00:00
Receipt Date:	19961009

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Manifest ID: 96480048  
Trans EPA ID: ILD984908202  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD053044053  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: D006  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.025  
Waste Quantity: 6  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19960904  
Creation Date: 5/21/1997 0:00:00  
Receipt Date: 19960904  
Manifest ID: 96505921  
Trans EPA ID: ILD984908202  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD053044053  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: D001  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.0208  
Waste Quantity: 5  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19960903  
Creation Date: 5/20/1997 0:00:00  
Receipt Date: 19960904  
Manifest ID: 95800821  
Trans EPA ID: CAD981694664  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Waste Code Description: 343 - Unspecified organic liquid mixture  
RCRA Code: Not reported  
Meth Code: - Not reported  
Quantity Tons: 0.34  
Waste Quantity: 100  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Additional Info:

Year: 1995  
Gen EPA ID: CAD981973365

Shipment Date: 19951204  
Creation Date: 7/26/1996 0:00:00  
Receipt Date: 19951204  
Manifest ID: 93402862  
Trans EPA ID: CAD981694664  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD042345884  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 491 - Unspecified sludge waste  
RCRA Code: Not reported  
Meth Code: - Not reported  
Quantity Tons: 0.3711  
Waste Quantity: 89  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19951204  
Creation Date: 7/26/1996 0:00:00  
Receipt Date: 19951204  
Manifest ID: 95648492  
Trans EPA ID: CAD980695761  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD980887418  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 134 - Aqueous solution with <10% total organic residues  
RCRA Code: Not reported  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.714  
Waste Quantity: 170

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19951127
Creation Date:	7/26/1996 0:00:00
Receipt Date:	19951127
Manifest ID:	95814058
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD053044053
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	213 - Hydrocarbon solvents (benzene, hexane, Stoddard, etc.
RCRA Code:	D039
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.3085
Waste Quantity:	74
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19951127
Creation Date:	7/26/1996 0:00:00
Receipt Date:	19951127
Manifest ID:	95814058
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD053044053
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0208
Waste Quantity:	5
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19951106
Creation Date:	7/26/1996 0:00:00

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Receipt Date: 19951106  
Manifest ID: 95767933  
Trans EPA ID: ILD984908202  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD053044053  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: D006  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.025  
Waste Quantity: 6  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19951106  
Creation Date: 7/26/1996 0:00:00  
Receipt Date: 19951106  
Manifest ID: 95646640  
Trans EPA ID: CAD980695761  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD980887418  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 134 - Aqueous solution with <10% total organic residues  
RCRA Code: Not reported  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.651  
Waste Quantity: 155  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19951016  
Creation Date: 7/26/1996 0:00:00  
Receipt Date: 19951017  
Manifest ID: 95646472  
Trans EPA ID: CAD980695761  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD980887418  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

TSDf Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.588
Waste Quantity:	140
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19951004
Creation Date:	7/26/1996 0:00:00
Receipt Date:	19951004
Manifest ID:	95697260
Trans EPA ID:	ILD984908202
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD053044053
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	741 - Liquids with halogenated organic compounds > 1000 mg/l
RCRA Code:	D001
Meth Code:	H01 - Transfer Station
Quantity Tons:	0.0208
Waste Quantity:	5
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19950815
Creation Date:	4/1/1996 0:00:00
Receipt Date:	19950815
Manifest ID:	95643923
Trans EPA ID:	CAD980695761
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD980887418
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	134 - Aqueous solution with <10% total organic residues
RCRA Code:	Not reported
Meth Code:	H01 - Transfer Station
Quantity Tons:	2.1
Waste Quantity:	500
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported  
  
Shipment Date: 19950814  
Creation Date: 4/1/1996 0:00:00  
Receipt Date: 19950814  
Manifest ID: 95554883  
Trans EPA ID: ILD984908202  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD053044053  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: D006  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.025  
Waste Quantity: 6  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Additional Info:

Year: 1994  
Gen EPA ID: CAD981973365

Shipment Date: 19941227  
Creation Date: 10/20/1995 0:00:00  
Receipt Date: 19941227  
Manifest ID: 95089133  
Trans EPA ID: ILD984908202  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD053044053  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: D001  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.0208  
Waste Quantity: 5  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19941227

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Creation Date: 10/20/1995 0:00:00  
Receipt Date: 19941227  
Manifest ID: 95089133  
Trans EPA ID: ILD984908202  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD053044053  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: D001  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.1876  
Waste Quantity: 45  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19941227  
Creation Date: 10/20/1995 0:00:00  
Receipt Date: 19941227  
Manifest ID: 95089133  
Trans EPA ID: ILD984908202  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD053044053  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: D001  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.0667  
Waste Quantity: 16  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19941129  
Creation Date: 10/19/1995 0:00:00  
Receipt Date: 19941202  
Manifest ID: 93697011  
Trans EPA ID: CAD028277036  
Trans Name: Not reported  
Trans 2 EPA ID: CAD028277036  
Trans 2 Name: Not reported  
TSDf EPA ID: CAT080013352  
Trans Name: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	1.155
Waste Quantity:	275
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19941012
Creation Date:	3/28/1996 0:00:00
Receipt Date:	19941018
Manifest ID:	93600151
Trans EPA ID:	CAT080011059
Trans Name:	Not reported
Trans 2 EPA ID:	CAD980814594
Trans 2 Name:	Not reported
TSDf EPA ID:	CAT080011059
Trans Name:	Not reported
TSDf Alt EPA ID:	CAT080011059
TSDf Alt Name:	Not reported
Waste Code Description:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	1.463
Waste Quantity:	385
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19941012
Creation Date:	3/28/1996 0:00:00
Receipt Date:	19941018
Manifest ID:	93600151
Trans EPA ID:	CAT080011059
Trans Name:	Not reported
Trans 2 EPA ID:	CAD980814594
Trans 2 Name:	Not reported
TSDf EPA ID:	CAT080011059
Trans Name:	Not reported
TSDf Alt EPA ID:	CAT080011059
TSDf Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	D99 - Disposal, Other
Quantity Tons:	0.363
Waste Quantity:	110
Quantity Unit:	G
Additional Code 1:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19941012
Creation Date:	3/28/1996 0:00:00
Receipt Date:	19941018
Manifest ID:	93600151
Trans EPA ID:	CAT080011059
Trans Name:	Not reported
Trans 2 EPA ID:	CAD980814594
Trans 2 Name:	Not reported
TSDf EPA ID:	CAT080011059
Trans Name:	Not reported
TSDf Alt EPA ID:	CAT080011059
TSDf Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.9174
Waste Quantity:	220
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19941012
Creation Date:	3/28/1996 0:00:00
Receipt Date:	19941018
Manifest ID:	93600151
Trans EPA ID:	CAT080011059
Trans Name:	Not reported
Trans 2 EPA ID:	CAD980814594
Trans 2 Name:	Not reported
TSDf EPA ID:	CAT080011059
Trans Name:	Not reported
TSDf Alt EPA ID:	CAT080011059
TSDf Alt Name:	Not reported
Waste Code Description:	- Not reported
RCRA Code:	F001
Meth Code:	R01 - Recycler
Quantity Tons:	0.2293
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	19940919
Creation Date:	10/17/1995 0:00:00
Receipt Date:	19940919
Manifest ID:	95059839

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

Trans EPA ID: ILD984908202  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD053044053  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 741 - Liquids with halogenated organic compounds > 1000 mg/l  
RCRA Code: D006  
Meth Code: H01 - Transfer Station  
Quantity Tons: 0.025  
Waste Quantity: 6  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

Shipment Date: 19940914  
Creation Date: 10/16/1995 0:00:00  
Receipt Date: 19940915  
Manifest ID: 93642783  
Trans EPA ID: CAT080011059  
Trans Name: Not reported  
Trans 2 EPA ID: Not reported  
Trans 2 Name: Not reported  
TSDf EPA ID: CAD009452657  
Trans Name: Not reported  
TSDf Alt EPA ID: Not reported  
TSDf Alt Name: Not reported  
Waste Code Description: 134 - Aqueous solution with <10% total organic residues  
RCRA Code: Not reported  
Meth Code: R01 - Recycler  
Quantity Tons: 1.995  
Waste Quantity: 475  
Quantity Unit: G  
Additional Code 1: Not reported  
Additional Code 2: Not reported  
Additional Code 3: Not reported  
Additional Code 4: Not reported  
Additional Code 5: Not reported

**NOTIFY 65:**

Name: CONNELL OLDSMOBILE/DAIHATSU  
Address: 3093 BROADWAY  
City,State,Zip: OAKLAND, CA 92626  
Date Reported: Not reported  
Staff Initials: Not reported  
Board File Number: Not reported  
Facility Type: Not reported  
Discharge Date: Not reported  
Issue Date: Not reported  
Incident Description: Not reported  
Global ID: Not reported  
Status: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

**1000312755**

**CERS:**

Name: CONNELL OLDSMOBILE  
Address: 3093 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
Site ID: 723687  
CERS ID: T0600100406  
CERS Description: Leaking Underground Storage Tank Cleanup Site

**Affiliation:**

Affiliation Type Desc: Regional Board Caseworker  
Entity Name: Regional Water Board - SAN FRANCISCO BAY RWQCB (REGION 2)  
Entity Title: Not reported  
Affiliation Address: 1515 CLAY ST SUITE 1400  
Affiliation City: OAKLAND  
Affiliation State: CA  
Affiliation Country: Not reported  
Affiliation Zip: Not reported  
Affiliation Phone: ,

Name: CONNELL AUTOMOBILE CENTER  
Address: 3093 BROADWAY  
City,State,Zip: OAKLAND, CA 94611  
Site ID: 462019  
CERS ID: 110021275083  
CERS Description: US EPA Air Emission Inventory System (EIS)

**201  
South  
1/2-1  
0.871 mi.  
4597 ft.**

**YUEN'S EXXON SERVICE  
1901 PARK BOULEVARD  
OAKLAND, CA 92626**

**Notify 65 S100179440  
N/A**

**Relative:  
Lower**

**NOTIFY 65:**  
Name: YUEN'S EXXON SERVICE  
Address: 1901 PARK BOULEVARD  
City,State,Zip: OAKLAND, CA 92626  
Date Reported: Not reported  
Staff Initials: Not reported  
Board File Number: Not reported  
Facility Type: Not reported  
Discharge Date: Not reported  
Issue Date: Not reported  
Incident Description: Not reported  
Global ID: Not reported  
Status: Not reported

**Actual:  
19 ft.**

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**202**  
**West**  
**1/2-1**  
**0.917 mi.**  
**4840 ft.**

**NEGHERBON**  
**2345, 2333 BROADWAY & 421 24TH ST.**  
**OAKLAND, CA 94612**

**ENVIROSTOR** **S112241534**  
**VCP** **N/A**  
**DEED**

**Relative:**  
**Lower**  
**Actual:**  
**24 ft.**

**ENVIROSTOR:**

Name: NEGHERBON  
 Address: 2345, 2333 BROADWAY & 421 24TH ST.  
 City,State,Zip: OAKLAND, CA 94612  
 Facility ID: 60001834  
 Status: Certified / Operation & Maintenance  
 Status Date: 05/26/2016  
 Site Code: 201954  
 Site Type: Voluntary Cleanup  
 Site Type Detailed: Voluntary Agreement  
 Acres: 0.69  
 NPL: NO  
 Regulatory Agencies: SMBRP  
 Lead Agency: SMBRP  
 Program Manager: Yongsheng (Johnny) Sun  
 Supervisor: Marikka Hughes  
 Division Branch: Cleanup Berkeley  
 Assembly: 18  
 Senate: 07  
 Special Program: Voluntary Agreement - CLRRRA  
 Restricted Use: YES  
 Site Mgmt Req: NONE SPECIFIED  
 Funding: Responsible Party  
 Latitude: 37.81326  
 Longitude: -122.2664  
 APN: 008 066600500, 008 066600900, 008 066601002, 008 066601003, 8-739-12, 8-739-13, 8-739-14  
 Past Use: VEHICLE MAINTENANCE  
 Potential COC: Lead Tetrachloroethylene (PCE TPH-diesel TPH-gas Trichloroethylene (TCE)  
 Confirmed COC: Lead TPH-diesel TPH-gas  
 Potential Description: OTH, SOIL

Alias Name: Hive Development  
 Alias Type: Alternate Name  
 Alias Name: 008 066600500  
 Alias Type: APN  
 Alias Name: 008 066600900  
 Alias Type: APN  
 Alias Name: 008 066601002  
 Alias Type: APN  
 Alias Name: 008 066601003  
 Alias Type: APN  
 Alias Name: 8-739-12  
 Alias Type: APN  
 Alias Name: 8-739-13  
 Alias Type: APN  
 Alias Name: 8-739-14  
 Alias Type: APN  
 Alias Name: T10000003613  
 Alias Type: GeoTracker Global ID  
 Alias Name: 201954  
 Alias Type: Project Code (Site Code)  
 Alias Name: 60001834

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**NEGHERBON (Continued)**

**S112241534**

Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Preliminary Endangerment Assessment Report  
Completed Date: 01/02/2013  
Comments: Phase I Environmental Site Assessment Report and All Appropriate Inquires Report dated November 8, 2012, approved by DTSC letter dated January 1, 2013. Per report recommendation, given Client s plans to redevelop the property for residential and commercial uses, limited additional assessment consistent with the proposed land use appears warranted and will be proposed in a separate document. DTSC reviewed the report for compliance with the All Appropriate Inquiries Final Rule at 40 CFR Part 312.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Application  
Completed Date: 10/30/2012  
Comments: Confirmation letter of submittal receipt, dated October 30, 2012. DTSC received Request for Oversight of a Brownfield Site application for Negherbon Site. Under Memorandum of Agreement, agencies determined that DTSC is appropriate oversight agency for project.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork  
Completed Date: 06/24/2014  
Comments: Fieldwork performed per DTSC-approved Implementation Plan dated November 2013.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Well Decommissioning Report  
Completed Date: 04/18/2014  
Comments: Well Closure Report for the Destruction of Monitoring Wells at the Negherbon Property, dated March 28, 2014, approved by DTSC letter dated April 18, 2014. Report documents DTSC-approved destruction of six (6) monitoring wells on March 3, 2014. Report attachments include Alameda County Department of Public Works Agency (ACPWA) Well Destruction Permits and California Department of Water Resources (DWR) Well Completion Reports.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Work Notice  
Completed Date: 03/06/2014  
Comments: Work Notice of Negherbon Soil Excavation and Removal Work to Begin March 17, 2014. DTSC will oversee this work to ensure that the activities take place in accordance with the DTSC-approved Response Plan and Implementation Plan dated June 2013 and October 2013, respectively.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Design/Implementation Workplan  
Completed Date: 11/14/2013

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Direction  
Distance  
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**NEGHERBON (Continued)**

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Comments: Final Implementation Plan dated November 2013, approved by DTSC letter dated November 14, 2013. The objectives of the plan are to (1) describe elements of the response actions, and (2) provide details of the work to be conducted. The plan includes detailed plans as appendices that describe procedures required to implement the proposed response actions: Excavation and Backfill Plan, Transportation plan, Decontamination Plan, Air Monitoring Plan, Health and Safety Plan.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Workplan  
Completed Date: 01/23/2013  
Comments: Workplan which identifies locations of samples to be collected for CPT, soil, shallow and deep gw and chemical analyses which will be conducted. Sampling revisions approved on 1/30/2013, see revised figure 10

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Community Profile  
Completed Date: 06/06/2013  
Comments: Community Profile dated April 2013, describes the community and potential community concerns regarding the potential health risks associated with the development of the Negherbon Project Site and the anticipated public participation activities.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Operation and Maintenance Plan  
Completed Date: 03/04/2015  
Comments: Operation and maintenance plan for groundwater monitoring.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Well Decommissioning Workplan  
Completed Date: 10/14/2013  
Comments: Request to Destroy Monitoring Wells at the Negherbon Property, dated October 11, 2013, approved by DTSC email dated October 14, 2013. Request includes tables/figures/attachments, Groundwater Monitoring Well Construction Details, Groundwater Monitoring Well Locations, and Monitoring Well Construction Logs. Well abandonment activities will be conducted in accordance with Alameda County Department of Public Works Agency (ACPWA) Well Standards Program requirements and any specific conditions of the ACPWA permit. A well closure report will be submitted to DTSC within 30 days of abandonment of each well. The report(s) will include copies of the well completion reports for the destroyed wells that are sent to the State of California Department of Water Resources.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: AB 389 Response Plan  
Completed Date: 07/24/2013  
Comments: Some soil excavation followed with GW monitoring and LUC for a portion of the site.

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**NEGHERBON (Continued)**

**S112241534**

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 06/13/2013  
Comments: Community Notice dated June 2013, entitled Negherbon Project Draft Response Plan Available for Review and Comment. DTSC invites the public to review and comment on the draft Response Plan (Remedial Action Plan) and proposed Notice of Exemption for the Negherbon Site. The fact sheet provides a Site history, summary of the proposed cleanup, and opportunities for public involvement.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Public Notice  
Completed Date: 06/13/2013  
Comments: Public Notice dated June 2013, entitled Draft Response Plan for Negherbon Project. DTSC invites the public to comment on a Draft Response Plan for the Negherbon Project. Public Notice indicates Public Comment Period, June 18 through July 19, 2013.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Work Notice  
Completed Date: 01/23/2013  
Comments: Work Notice of Site Assessment Work at Negherbon, Oakland, CA. Work will begin January 31, 2013. Sampling results will be compiled into a report and reviewed by DTSC who will oversee the investigation to ensure that the activities are in accordance with the DTSC approved Site Assessment Workplan dated January 23, 2013.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Well Decommissioning Workplan  
Completed Date: 03/28/2018  
Comments: Work plan for groundwater monitoring well abandonment for wells (HMW-1, HMW-2, HMW-3) located at the Negherbon Site. A well closure report will be submitted to DTSC within 30 days of abandonment. The report will summarize the well abandonment activities, and include copies of the permits, well completion reports for the destroyed wells that are sent to the State of California Department of Water Resources, and off-Site disposal of wastes, if generated.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 10/09/2017  
Comments: Annual Oversight Cost Estimate letter with enclosures (Activity Schedule and Cost Estimate) of DTSC oversight for 2017/2018 Fiscal Year.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 10/01/2018  
Comments: Not reported

Completed Area Name: PROJECT WIDE

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**NEGHERBON (Continued)**

**S112241534**

Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 10/09/2019  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 10/02/2020  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 09/10/2021  
Comments: completed

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Post HARP Form  
Completed Date: 02/27/2017  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Correspondence  
Completed Date: 03/28/2018  
Comments: Notification of Change in DTSC Project Manager as of April 2, 2018.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Operation & Maintenance Order/Agreement  
Completed Date: 12/24/2018  
Comments: O&M Agreement had terminated by DTSC after groundwater monitoring wells were abandoned. There is a land use covenant remains at this site which requires an inspection report due Jan 15th of each year.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork  
Completed Date: 02/25/2013  
Comments: Fieldwork performed per DTSC-approved Site Assessment Workplan dated January 2013.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork  
Completed Date: 04/04/2018  
Comments: 4/24/2018 Emails from consultant indicated that the well destruction went well. They are just finalizing the well destruction report and will submit the report this week.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Well Decommissioning Report  
Completed Date: 07/16/2018  
Comments: DTSC reviewed the Report and has no comment. Therefore, DTSC approved

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**NEGHERBON (Continued)**

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the GW Monitoring Well Abandonment Report. (YS 8.14.2018)

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 09/23/2015  
Comments: Annual Oversight Cost Estimate letter with enclosures (Activity Schedule and Cost Estimate) of DTSC oversight for 2015/2016 Fiscal Year.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 09/22/2014  
Comments: Annual Oversight Cost Estimate letter with enclosures (Cost Estimate and Activity Schedule) of DTSC oversight for 2014/2015 Fiscal Year.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Pre-HARP Form  
Completed Date: 01/29/2014  
Comments: Health & Safety review of Pre-HARP Form (Hazard Appraisal and Recognition Plan Presite Visit Form) completed on 1/24/2014. Industrial Hygienist reviewed Pre-HARP, provided recommendations for safety and health, and returned to PM for supervisor approval on 1/29/2014.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Correspondence  
Completed Date: 08/26/2015  
Comments: Notification of change in DTSC Project Manager as of August 18, 2015.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Certification  
Completed Date: 05/26/2016  
Comments: DTSC finds that all response actions, other than long-term operation and maintenance at the Negherbon Site, located at 2333 Broadway and 421 24th Street, Oakland, California 94612 (Site), have been satisfactorily completed in accordance with the requirements of the Response Plan, approved by DTSC on July 24, 2013. In accordance with the requirements of the California Land Reuse and Redevelopment Act (CLRRA), DTSC issues a Certificate of Completion for the Site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Pre-HARP Form  
Completed Date: 02/06/2017  
Comments: Hazard Appraisal and Recognition Plan Presite Visit Form (Pre-HARP Form) for site visit in February 2017.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 09/29/2016  
Comments: Annual Oversight Cost Estimate letter with enclosures (Activity

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**NEGHERBON (Continued)**

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Schedule and Cost Estimate) of DTSC oversight for 2016/2017 Fiscal Year.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 09/18/2014  
Comments: Excavation completed per workplan. No confirmation samples exceeded screening level goals.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork  
Completed Date: 07/12/2016  
Comments: Groundwater samples collected on Tuesday, July 12, 2016.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork  
Completed Date: 10/18/2016  
Comments: Quarterly Groundwater Monitoring Event

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Operation and Maintenance Report  
Completed Date: 03/22/2017  
Comments: Quarterly Groundwater Monitoring for October 2016. The data collected during the five quarters of sampling indicate: TPH has not been reported in groundwater collected from HMW-1, HMW-2, or HMW-3. 1,1-DCA concentrations in groundwater collected from HMW-1 and HMW-2 are similar to or lower than those detected during the previous sampling events. 1,1-DCA concentrations in groundwater collected from HMW-1 and HMW-2 are generally stable; concentrations do not appear to be increasing. However, The 10/18/2016 sample from HMW-2 shows a slight increase and the highest concentration of 1,1-DCA among the past five (5) quarterly monitoring events. As described in the DTSC approved O&M Plan (EKI, 2015a), after 6 quarters of monitoring an evaluation of COCs in groundwater will be prepared and if appropriate, cessation of further groundwater monitoring events will be recommended. Based on the data collected during the five quarterly events, it is anticipated the COC evaluation will be provided in early 2017, after the sixth quarterly event. The next quarterly groundwater monitoring will be performed during January 2017. The DTSC will be notified regarding the exact date approximately 7 days prior to the monitoring event.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork  
Completed Date: 02/24/2017  
Comments: Quarterly Groundwater Monitoring Event. DTSC provided field oversight of well sampling activities and Soil Management Plan.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Operation and Maintenance Report  
Completed Date: 06/16/2017

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**NEGHERBON (Continued)**

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Comments: Quarterly Groundwater Monitoring for February 2017, dated May 31, 2017. The data collected during the six quarters of sampling indicate: TPH has not been reported in groundwater collected from HMW-1, HMW-2, or HMW-3. 1,1-DCA concentrations in groundwater collected from HMW-1 and HMW-2 are lower than those detected during the pre-remedial Site investigation. The 1,1-DCA concentration measured in HMW-1 was lower in February compared to previous O&M sampling events. The 1,1-DCA concentration measured in HMW-2 was higher in February compared to previous O&M sampling events. The DTSC approved O&M Plan (EKI, 2015a) noted that an evaluation of COCs in groundwater would be prepared after 6 quarters of groundwater monitoring and if appropriate, cessation of further groundwater monitoring events could be recommended. Uptown will prepare the evaluation of COCs in groundwater and transmit the evaluation to the DTSC by 30 June 2017.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Land Use Restriction Monitoring Report  
Completed Date: 02/08/2017  
Comments: Annual Inspection Report. For the year 2016, commencing in January 2016 and ending in December 2016, the prohibited activities were not performed on the property (Excavation, Grading, Removal, Trenching, Filling, Earth Movement, Mining, Drilling), in compliance with the Land Use Covenant and Agreement Environmental Restrictions recorded August 19, 2015.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Land Use Restriction Monitoring Report  
Completed Date: 03/28/2018  
Comments: For the year 2017, commencing in January 2017 and ending in December 2017. The following activities were performed on the property: Excavation, Trenching, Implemented a DTSC-approved Soil Management Plan. The following activities were not performed on the property: Grading, Removal, Filling, Earth Movement, Mining, Drilling. In compliance with the Land Use Covenant and Agreement Environmental Restrictions recorded August 19, 2015.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Land Use Restriction Monitoring Report  
Completed Date: 01/07/2019  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Land Use Restriction Monitoring Report  
Completed Date: 01/10/2020  
Comments: RP is in compliance with LUC requirement. No cap breakthrough in the past year.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Land Use Restriction Monitoring Report  
Completed Date: 12/10/2020  
Comments: Property is in compliance with LUC restrictions.

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**NEGHERBON (Continued)**

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Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork  
Completed Date: 08/09/2017  
Comments: Fieldwork implementation of Soil Management Plan for Flynn Container Excavations, dated April 25, 2017.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 01/30/2018  
Comments: Revised Proposed Termination of Groundwater Monitoring at the former Negherbon Site, Oakland CA (dated 25 January 2018). This memorandum provides information and analysis to support a recommendation for cessation of further groundwater monitoring on the Site. Site data demonstrate there are no identified soil or soil vapor sources of 1,1-DCA on the Site. The 1,1-DCA plume is migrating onto the Site from an upgradient source. The 1,1-DCA plume on the Site is stable. DTSC has no additional comments and hereby approves the request to terminate groundwater monitoring. As a reminder, the Operation and Maintenance Agreement signed with Hive Development Group, LLC remains in effect. The Operation and Maintenance Agreement requires implementation of the Operation and Maintenance Plan. The Operation and Maintenance Plan covers installation and sampling of groundwater monitoring wells. Groundwater monitoring wells that are not being regularly sampled can serve as a conduit for contamination migration. Therefore, it may be prudent to properly abandon these wells. Following receipt of documentation that the monitoring wells have been properly abandoned, DTSC will initiate steps to terminate the Operation and Maintenance Agreement. This includes conducting an annual inspection and submitting an annual inspection report to DTSC by January 15th of each calendar year.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 03/06/2018  
Comments: Summary of minor construction related soil excavation activities performed at the property located at 2333 Broadway / 421-24th Street, Oakland, California ( Site or Former Negherbon ). EKI performed environmental oversight in accordance with the Soil Management Plan ( SMP ), dated 25 April 2017, approved by the DTSC on 26 April 2017.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Soils Management Plan  
Completed Date: 04/26/2017  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 09/10/2013  
Comments: Annual Oversight Cost Estimate letter with enclosures (Activity Schedule and Cost Estimate) of DTSC oversight for 2013/2014 Fiscal Year.

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Distance  
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**NEGHERBON (Continued)**

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Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: California Land Reuse and Revitalization Agreement  
Completed Date: 04/02/2013  
Comments: Standard Agreement for participating under California's Land Reuse and Revitalization Act (CLRRA) Program, between Hive Development Group, LLC, a California limited liability company, and DTSC, fully executed on April 2, 2013.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Land Use Restriction  
Completed Date: 08/19/2015  
Comments: Land Use Covenant (LUC) and Agreement for Environmental Restrictions recorded at County of Alameda on 8/19/2015. LUC made by and between Hive Development Group, LLC, a California limited liability company, current owner of property, and DTSC.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Correspondence  
Completed Date: 03/28/2013  
Comments: Letter dated March 27, 2013, notifying agencies of DTSC's intent to enter into an agreement under the California Land Reuse and Revitalization Act of 2004 (CLRRA) with the Hive Development Group, LLC, for the property located at 2345 and 2333 Broadway and 421 24th Street in Oakland, Alameda County, California. Entry into this agreement provides Hive Development Group, LLC with immunity from liability for certain hazardous materials response costs and damage claims. Under the agreement, Hive Development Group, LLC will perform a site assessment and prepare and implement a response plan.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: CEQA - Notice of Exemption  
Completed Date: 07/23/2013  
Comments: CEQA Notice of Exemption by General Rule [CCR, Sec. 15061(b)(3)]: It can be seen with certainty that there is no possibility that the activities in question will result in a significant effect on the environment.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Operation & Maintenance Order/Agreement  
Completed Date: 05/11/2016  
Comments: The California Department of Toxic Substances Control (DTSC) and Hive Development Group, LLC, a California limited liability company (Proponent) enter into this Operation and Maintenance Agreement (Agreement) for the site located at 2333 Broadway and 421 24th Street, Oakland, Alameda County, California (Site). A DTSC-approved remedy has been installed at the Site for the remediation of groundwater. The remedy consists of groundwater monitoring, a land use covenant restricting the use of Environmental Area 1 for sensitive uses without further DTSC review, and restricting the use of groundwater. The Site is owned by Hive Development Group, LLC. A site location map and the assessor's parcel map are attached as Exhibit A and Exhibit B. A site map or diagram showing the

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**NEGHERBON (Continued)**

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location(s) of the installed remedy (groundwater monitoring wells) is attached as Exhibit C. Proponent shall fully implement the DTSC-approved Operation and Maintenance Plan dated February 2015, including any requirements for inspections, monitoring, reporting and record keeping as approved by DTSC on March 4, 2015 or any successor O&M Plan as later approved by DTSC.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Operation and Maintenance Report  
Completed Date: 02/23/2016  
Comments: Quarterly Groundwater Monitoring for December 2015, dated February 10, 2016. Approved by DTSC letter, dated February 23, 2016. Analytical results for groundwater samples from the three wells are summarized in Table 3. The analytical lab reports and chain-of-custody are included in Appendix C. VOCs were detected above reporting limits in samples from monitoring wells HMW-1 and HMW-2 (including the blind duplicate sample from HMW-3). Detected VOCs include 1,1-DCA, 1,1-DCE, 1,2-DCA, 1,1,2-TCA, TCE, and VC. These VOCs were reported at concentrations similar to those reported in samples collected during the first quarter event (see Table 3) and the Response Plan (see Appendix A). TPH was not detected in groundwater samples. Groundwater elevations measured in July and December 2015 are included in Table 2. As shown, groundwater levels measured in December were 0.71 to 1.19 feet higher than levels measured in July 2015, reflecting autumn rain. Concentrations of 1,1-DCA were higher in samples collected during December than concentrations collected during July 2015. However, because there have been only two sampling events, there are insufficient data to evaluate the natural attenuation of 1,1-DCA. The next quarterly groundwater monitoring will be performed during April 2016. The DTSC will be notified regarding the exact date 7 days prior to the monitoring event.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Operation and Maintenance Report  
Completed Date: 10/04/2016  
Comments: Quarterly Groundwater Monitoring for July 2016. The data collected during July and December 2015 and April and July 2016 indicate: TPH has not been reported in groundwater collected from HMW-1, HMW-2, or HMW-3. 1,1-DCA concentrations in groundwater collected from HMW-1 and HMW-2 are similar to or lower than those detected during the previous sampling events. 1,1-DCA concentrations in groundwater collected from HMW-1 and HMW-2 are generally stable; concentrations do not appear to be increasing. Based on the data collected during the first three quarterly events, it is anticipated the COC evaluation will be provided in early 2017, after the sixth quarterly event. The next quarterly groundwater monitoring will be performed during October 2016. The DTSC will be notified regarding the exact date approximately 7 days prior to the monitoring event.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Operation and Maintenance Report  
Completed Date: 06/27/2016  
Comments: Quarterly Groundwater Monitoring for April 2016. VOCs were detected above reporting limits in samples from monitoring wells HMW-1 and

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**NEGHERBON (Continued)**

**S112241534**

HMW-2 (including the blind duplicate sample from HMW-3). Detected VOCs include 1,1-DCA, 1,1-DCE, 1,2-DCA, 1,1,2-TCA, TCE, and VC. These VOCs were reported at concentrations similar to those reported in samples collected during the first quarter event and the Response Plan. TPH was not detected in groundwater samples. Groundwater levels measured in April were 1.74 to 1.86 feet higher than levels measured in July 2015, reflecting autumn and winter rain. The data collected during July and December 2015 and April 2016 indicate: TPH has not been reported in groundwater collected from HMW-1, HMW-2, or HMW-3. 1,1-DCA concentrations in groundwater collected from HMW-1 and HMW-2 are generally lower than in groundwater collected during the previous investigation. 1,1-DCA concentrations in groundwater collected from HMW-1 and HMW-2 are generally stable; concentrations do not appear to be increasing. Redox conditions are suitable for dechlorination of 1,1-DCA. As described in the DTSC approved O&M Plan, after 6 quarters of monitoring an evaluation of COCs in groundwater will be prepared and if appropriate, cessation of further groundwater monitoring events will be recommended. Based on the data collected during the first three quarterly events, it is anticipated the COC evaluation will be provided in early 2017, after the sixth quarterly event. The next quarterly groundwater monitoring will be performed during July 2016. DTSC will be notified regarding the exact date 7 days prior to the monitoring event.

Completed Area Name: PROJECT WIDE  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Fieldwork  
 Completed Date: 12/16/2015  
 Comments: Second round of quarterly groundwater monitoring samples, collected on December 16, 2015, of three monitoring wells in accordance with the O&M Plan for groundwater.

Completed Area Name: PROJECT WIDE  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Fieldwork  
 Completed Date: 04/12/2016  
 Comments: Groundwater samples collection completed as scheduled, Tuesday, April 12, 2016.

Completed Area Name: PROJECT WIDE  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Remedial Action Completion Report  
 Completed Date: 12/15/2015  
 Comments: Well Installation Report and Quarterly Groundwater Monitoring Report for July 2015, dated November 6, 2015. The report presents data related to the installation, development, and sampling of three monitoring wells in accordance with the Operation and Maintenance (O&M) Plan for groundwater (EKI, February 2015). Sampling results for the first round of groundwater monitoring, collected in July 2015, are included in the report. Contaminant levels in groundwater monitoring wells are consistent with historical levels in groundwater beneath the site. In addition to 1,1,1-dichloroethane (1,1-DCA), trichloroethene, vinyl chloride, 1,1-dichloroethene, 1,2-dichloroethane, and 1,1,2-trichloroethane were detected above their respective maximum contaminant levels in the newly constructed upgradient well; however, a remedial goal has only been established for 1,1-DCA per the Response Plan (EKI, June 2013). Per the O&M Plan,

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additional data from the newly-installed monitoring wells will be obtained quarterly to evaluate the contaminant trends over time and the evidence for natural attenuation. Report approved by DTSC letter dated December 15, 2015.

Future Area Name: Not reported  
Future Sub Area Name: Not reported  
Future Document Type: Not reported  
Future Due Date: Not reported  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

VCP:

Name: NEGHERBON  
Address: 2345, 2333 BROADWAY & 421 24TH ST.  
City,State,Zip: OAKLAND, CA 94612  
Facility ID: 60001834  
Site Type: Voluntary Cleanup  
Site Type Detail: Voluntary Agreement  
Site Mgmt. Req.: NONE SPECIFIED  
Acres: 0.69  
National Priorities List: NO  
Cleanup Oversight Agencies: SMBRP  
Lead Agency: SMBRP  
Lead Agency Description: DTSC - Site Cleanup Program  
Project Manager: Yongsheng (Johnny) Sun  
Supervisor: Marikka Hughes  
Division Branch: Cleanup Berkeley  
Site Code: 201954  
Assembly: 18  
Senate: 07  
Special Programs Code: Voluntary Agreement - CLRRRA  
Status: Certified / Operation & Maintenance  
Status Date: 05/26/2016  
Restricted Use: YES  
Funding: Responsible Party  
Lat/Long: 37.81326 / -122.2664  
APN: 008 066600500, 008 066600900, 008 066601002, 008 066601003, 8-739-12, 8-739-13, 8-739-14  
Past Use: VEHICLE MAINTENANCE  
Potential COC: 30013, 30022, 30024, 30025, 30027  
Confirmed COC: 30013,30024,30025  
Potential Description: OTH, SOIL  
Alias Name: Hive Development  
Alias Type: Alternate Name  
Alias Name: 008 066600500  
Alias Type: APN  
Alias Name: 008 066600900  
Alias Type: APN  
Alias Name: 008 066601002  
Alias Type: APN  
Alias Name: 008 066601003  
Alias Type: APN  
Alias Name: 8-739-12

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**NEGHERBON (Continued)**

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Alias Type: APN  
Alias Name: 8-739-13  
Alias Type: APN  
Alias Name: 8-739-14  
Alias Type: APN  
Alias Name: T10000003613  
Alias Type: GeoTracker Global ID  
Alias Name: 201954  
Alias Type: Project Code (Site Code)  
Alias Name: 60001834  
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Preliminary Endangerment Assessment Report  
Completed Date: 01/02/2013  
Comments: Phase I Environmental Site Assessment Report and All Appropriate Inquires Report dated November 8, 2012, approved by DTSC letter dated January 1, 2013. Per report recommendation, given Client s plans to redevelop the property for residential and commercial uses, limited additional assessment consistent with the proposed land use appears warranted and will be proposed in a separate document. DTSC reviewed the report for compliance with the All Appropriate Inquiries Final Rule at 40 CFR Part 312.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Application  
Completed Date: 10/30/2012  
Comments: Confirmation letter of submittal receipt, dated October 30, 2012. DTSC received Request for Oversight of a Brownfield Site application for Negherbon Site. Under Memorandum of Agreement, agencies determined that DTSC is appropriate oversight agency for project.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork  
Completed Date: 06/24/2014  
Comments: Fieldwork performed per DTSC-approved Implementation Plan dated November 2013.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Well Decommissioning Report  
Completed Date: 04/18/2014  
Comments: Well Closure Report for the Destruction of Monitoring Wells at the Negherbon Property, dated March 28, 2014, approved by DTSC letter dated April 18, 2014. Report documents DTSC-approved destruction of six (6) monitoring wells on March 3, 2014. Report attachments include Alameda County Department of Public Works Agency (ACPWA) Well Destruction Permits and California Department of Water Resources (DWR) Well Completion Reports.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Work Notice  
Completed Date: 03/06/2014

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**NEGHERBON (Continued)**

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Comments: Work Notice of Negherbon Soil Excavation and Removal Work to Begin March 17, 2014. DTSC will oversee this work to ensure that the activities take place in accordance with the DTSC-approved Response Plan and Implementation Plan dated June 2013 and October 2013, respectively.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Design/Implementation Workplan  
Completed Date: 11/14/2013  
Comments: Final Implementation Plan dated November 2013, approved by DTSC letter dated November 14, 2013. The objectives of the plan are to (1) describe elements of the response actions, and (2) provide details of the work to be conducted. The plan includes detailed plans as appendices that describe procedures required to implement the proposed response actions: Excavation and Backfill Plan, Transportation plan, Decontamination Plan, Air Monitoring Plan, Health and Safety Plan.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Workplan  
Completed Date: 01/23/2013  
Comments: Workplan which identifies locations of samples to be collected for CPT, soil, shallow and deep gw and chemical analyses which will be conducted. Sampling revisions approved on 1/30/2013, see revised figure 10

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Community Profile  
Completed Date: 06/06/2013  
Comments: Community Profile dated April 2013, describes the community and potential community concerns regarding the potential health risks associated with the development of the Negherbon Project Site and the anticipated public participation activities.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Operation and Maintenance Plan  
Completed Date: 03/04/2015  
Comments: Operation and maintenance plan for groundwater monitoring.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Well Decommissioning Workplan  
Completed Date: 10/14/2013  
Comments: Request to Destroy Monitoring Wells at the Negherbon Property, dated October 11, 2013, approved by DTSC email dated October 14, 2013. Request includes tables/figures/attachments, Groundwater Monitoring Well Construction Details, Groundwater Monitoring Well Locations, and Monitoring Well Construction Logs. Well abandonment activities will be conducted in accordance with Alameda County Department of Public Works Agency (ACPWA) Well Standards Program requirements and any specific conditions of the ACPWA permit. A well closure report will be submitted to DTSC within 30 days of abandonment of each well. The report(s) will include copies of the well completion reports for the

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**NEGHERBON (Continued)**

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destroyed wells that are sent to the State of California Department of Water Resources.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: AB 389 Response Plan  
Completed Date: 07/24/2013  
Comments: Some soil excavation followed with GW monitoring and LUC for a portion of the site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 06/13/2013  
Comments: Community Notice dated June 2013, entitled Negherbon Project Draft Response Plan Available for Review and Comment. DTSC invites the public to review and comment on the draft Response Plan (Remedial Action Plan) and proposed Notice of Exemption for the Negherbon Site. The fact sheet provides a Site history, summary of the proposed cleanup, and opportunities for public involvement.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Public Notice  
Completed Date: 06/13/2013  
Comments: Public Notice dated June 2013, entitled Draft Response Plan for Negherbon Project. DTSC invites the public to comment on a Draft Response Plan for the Negherbon Project. Public Notice indicates Public Comment Period, June 18 through July 19, 2013.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Work Notice  
Completed Date: 01/23/2013  
Comments: Work Notice of Site Assessment Work at Negherbon, Oakland, CA. Work will begin January 31, 2013. Sampling results will be compiled into a report and reviewed by DTSC who will oversee the investigation to ensure that the activities are in accordance with the DTSC approved Site Assessment Workplan dated January 23, 2013.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Well Decommissioning Workplan  
Completed Date: 03/28/2018  
Comments: Work plan for groundwater monitoring well abandonment for wells (HMW-1, HMW-2, HMW-3) located at the Negherbon Site. A well closure report will be submitted to DTSC within 30 days of abandonment. The report will summarize the well abandonment activities, and include copies of the permits, well completion reports for the destroyed wells that are sent to the State of California Department of Water Resources, and off-Site disposal of wastes, if generated.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 10/09/2017  
Comments: Annual Oversight Cost Estimate letter with enclosures (Activity

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**NEGHERBON (Continued)**

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Schedule and Cost Estimate) of DTSC oversight for 2017/2018 Fiscal Year.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 10/01/2018  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 10/09/2019  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 10/02/2020  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 09/10/2021  
Comments: completed

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Post HARP Form  
Completed Date: 02/27/2017  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Correspondence  
Completed Date: 03/28/2018  
Comments: Notification of Change in DTSC Project Manager as of April 2, 2018.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Operation & Maintenance Order/Agreement  
Completed Date: 12/24/2018  
Comments: O&M Agreement had terminated by DTSC after groundwater monitoring wells were abandoned. There is a land use covenant remains at this site which requires an inspection report due Jan 15th of each year.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork  
Completed Date: 02/25/2013  
Comments: Fieldwork performed per DTSC-approved Site Assessment Workplan dated January 2013.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork

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**NEGHERBON (Continued)**

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Completed Date: 04/04/2018  
Comments: 4/24/2018 Emails from consultant indicated that the well destruction went well. They are just finalizing the well destruction report and will submit the report this week.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Well Decommissioning Report  
Completed Date: 07/16/2018  
Comments: DTSC reviewed the Report and has no comment. Therefore, DTSC approved the GW Monitoring Well Abandonment Report. (YS 8.14.2018)

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 09/23/2015  
Comments: Annual Oversight Cost Estimate letter with enclosures (Activity Schedule and Cost Estimate) of DTSC oversight for 2015/2016 Fiscal Year.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 09/22/2014  
Comments: Annual Oversight Cost Estimate letter with enclosures (Cost Estimate and Activity Schedule) of DTSC oversight for 2014/2015 Fiscal Year.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Pre-HARP Form  
Completed Date: 01/29/2014  
Comments: Health & Safety review of Pre-HARP Form (Hazard Appraisal and Recognition Plan Presite Visit Form) completed on 1/24/2014. Industrial Hygienist reviewed Pre-HARP, provided recommendations for safety and health, and returned to PM for supervisor approval on 1/29/2014.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Correspondence  
Completed Date: 08/26/2015  
Comments: Notification of change in DTSC Project Manager as of August 18, 2015.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Certification  
Completed Date: 05/26/2016  
Comments: DTSC finds that all response actions, other than long-term operation and maintenance at the Negherbon Site, located at 2333 Broadway and 421 24th Street, Oakland, California 94612 (Site), have been satisfactorily completed in accordance with the requirements of the Response Plan, approved by DTSC on July 24, 2013. In accordance with the requirements of the California Land Reuse and Redevelopment Act (CLRRA), DTSC issues a Certificate of Completion for the Site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported

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Completed Document Type: Pre-HARP Form  
Completed Date: 02/06/2017  
Comments: Hazard Appraisal and Recognition Plan Presite Visit Form (Pre-HARP Form) for site visit in February 2017.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 09/29/2016  
Comments: Annual Oversight Cost Estimate letter with enclosures (Activity Schedule and Cost Estimate) of DTSC oversight for 2016/2017 Fiscal Year.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 09/18/2014  
Comments: Excavation completed per workplan. No confirmation samples exceeded screening level goals.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork  
Completed Date: 07/12/2016  
Comments: Groundwater samples collected on Tuesday, July 12, 2016.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork  
Completed Date: 10/18/2016  
Comments: Quarterly Groundwater Monitoring Event

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Operation and Maintenance Report  
Completed Date: 03/22/2017  
Comments: Quarterly Groundwater Monitoring for October 2016. The data collected during the five quarters of sampling indicate: TPH has not been reported in groundwater collected from HMW-1, HMW-2, or HMW-3. 1,1-DCA concentrations in groundwater collected from HMW-1 and HMW-2 are similar to or lower than those detected during the previous sampling events. 1,1-DCA concentrations in groundwater collected from HMW-1 and HMW-2 are generally stable; concentrations do not appear to be increasing. However, The 10/18/2016 sample from HMW-2 shows a slight increase and the highest concentration of 1,1-DCA among the past five (5) quarterly monitoring events. As described in the DTSC approved O&M Plan (EKI, 2015a), after 6 quarters of monitoring an evaluation of COCs in groundwater will be prepared and if appropriate, cessation of further groundwater monitoring events will be recommended. Based on the data collected during the five quarterly events, it is anticipated the COC evaluation will be provided in early 2017, after the sixth quarterly event. The next quarterly groundwater monitoring will be performed during January 2017. The DTSC will be notified regarding the exact date approximately 7 days prior to the monitoring event.

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Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork  
Completed Date: 02/24/2017  
Comments: Quarterly Groundwater Monitoring Event. DTSC provided field oversight of well sampling activities and Soil Management Plan.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Operation and Maintenance Report  
Completed Date: 06/16/2017  
Comments: Quarterly Groundwater Monitoring for February 2017, dated May 31, 2017. The data collected during the six quarters of sampling indicate: TPH has not been reported in groundwater collected from HMW-1, HMW-2, or HMW-3. 1,1-DCA concentrations in groundwater collected from HMW-1 and HMW-2 are lower than those detected during the pre-remedial Site investigation. The 1,1-DCA concentration measured in HMW-1 was lower in February compared to previous O&M sampling events. The 1,1-DCA concentration measured in HMW-2 was higher in February compared to previous O&M sampling events. The DTSC approved O&M Plan (EKI, 2015a) noted that an evaluation of COCs in groundwater would be prepared after 6 quarters of groundwater monitoring and if appropriate, cessation of further groundwater monitoring events could be recommended. Uptown will prepare the evaluation of COCs in groundwater and transmit the evaluation to the DTSC by 30 June 2017.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Land Use Restriction Monitoring Report  
Completed Date: 02/08/2017  
Comments: Annual Inspection Report. For the year 2016, commencing in January 2016 and ending in December 2016, the prohibited activities were not performed on the property (Excavation, Grading, Removal, Trenching, Filling, Earth Movement, Mining, Drilling), in compliance with the Land Use Covenant and Agreement Environmental Restrictions recorded August 19, 2015.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Land Use Restriction Monitoring Report  
Completed Date: 03/28/2018  
Comments: For the year 2017, commencing in January 2017 and ending in December 2017. The following activities were performed on the property: Excavation, Trenching, Implemented a DTSC-approved Soil Management Plan. The following activities were not performed on the property: Grading, Removal, Filling, Earth Movement, Mining, Drilling. In compliance with the Land Use Covenant and Agreement Environmental Restrictions recorded August 19, 2015.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Land Use Restriction Monitoring Report  
Completed Date: 01/07/2019  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported

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**NEGHERBON (Continued)**

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Completed Document Type: Land Use Restriction Monitoring Report  
Completed Date: 01/10/2020  
Comments: RP is in compliance with LUC requirement. No cap breakthrough in the past year.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Land Use Restriction Monitoring Report  
Completed Date: 12/10/2020  
Comments: Property is in compliance with LUC restrictions.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork  
Completed Date: 08/09/2017  
Comments: Fieldwork implementation of Soil Management Plan for Flynn Container Excavations, dated April 25, 2017.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 01/30/2018  
Comments: Revised Proposed Termination of Groundwater Monitoring at the former Negherbon Site, Oakland CA (dated 25 January 2018). This memorandum provides information and analysis to support a recommendation for cessation of further groundwater monitoring on the Site. Site data demonstrate there are no identified soil or soil vapor sources of 1,1-DCA on the Site. The 1,1-DCA plume is migrating onto the Site from an upgradient source. The 1,1-DCA plume on the Site is stable. DTSC has no additional comments and hereby approves the request to terminate groundwater monitoring. As a reminder, the Operation and Maintenance Agreement signed with Hive Development Group, LLC remains in effect. The Operation and Maintenance Agreement requires implementation of the Operation and Maintenance Plan. The Operation and Maintenance Plan covers installation and sampling of groundwater monitoring wells. Groundwater monitoring wells that are not being regularly sampled can serve as a conduit for contamination migration. Therefore, it may be prudent to properly abandon these wells. Following receipt of documentation that the monitoring wells have been properly abandoned, DTSC will initiate steps to terminate the Operation and Maintenance Agreement. This includes conducting an annual inspection and submitting an annual inspection report to DTSC by January 15th of each calendar year.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 03/06/2018  
Comments: Summary of minor construction related soil excavation activities performed at the property located at 2333 Broadway / 421-24th Street, Oakland, California ( Site or Former Negherbon ). EKI performed environmental oversight in accordance with the Soil Management Plan ( SMP ), dated 25 April 2017, approved by the DTSC on 26 April 2017.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported

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Completed Document Type: Soils Management Plan  
Completed Date: 04/26/2017  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 09/10/2013  
Comments: Annual Oversight Cost Estimate letter with enclosures (Activity Schedule and Cost Estimate) of DTSC oversight for 2013/2014 Fiscal Year.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: California Land Reuse and Revitalization Agreement  
Completed Date: 04/02/2013  
Comments: Standard Agreement for participating under California's Land Reuse and Revitalization Act (CLRRA) Program, between Hive Development Group, LLC, a California limited liability company, and DTSC, fully executed on April 2, 2013.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Land Use Restriction  
Completed Date: 08/19/2015  
Comments: Land Use Covenant (LUC) and Agreement for Environmental Restrictions recorded at County of Alameda on 8/19/2015. LUC made by and between Hive Development Group, LLC, a California limited liability company, current owner of property, and DTSC.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Correspondence  
Completed Date: 03/28/2013  
Comments: Letter dated March 27, 2013, notifying agencies of DTSC's intent to enter into an agreement under the California Land Reuse and Revitalization Act of 2004 (CLRRA) with the Hive Development Group, LLC, for the property located at 2345 and 2333 Broadway and 421 24th Street in Oakland, Alameda County, California. Entry into this agreement provides Hive Development Group, LLC with immunity from liability for certain hazardous materials response costs and damage claims. Under the agreement, Hive Development Group, LLC will perform a site assessment and prepare and implement a response plan.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: CEQA - Notice of Exemption  
Completed Date: 07/23/2013  
Comments: CEQA Notice of Exemption by General Rule [CCR, Sec. 15061(b)(3)]: It can be seen with certainty that there is no possibility that the activities in question will result in a significant effect on the environment.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Operation & Maintenance Order/Agreement  
Completed Date: 05/11/2016

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Comments: The California Department of Toxic Substances Control (DTSC) and Hive Development Group, LLC, a California limited liability company (Proponent) enter into this Operation and Maintenance Agreement (Agreement) for the site located at 2333 Broadway and 421 24th Street, Oakland, Alameda County, California (Site). A DTSC-approved remedy has been installed at the Site for the remediation of groundwater. The remedy consists of groundwater monitoring, a land use covenant restricting the use of Environmental Area 1 for sensitive uses without further DTSC review, and restricting the use of groundwater. The Site is owned by Hive Development Group, LLC. A site location map and the assessor's parcel map are attached as Exhibit A and Exhibit B. A site map or diagram showing the location(s) of the installed remedy (groundwater monitoring wells) is attached as Exhibit C. Proponent shall fully implement the DTSC-approved Operation and Maintenance Plan dated February 2015, including any requirements for inspections, monitoring, reporting and record keeping as approved by DTSC on March 4, 2015 or any successor O&M Plan as later approved by DTSC.

Completed Area Name: PROJECT WIDE

Completed Sub Area Name: Not reported

Completed Document Type: Operation and Maintenance Report

Completed Date: 02/23/2016

Comments: Quarterly Groundwater Monitoring for December 2015, dated February 10, 2016. Approved by DTSC letter, dated February 23, 2016. Analytical results for groundwater samples from the three wells are summarized in Table 3. The analytical lab reports and chain-of-custody are included in Appendix C. VOCs were detected above reporting limits in samples from monitoring wells HMW-1 and HMW-2 (including the blind duplicate sample from HMW-3). Detected VOCs include 1,1-DCA, 1,1-DCE, 1,2-DCA, 1,1,2-TCA, TCE, and VC. These VOCs were reported at concentrations similar to those reported in samples collected during the first quarter event (see Table 3) and the Response Plan (see Appendix A). TPH was not detected in groundwater samples. Groundwater elevations measured in July and December 2015 are included in Table 2. As shown, groundwater levels measured in December were 0.71 to 1.19 feet higher than levels measured in July 2015, reflecting autumn rain. Concentrations of 1,1-DCA were higher in samples collected during December than concentrations collected during July 2015. However, because there have been only two sampling events, there are insufficient data to evaluate the natural attenuation of 1,1-DCA. The next quarterly groundwater monitoring will be performed during April 2016. The DTSC will be notified regarding the exact date 7 days prior to the monitoring event.

Completed Area Name: PROJECT WIDE

Completed Sub Area Name: Not reported

Completed Document Type: Operation and Maintenance Report

Completed Date: 10/04/2016

Comments: Quarterly Groundwater Monitoring for July 2016. The data collected during July and December 2015 and April and July 2016 indicate: TPH has not been reported in groundwater collected from HMW-1, HMW-2, or HMW-3. 1,1-DCA concentrations in groundwater collected from HMW-1 and HMW-2 are similar to or lower than those detected during the previous sampling events. 1,1-DCA concentrations in groundwater collected from HMW-1 and HMW-2 are generally stable; concentrations do not appear to be increasing. Based on the data collected during the first three

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quarterly events, it is anticipated the COC evaluation will be provided in early 2017, after the sixth quarterly event. The next quarterly groundwater monitoring will be performed during October 2016. The DTSC will be notified regarding the exact date approximately 7 days prior to the monitoring event.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Operation and Maintenance Report  
Completed Date: 06/27/2016  
Comments: Quarterly Groundwater Monitoring for April 2016. VOCs were detected above reporting limits in samples from monitoring wells HMW-1 and HMW-2 (including the blind duplicate sample from HMW-3). Detected VOCs include 1,1-DCA, 1,1-DCE, 1,2-DCA, 1,1,2-TCA, TCE, and VC. These VOCs were reported at concentrations similar to those reported in samples collected during the first quarter event and the Response Plan. TPH was not detected in groundwater samples. Groundwater levels measured in April were 1.74 to 1.86 feet higher than levels measured in July 2015, reflecting autumn and winter rain. The data collected during July and December 2015 and April 2016 indicate: TPH has not been reported in groundwater collected from HMW-1, HMW-2, or HMW-3. 1,1-DCA concentrations in groundwater collected from HMW-1 and HMW-2 are generally lower than in groundwater collected during the previous investigation. 1,1-DCA concentrations in groundwater collected from HMW-1 and HMW-2 are generally stable; concentrations do not appear to be increasing. Redox conditions are suitable for dechlorination of 1,1-DCA. As described in the DTSC approved O&M Plan, after 6 quarters of monitoring an evaluation of COCs in groundwater will be prepared and if appropriate, cessation of further groundwater monitoring events will be recommended. Based on the data collected during the first three quarterly events, it is anticipated the COC evaluation will be provided in early 2017, after the sixth quarterly event. The next quarterly groundwater monitoring will be performed during July 2016. DTSC will be notified regarding the exact date 7 days prior to the monitoring event.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork  
Completed Date: 12/16/2015  
Comments: Second round of quarterly groundwater monitoring samples, collected on December 16, 2015, of three monitoring wells in accordance with the O&M Plan for groundwater.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork  
Completed Date: 04/12/2016  
Comments: Groundwater samples collection completed as scheduled, Tuesday, April 12, 2016.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Completion Report  
Completed Date: 12/15/2015  
Comments: Well Installation Report and Quarterly Groundwater Monitoring Report for July 2015, dated November 6, 2015. The report presents data

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related to the installation, development, and sampling of three monitoring wells in accordance with the Operation and Maintenance (O&M) Plan for groundwater (EKI, February 2015). Sampling results for the first round of groundwater monitoring, collected in July 2015, are included in the report. Contaminant levels in groundwater monitoring wells are consistent with historical levels in groundwater beneath the site. In addition to 1,1,1-dichloroethane (1,1-DCA), trichloroethene, vinyl chloride, 1,1-dichloroethene, 1,2-dichloroethane, and 1,1,2-trichloroethane were detected above their respective maximum contaminant levels in the newly constructed upgradient well; however, a remedial goal has only been established for 1,1-DCA per the Response Plan (EKI, June 2013). Per the O&M Plan, additional data from the newly-installed monitoring wells will be obtained quarterly to evaluate the contaminant trends over time and the evidence for natural attenuation. Report approved by DTSC letter dated December 15, 2015.

Future Area Name: Not reported  
 Future Sub Area Name: Not reported  
 Future Document Type: Not reported  
 Future Due Date: Not reported  
 Schedule Area Name: Not reported  
 Schedule Sub Area Name: Not reported  
 Schedule Document Type: Not reported  
 Schedule Due Date: Not reported  
 Schedule Revised Date: Not reported

**DEED:**

Name: NEGHERBON  
 Address: 2345, 2333 BROADWAY & 421 24TH ST.  
 City,State,Zip: OAKLAND, CA 94612  
 Envirostor ID: 60001834  
 Area: PROJECT WIDE  
 Sub Area: Not reported  
 Site Type: VOLUNTARY CLEANUP  
 Status: CERTIFIED / OPERATION & MAINTENANCE  
 Agency: Not reported  
 Covenant Uploaded: Not reported  
 Deed Date(s): Not reported  
 File Name: Envirostor Land Use Restrictions

203  
 NW  
 1/2-1  
 0.932 mi.  
 4923 ft.

**CARDIO PULMANARY BUILDING**  
**365 HAWTHRONE STREET**  
**OAKLAND, CA 92626**

**Notify 65 S100179153**  
**N/A**

**Relative:**  
**Higher**  
**Actual:**  
**88 ft.**

**NOTIFY 65:**  
 Name: CARDIO PULMANARY BUILDING  
 Address: 365 HAWTHRONE STREET  
 City,State,Zip: OAKLAND, CA 92626  
 Date Reported: Not reported  
 Staff Initials: Not reported  
 Board File Number: Not reported  
 Facility Type: Not reported  
 Discharge Date: Not reported  
 Issue Date: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**CARDIO PULMANARY BUILDING (Continued)**

**S100179153**

Incident Description: Not reported  
 Global ID: Not reported  
 Status: Not reported

**204  
 North  
 1/2-1  
 0.988 mi.  
 5214 ft.**

**4212-4220 PIEDMONT AVENUE  
 4212-4220 PIEDMONT AVENUE  
 OAKLAND, CA 94601**

**ENVIROSTOR  
 Alameda County CS  
 VCP**

**S110121741  
 N/A**

**Relative:  
 Higher  
 Actual:  
 117 ft.**

**ENVIROSTOR:**

Name: 4212-4220 PIEDMONT AVENUE  
 Address: 4212-4220 PIEDMONT AVENUE  
 City,State,Zip: OAKLAND, CA 94601  
 Facility ID: 60001212  
 Status: Refer: RWQCB  
 Status Date: 10/24/2023  
 Site Code: 201864  
 Site Type: Voluntary Cleanup  
 Site Type Detailed: Voluntary Agreement  
 Acres: 0.15  
 NPL: NO  
 Regulatory Agencies: SMBRP  
 Lead Agency: SMBRP  
 Program Manager: Tom Price  
 Supervisor: Marikka Hughes  
 Division Branch: Cleanup Berkeley  
 Assembly: 14  
 Senate: 07  
 Special Program: Not reported  
 Restricted Use: NO  
 Site Mgmt Req: NONE SPECIFIED  
 Funding: Responsible Party  
 Latitude: 37.82789  
 Longitude: -122.2504  
 APN: NONE SPECIFIED  
 Past Use: DRY CLEANING  
 Potential COC: Tetrachloroethylene (PCE TPH-diesel TPH-JET FUEL TPH-MOTOR OIL  
 Trichloroethylene (TCE 1,2-Dichloroethylene (cis 1,2-Dichloroethylene (trans  
 Confirmed COC: Tetrachloroethylene (PCE TPH-diesel 1,2-Dichloroethylene (cis 1,2-Dichloroethylene (trans TPH-JET FUEL TPH-MOTOR OIL  
 Trichloroethylene (TCE  
 Potential Description: IA, OTH, SOIL, SV  
 Alias Name: 201864  
 Alias Type: Project Code (Site Code)  
 Alias Name: 60001212  
 Alias Type: Envirostor ID Number

**Completed Info:**

Completed Area Name: PROJECT WIDE  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Site Characterization Report  
 Completed Date: 10/26/2009  
 Comments: Low levels of perchloroethylene (PCE) was detected in shallow soil. PCE, trichloroethene (TCE), and dichloroethenes (DCEs) were detected in shallow groundwater at a depth of approximately 20 feet below ground surface. Groundwater samples contained detectable

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**4212-4220 PIEDMONT AVENUE (Continued)**

**S110121741**

concentrations of diesel, kerosene, and motor oil. This report was not prepared under DTSC oversight, but is uploaded as background information.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Workplan  
Completed Date: 03/16/2011  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork  
Completed Date: 08/05/2011  
Comments: Field work for collection of groundwater and soil gas was completed.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Standard Voluntary Agreement  
Completed Date: 06/07/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 09/22/2011  
Comments: The cost estimate is for the fiscal year from 7/1/2011 to 6/30/2012.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Correspondence  
Completed Date: 02/08/2013  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Letter - Demand  
Completed Date: 04/30/2012  
Comments: Demand letter #1

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Correspondence  
Completed Date: 04/12/2013  
Comments: Includes correspondence from January 1 - March 30, 2013.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Correspondence  
Completed Date: 07/03/2013  
Comments: Email correspondence.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Correspondence  
Completed Date: 10/09/2013  
Comments: Email correspondence for the calendar 3rd quarter 2013.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**4212-4220 PIEDMONT AVENUE (Continued)**

**S110121741**

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Correspondence  
Completed Date: 01/15/2014  
Comments: Email correspondence from October 1 - December 31, 2013.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 09/24/2013  
Comments: Estimated costs for regulatory oversight by DTSC for the 2013-14 fiscal year.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 10/29/2012  
Comments: The cost estimate is for anticipated regulatory oversight activities from July 1, 2012 to June 30, 2013.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Report  
Completed Date: 06/28/2012  
Comments: The investigation characterized soil, groundwater, and soil gas at the site for dry cleaning solvent (perchloroethylene). Based on the findings of the investigation the consultant recommended additional downgradient delineation of shallow groundwater (approximately 20 feet below ground surface or less) and additional soil gas sampling inside the on-site building. The consultant recommended that a workplan for the additional investigation should be prepared.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Phase 1  
Completed Date: 04/14/2008  
Comments: The report recommended additional investigation since the property was used as a dry cleaning facility. This report included as background information, but was not prepared under DTSC oversight.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Voluntary Cleanup Agreement Termination Notification  
Completed Date: 04/02/2014  
Comments: VCA terminated at the request of the property owner's attorney.

Future Area Name: Not reported  
Future Sub Area Name: Not reported  
Future Document Type: Not reported  
Future Due Date: Not reported  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**4212-4220 PIEDMONT AVENUE (Continued)**

**S110121741**

Alameda County CS:

Name: 4212 - 4220 PIEDMONT AVENUE  
Address: 4212 - 4220 PIEDMONT AVE  
City,State,Zip: OAKLAND, CA 94611-  
Status: 12  
Record Id: RO0003285  
PE: 5502  
Facility Status: Not reported  
Latitude: Not reported  
Longitude: Not reported

VCP:

Name: 4212-4220 PIEDMONT AVENUE  
Address: 4212-4220 PIEDMONT AVENUE  
City,State,Zip: OAKLAND, CA 94601  
Facility ID: 60001212  
Site Type: Voluntary Cleanup  
Site Type Detail: Voluntary Agreement  
Site Mgmt. Req.: NONE SPECIFIED  
Acres: 0.15  
National Priorities List: NO  
Cleanup Oversight Agencies: SMBRP  
Lead Agency: SMBRP  
Lead Agency Description: DTSC - Site Cleanup Program  
Project Manager: Tom Price  
Supervisor: Marikka Hughes  
Division Branch: Cleanup Berkeley  
Site Code: 201864  
Assembly: 14  
Senate: 07  
Special Programs Code: Not reported  
Status: Refer: RWQCB  
Status Date: 10/24/2023  
Restricted Use: NO  
Funding: Responsible Party  
Lat/Long: 37.82789 / -122.2504  
APN: NONE SPECIFIED  
Past Use: DRY CLEANING  
Potential COC: 30022, 30024, 3002501, 3002502, 30027, 30195, 30196  
Confirmed COC: 30022,30024,30195,30196,3002501,3002502,30027  
Potential Description: IA, OTH, SOIL, SV  
Alias Name: 201864  
Alias Type: Project Code (Site Code)  
Alias Name: 60001212  
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Report  
Completed Date: 10/26/2009  
Comments: Low levels of perchloroethylene (PCE) was detected in shallow soil. PCE, trichloroethene (TCE), and dichloroethenes (DCEs) were detected in shallow groundwater at a depth of approxiamtely 20 feet below ground surface. Groundwater samples contained detectable concentrations of diesel, kerosene, and motor oil. This report was not prepared under DTSC oversight, but is uploaded as background

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**4212-4220 PIEDMONT AVENUE (Continued)**

**S110121741**

information.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Workplan  
Completed Date: 03/16/2011  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork  
Completed Date: 08/05/2011  
Comments: Field work for collection of groundwater and soil gas was completed.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Standard Voluntary Agreement  
Completed Date: 06/07/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 09/22/2011  
Comments: The cost estimate is for the fiscal year from 7/1/2011 to 6/30/2012.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Correspondence  
Completed Date: 02/08/2013  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Letter - Demand  
Completed Date: 04/30/2012  
Comments: Demand letter #1

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Correspondence  
Completed Date: 04/12/2013  
Comments: Includes correspondence from January 1 - March 30, 2013.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Correspondence  
Completed Date: 07/03/2013  
Comments: Email correspondence.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Correspondence  
Completed Date: 10/09/2013  
Comments: Email correspondence for the calendar 3rd quarter 2013.

Completed Area Name: PROJECT WIDE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**4212-4220 PIEDMONT AVENUE (Continued)**

**S110121741**

Completed Sub Area Name: Not reported  
Completed Document Type: Correspondence  
Completed Date: 01/15/2014  
Comments: Email correspondence from October 1 - December 31, 2013.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 09/24/2013  
Comments: Estimated costs for regulatory oversight by DTSC for the 2013-14 fiscal year.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 10/29/2012  
Comments: The cost estimate is for anticipated regulatory oversight activities from July 1, 2012 to June 30, 2013.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Report  
Completed Date: 06/28/2012  
Comments: The investigation characterized soil, groundwater, and soil gas at the site for dry cleaning solvent (perchloroethylene). Based on the findings of the investigation the consultant recommended additional downgradient delineation of shallow groundwater (approximately 20 feet below ground surface or less) and additional soil gas sampling inside the on-site building. The consultant recommended that a workplan for the additional investigation should be prepared.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Phase 1  
Completed Date: 04/14/2008  
Comments: The report recommended additional investigation since the property was used as a dry cleaning facility. This report included as background information, but was not prepared under DTSC oversight.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Voluntary Cleanup Agreement Termination Notification  
Completed Date: 04/02/2014  
Comments: VCA terminated at the request of the property owner's attorney.

Future Area Name: Not reported  
Future Sub Area Name: Not reported  
Future Document Type: Not reported  
Future Due Date: Not reported  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Site

Database(s)

EDR ID Number  
EPA ID Number

**205**  
**SSW**  
**1/2-1**  
**0.995 mi.**  
**5253 ft.**

**ZUEDELAC APARTMENTS**  
**1600 3RD AVE**  
**OAKLAND, CA 94606**

**ENVIROSTOR**  
**VCP**  
**HWTS**  
**HAZNET**

**S112921473**  
**N/A**

**Relative:**  
**Lower**  
**Actual:**  
**25 ft.**

**ENVIROSTOR:**  
Name: SMITH'S WRECKING YARD  
Address: 1600 3RD STREET  
City,State,Zip: OAKLAND, CA 94607  
Facility ID: 01990014  
Status: Certified  
Status Date: 05/25/2001  
Site Code: 200355  
Site Type: Voluntary Cleanup  
Site Type Detailed: Voluntary Agreement  
Acres: 0.3  
NPL: NO  
Regulatory Agencies: SMBRP  
Lead Agency: SMBRP  
Program Manager: Not reported  
Supervisor: \* Barbara Cook  
Division Branch: Cleanup Berkeley  
Assembly: 18  
Senate: 07  
Special Program: Voluntary Agreement - Standard Voluntary Agreement  
Restricted Use: NO  
Site Mgmt Req: NONE SPECIFIED  
Funding: Responsible Party  
Latitude: 37.80333  
Longitude: -122.2991  
APN: NONE SPECIFIED  
Past Use: JUNKYARD  
Potential COC: Arsenic Lead Polychlorinated biphenyls (PCBs Polynuclear aromatic hydrocarbons (PAHs TPH-diesel Beryllium and compounds Polychlorinated biphenyls (PCBs Polynuclear aromatic hydrocarbons (PAHs TPH-diesel Beryllium and compounds Arsenic Lead SOIL  
Confirmed COC: Polychlorinated biphenyls (PCBs Polynuclear aromatic hydrocarbons (PAHs TPH-diesel Beryllium and compounds Arsenic Lead SOIL  
Potential Description: SOIL  
Alias Name: BOBO'S JUNKYARD  
Alias Type: Alternate Name  
Alias Name: CYPREES FREEWAY/SMITH'S WRECKING YARD  
Alias Type: Alternate Name  
Alias Name: CYPRESS RECONSTRUCTION  
Alias Type: Alternate Name  
Alias Name: KRUEZBERGER PARCEL  
Alias Type: Alternate Name  
Alias Name: SOUTH PRESCOTT NEIGHBORHOOD PARK  
Alias Type: Alternate Name  
Alias Name: SOUTHERN PACIFIC WEST OAKLAND RAIL YARD  
Alias Type: Alternate Name  
Alias Name: 110033609343  
Alias Type: EPA (FRS #)  
Alias Name: 200355  
Alias Type: Project Code (Site Code)  
Alias Name: 01990014  
Alias Type: Envirostor ID Number

**Completed Info:**  
Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**ZUEDELAC APARTMENTS (Continued)**

**S112921473**

Completed Document Type: Remedial Investigation Report  
Completed Date: 06/19/1995  
Comments: Report describes the soil and groundwater results found.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Amendment - Order/Agreement  
Completed Date: 01/07/1999  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: CEQA - Responsible Agency Review  
Completed Date: 03/20/1998  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Certification  
Completed Date: 05/25/2001  
Comments: CERT - This site is known as Smith's Wrecking Yard and was remediated as part of the South Prescott Neighborhood Park, Oakland. The site is located in the eastern part of the San Francisco Bay area. After completion of the remedial actions, construction of the neighborhood park began. It is anticipated that the park will be turned over to the City of Oakland in October 2001. DTSC has determined that all appropriate response actions have been completed, that all acceptable engineering practices were implemented and that no further removal/remedial action is necessary.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Standard Voluntary Agreement  
Completed Date: 05/10/1994  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Completion Report  
Completed Date: 05/24/2001  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Design/Implementation Workplan  
Completed Date: 08/02/1999  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Plan  
Completed Date: 03/20/1998  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Preliminary Endangerment Assessment Report

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**ZUEDELAC APARTMENTS (Continued)**

**S112921473**

Completed Date: 01/03/1994  
Comments: Not reported

Future Area Name: Not reported  
Future Sub Area Name: Not reported  
Future Document Type: Not reported  
Future Due Date: Not reported  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

VCP:

Name: SMITH'S WRECKING YARD  
Address: 1600 3RD STREET  
City,State,Zip: OAKLAND, CA 94607  
Facility ID: 01990014  
Site Type: Voluntary Cleanup  
Site Type Detail: Voluntary Agreement  
Site Mgmt. Req.: NONE SPECIFIED  
Acres: 0.3  
National Priorities List: NO  
Cleanup Oversight Agencies: SMBRP  
Lead Agency: SMBRP  
Lead Agency Description: DTSC - Site Cleanup Program  
Project Manager: Not reported  
Supervisor: \* Barbara Cook  
Division Branch: Cleanup Berkeley  
Site Code: 200355  
Assembly: 18  
Senate: 07  
Special Programs Code: Voluntary Agreement - Standard Voluntary Agreement  
Status: Certified  
Status Date: 05/25/2001  
Restricted Use: NO  
Funding: Responsible Party  
Lat/Long: 37.80333 / -122.2991  
APN: NONE SPECIFIED  
Past Use: JUNKYARD  
Potential COC: 30001, 30013, 30018, 30019, 30024, 30080  
Confirmed COC: 30018,30019,30024,30080,30001,30013  
Potential Description: SOIL  
Alias Name: BOBO'S JUNKYARD  
Alias Type: Alternate Name  
Alias Name: CYPREES FREEWAY/SMITH'S WRECKING YARD  
Alias Type: Alternate Name  
Alias Name: CYPRESS RECONSTRUCTION  
Alias Type: Alternate Name  
Alias Name: KRUEZBERGER PARCEL  
Alias Type: Alternate Name  
Alias Name: SOUTH PRESCOTT NEIGHBORHOOD PARK  
Alias Type: Alternate Name  
Alias Name: SOUTHERN PACIFIC WEST OAKLAND RAIL YARD  
Alias Type: Alternate Name  
Alias Name: 110033609343  
Alias Type: EPA (FRS #)

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**ZUEDELAC APARTMENTS (Continued)**

**S112921473**

Alias Name: 200355  
Alias Type: Project Code (Site Code)  
Alias Name: 01990014  
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 06/19/1995  
Comments: Report describes the soil and groundwater results found.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Amendment - Order/Agreement  
Completed Date: 01/07/1999  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: CEQA - Responsible Agency Review  
Completed Date: 03/20/1998  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Certification  
Completed Date: 05/25/2001  
Comments: CERT - This site is known as Smith's Wrecking Yard and was remediated as part of the South Prescott Neighborhood Park, Oakland. The site is located in the eastern part of the San Francisco Bay area. After completion of the remedial actions, construction of the neighborhood park began. It is anticipated that the park will be turned over to the City of Oakland in October 2001. DTSC has determined that all appropriate response actions have been completed, that all acceptable engineering practices were implemented and that no further removal/remedial action is necessary.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Standard Voluntary Agreement  
Completed Date: 05/10/1994  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Completion Report  
Completed Date: 05/24/2001  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Design/Implementation Workplan  
Completed Date: 08/02/1999  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**ZUEDELAC APARTMENTS (Continued)**

**S112921473**

Completed Document Type: Remedial Action Plan  
Completed Date: 03/20/1998  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Preliminary Endangerment Assessment Report  
Completed Date: 01/03/1994  
Comments: Not reported

Future Area Name: Not reported  
Future Sub Area Name: Not reported  
Future Document Type: Not reported  
Future Due Date: Not reported  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

**HWTS:**

Name: ZUEDELAC APARTMENTS  
Address: 1600 3RD AVE  
Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94606  
EPA ID: CAC002550979  
Inactive Date: 03/18/2003  
Create Date: 04/16/2002  
Last Act Date: Not reported  
Mailing Name: Not reported  
Mailing Address: 1600 3RD AVE  
Mailing Address 2: Not reported  
Mailing City,State,Zip: OAKLAND, CA 94606  
Owner Name: RICHARD PHILLIPS  
Owner Address: 1600 3RD AVE  
Owner Address 2: Not reported  
Owner City,State,Zip: OAKLAND, CA 94606  
Owner Phone: Not reported  
Owner Fax: Not reported  
Contact Name: RICHARD PHILLIPS  
Contact Address: 1600 3RD AVE  
Contact Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94606  
Contact Phone: Not reported  
Contact Fax: Not reported  
Facility Status: Inactive  
Facility Type: TEMPORARY  
Category: STATE  
Latitude: 37.798552  
Longitude: -122.253687

**HAZNET:**

Name: ZUEDELAC APARTMENTS  
Address: 1600 3RD AVE  
Address 2: Not reported  
City,State,Zip: OAKLAND, CA 94606

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**ZUEDELAC APARTMENTS (Continued)**

**S112921473**

Contact:	Richard Phillips
Telephone:	5103936420
Mailing Name:	Not reported
Mailing Address:	1600 3rd Ave
Year:	2003
Gepaid:	CAC002550979
TSD EPA ID:	CAT080013352
CA Waste Code:	331 - Off-specification, aged or surplus organics
Disposal Method:	R01 - Recycler
Tons:	0.1815
Year:	2002
Gepaid:	CAC002550979
TSD EPA ID:	CAD981382732
CA Waste Code:	151 - Asbestos containing waste
Disposal Method:	D80 - Disposal, Land Fill
Tons:	3.3712
Additional Info:	
Year:	2003
Gen EPA ID:	CAC002550979
Shipment Date:	20031031
Creation Date:	8/24/2004 10:00:04
Receipt Date:	20031113
Manifest ID:	22920185
Trans EPA ID:	CAT080013428
Trans Name:	MORGAN ENVIRONMENTAL INC
Trans 2 EPA ID:	CAR000101600
Trans 2 Name:	DK RICHMOND
TSD EPA ID:	CAT080013352
Trans Name:	DEMENNO/KERDOON
TSD Alt EPA ID:	CAT080013352
TSD Alt Name:	Not reported
Waste Code Description:	331 - Off-specification, aged, or surplus organics
RCRA Code:	D001
Meth Code:	R01 - Recycler
Quantity Tons:	0.1815
Waste Quantity:	55
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Additional Info:	
Year:	2002
Gen EPA ID:	CAC002550979
Shipment Date:	20020423
Creation Date:	1/8/2003 18:31:12
Receipt Date:	20020430
Manifest ID:	21874001

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**ZUEDELAC APARTMENTS (Continued)**

**S112921473**

Trans EPA ID:	CAD982029258
Trans Name:	Not reported
Trans 2 EPA ID:	CAR000017657
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD981382732
Trans Name:	Not reported
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	151 - Asbestos-containing waste
RCRA Code:	Not reported
Meth Code:	D80 - Disposal, Land Fill
Quantity Tons:	3.3712
Waste Quantity:	4
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Count: 8 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
OAKLAND	S127094028	BROOKLYN BASIN - PARCEL F	285 & 255 8TH AVENUE	94612	ENVIROSTOR, VCP, DEED
OAKLAND	S128265393	BROOKLYN BASIN - PARCEL H	277 BROOKLYN BASIN WAY	94606	ENVIROSTOR, VCP
OAKLAND	S127459716	BROOKLYN BASIN - PARCEL G	BROOKLYN BASIN WAY	94606	ENVIROSTOR, VCP
OAKLAND	S103576383	BLAZIC INDUSTRIAL BUILDING	1016 MACARTHUR BLVD W	94610	LUST
OAKLAND	S128885710	BROOKLYN BASIN - PARCEL C	OAK STREET TO 9TH AVENUE	94606	ENVIROSTOR, VCP
OAKLAND	S128004964	BROOKLYN BASIN - PARCEL E	OAK STREET TO 9TH AVENUE	94606	ENVIROSTOR, VCP
OAKLAND	S126982069	BROOKLYN BASIN - PARCEL A	OAK STREET TO 9TH AVENUE	94606	ENVIROSTOR, VCP
OAKLAND	S125820819	BROOKLYN BASIN - PARCEL D	OAK STREET TO 9TH AVENUE	94606	ENVIROSTOR, VCP

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Number of Days to Update:** Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

## STANDARD ENVIRONMENTAL RECORDS

### *Lists of Federal NPL (Superfund) sites*

#### NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 02/29/2024	Source: EPA
Date Data Arrived at EDR: 03/01/2024	Telephone: N/A
Date Made Active in Reports: 03/27/2024	Last EDR Contact: 05/01/2024
Number of Days to Update: 26	Next Scheduled EDR Contact: 07/08/2024
	Data Release Frequency: Quarterly

#### NPL Site Boundaries

##### Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)  
Telephone: 202-564-7333

EPA Region 1  
Telephone 617-918-1143

EPA Region 6  
Telephone: 214-655-6659

EPA Region 3  
Telephone 215-814-5418

EPA Region 7  
Telephone: 913-551-7247

EPA Region 4  
Telephone 404-562-8033

EPA Region 8  
Telephone: 303-312-6774

EPA Region 5  
Telephone 312-886-6686

EPA Region 9  
Telephone: 415-947-4246

EPA Region 10  
Telephone 206-553-8665

#### Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 02/29/2024	Source: EPA
Date Data Arrived at EDR: 03/01/2024	Telephone: N/A
Date Made Active in Reports: 03/27/2024	Last EDR Contact: 05/01/2024
Number of Days to Update: 26	Next Scheduled EDR Contact: 07/08/2024
	Data Release Frequency: Quarterly

#### NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/15/1991  
Date Data Arrived at EDR: 02/02/1994  
Date Made Active in Reports: 03/30/1994  
Number of Days to Update: 56

Source: EPA  
Telephone: 202-564-4267  
Last EDR Contact: 08/15/2011  
Next Scheduled EDR Contact: 11/28/2011  
Data Release Frequency: No Update Planned

## ***Lists of Federal Delisted NPL sites***

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 02/29/2024  
Date Data Arrived at EDR: 03/01/2024  
Date Made Active in Reports: 03/27/2024  
Number of Days to Update: 26

Source: EPA  
Telephone: N/A  
Last EDR Contact: 05/01/2024  
Next Scheduled EDR Contact: 07/08/2024  
Data Release Frequency: Quarterly

## ***Lists of Federal sites subject to CERCLA removals and CERCLA orders***

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 12/20/2023  
Date Data Arrived at EDR: 12/20/2023  
Date Made Active in Reports: 01/24/2024  
Number of Days to Update: 35

Source: Environmental Protection Agency  
Telephone: 703-603-8704  
Last EDR Contact: 03/26/2024  
Next Scheduled EDR Contact: 07/08/2024  
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly known as CERCLIS, renamed to SEMs by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/29/2024  
Date Data Arrived at EDR: 02/01/2024  
Date Made Active in Reports: 02/22/2024  
Number of Days to Update: 21

Source: EPA  
Telephone: 800-424-9346  
Last EDR Contact: 05/01/2024  
Next Scheduled EDR Contact: 07/22/2024  
Data Release Frequency: Quarterly

## ***Lists of Federal CERCLA sites with NFRAP***

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 01/29/2024	Source: EPA
Date Data Arrived at EDR: 02/01/2024	Telephone: 800-424-9346
Date Made Active in Reports: 02/22/2024	Last EDR Contact: 05/01/2024
Number of Days to Update: 21	Next Scheduled EDR Contact: 07/22/2024
	Data Release Frequency: Quarterly

## ***Lists of Federal RCRA facilities undergoing Corrective Action***

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/04/2023	Source: EPA
Date Data Arrived at EDR: 12/06/2023	Telephone: 800-424-9346
Date Made Active in Reports: 12/12/2023	Last EDR Contact: 03/19/2024
Number of Days to Update: 6	Next Scheduled EDR Contact: 07/01/2024
	Data Release Frequency: Quarterly

## ***Lists of Federal RCRA TSD facilities***

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/04/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/06/2023	Telephone: (415) 495-8895
Date Made Active in Reports: 12/12/2023	Last EDR Contact: 03/19/2024
Number of Days to Update: 6	Next Scheduled EDR Contact: 07/01/2024
	Data Release Frequency: Quarterly

## ***Lists of Federal RCRA generators***

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/04/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/06/2023	Telephone: (415) 495-8895
Date Made Active in Reports: 12/12/2023	Last EDR Contact: 03/19/2024
Number of Days to Update: 6	Next Scheduled EDR Contact: 07/01/2024
	Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/04/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/06/2023	Telephone: (415) 495-8895
Date Made Active in Reports: 12/12/2023	Last EDR Contact: 03/19/2024
Number of Days to Update: 6	Next Scheduled EDR Contact: 07/01/2024
	Data Release Frequency: Quarterly

## RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/04/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/06/2023	Telephone: (415) 495-8895
Date Made Active in Reports: 12/12/2023	Last EDR Contact: 03/19/2024
Number of Days to Update: 6	Next Scheduled EDR Contact: 07/01/2024
	Data Release Frequency: Quarterly

## ***Federal institutional controls / engineering controls registries***

### LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 02/14/2024	Source: Department of the Navy
Date Data Arrived at EDR: 02/16/2024	Telephone: 843-820-7326
Date Made Active in Reports: 04/04/2024	Last EDR Contact: 05/17/2024
Number of Days to Update: 48	Next Scheduled EDR Contact: 08/19/2024
	Data Release Frequency: Varies

### US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2024	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/21/2024	Telephone: 703-603-0695
Date Made Active in Reports: 04/04/2024	Last EDR Contact: 05/21/2024
Number of Days to Update: 43	Next Scheduled EDR Contact: 09/02/2024
	Data Release Frequency: Varies

### US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2024	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/21/2024	Telephone: 703-603-0695
Date Made Active in Reports: 04/04/2024	Last EDR Contact: 05/21/2024
Number of Days to Update: 43	Next Scheduled EDR Contact: 09/02/2024
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## ***Federal ERNS list***

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/12/2023

Date Data Arrived at EDR: 12/13/2023

Date Made Active in Reports: 02/28/2024

Number of Days to Update: 77

Source: National Response Center, United States Coast Guard

Telephone: 202-267-2180

Last EDR Contact: 03/19/2024

Next Scheduled EDR Contact: 07/01/2024

Data Release Frequency: Quarterly

## ***Lists of state- and tribal (Superfund) equivalent sites***

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity.

These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 01/22/2024

Date Data Arrived at EDR: 01/23/2024

Date Made Active in Reports: 04/08/2024

Number of Days to Update: 76

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

Last EDR Contact: 04/23/2024

Next Scheduled EDR Contact: 08/05/2024

Data Release Frequency: Quarterly

## ***Lists of state- and tribal hazardous waste facilities***

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 01/22/2024

Date Data Arrived at EDR: 01/23/2024

Date Made Active in Reports: 04/08/2024

Number of Days to Update: 76

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

Last EDR Contact: 04/23/2024

Next Scheduled EDR Contact: 08/05/2024

Data Release Frequency: Quarterly

## ***Lists of state and tribal landfills and solid waste disposal facilities***

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/05/2024

Date Data Arrived at EDR: 02/06/2024

Date Made Active in Reports: 04/26/2024

Number of Days to Update: 80

Source: Department of Resources Recycling and Recovery

Telephone: 916-341-6320

Last EDR Contact: 05/07/2024

Next Scheduled EDR Contact: 08/19/2024

Data Release Frequency: Quarterly

## ***Lists of state and tribal leaking storage tanks***

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)

Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/04/2023	Source: State Water Resources Control Board
Date Data Arrived at EDR: 12/05/2023	Telephone: see region list
Date Made Active in Reports: 02/28/2024	Last EDR Contact: 03/05/2024
Number of Days to Update: 85	Next Scheduled EDR Contact: 06/17/2024
	Data Release Frequency: Quarterly

## LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003	Source: California Regional Water Quality Control Board Lahontan Region (6)
Date Data Arrived at EDR: 09/10/2003	Telephone: 530-542-5572
Date Made Active in Reports: 10/07/2003	Last EDR Contact: 09/12/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 12/26/2011
	Data Release Frequency: No Update Planned

## LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001	Source: California Regional Water Quality Control Board San Diego Region (9)
Date Data Arrived at EDR: 04/23/2001	Telephone: 858-637-5595
Date Made Active in Reports: 05/21/2001	Last EDR Contact: 09/26/2011
Number of Days to Update: 28	Next Scheduled EDR Contact: 01/09/2012
	Data Release Frequency: No Update Planned

## LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005	Source: California Regional Water Quality Control Board Santa Ana Region (8)
Date Data Arrived at EDR: 02/15/2005	Telephone: 909-782-4496
Date Made Active in Reports: 03/28/2005	Last EDR Contact: 08/15/2011
Number of Days to Update: 41	Next Scheduled EDR Contact: 11/28/2011
	Data Release Frequency: No Update Planned

## LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004	Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Date Data Arrived at EDR: 02/26/2004	Telephone: 760-776-8943
Date Made Active in Reports: 03/24/2004	Last EDR Contact: 08/01/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 11/14/2011
	Data Release Frequency: No Update Planned

## LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008	Source: California Regional Water Quality Control Board Central Valley Region (5)
Date Data Arrived at EDR: 07/22/2008	Telephone: 916-464-4834
Date Made Active in Reports: 07/31/2008	Last EDR Contact: 07/01/2011
Number of Days to Update: 9	Next Scheduled EDR Contact: 10/17/2011
	Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004	Source: California Regional Water Quality Control Board Los Angeles Region (4)
Date Data Arrived at EDR: 09/07/2004	Telephone: 213-576-6710
Date Made Active in Reports: 10/12/2004	Last EDR Contact: 09/06/2011
Number of Days to Update: 35	Next Scheduled EDR Contact: 12/19/2011
	Data Release Frequency: No Update Planned

## LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003	Source: California Regional Water Quality Control Board Central Coast Region (3)
Date Data Arrived at EDR: 05/19/2003	Telephone: 805-542-4786
Date Made Active in Reports: 06/02/2003	Last EDR Contact: 07/18/2011
Number of Days to Update: 14	Next Scheduled EDR Contact: 10/31/2011
	Data Release Frequency: No Update Planned

## LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004	Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Date Data Arrived at EDR: 10/20/2004	Telephone: 510-622-2433
Date Made Active in Reports: 11/19/2004	Last EDR Contact: 09/19/2011
Number of Days to Update: 30	Next Scheduled EDR Contact: 01/02/2012
	Data Release Frequency: No Update Planned

## LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001	Source: California Regional Water Quality Control Board North Coast (1)
Date Data Arrived at EDR: 02/28/2001	Telephone: 707-570-3769
Date Made Active in Reports: 03/29/2001	Last EDR Contact: 08/01/2011
Number of Days to Update: 29	Next Scheduled EDR Contact: 11/14/2011
	Data Release Frequency: No Update Planned

## LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005	Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Date Data Arrived at EDR: 06/07/2005	Telephone: 760-241-7365
Date Made Active in Reports: 06/29/2005	Last EDR Contact: 09/12/2011
Number of Days to Update: 22	Next Scheduled EDR Contact: 12/26/2011
	Data Release Frequency: No Update Planned

## INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/25/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 01/17/2024	Telephone: 415-972-3372
Date Made Active in Reports: 03/13/2024	Last EDR Contact: 04/17/2024
Number of Days to Update: 56	Next Scheduled EDR Contact: 07/29/2024
	Data Release Frequency: Varies

## INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/25/2023  
Date Data Arrived at EDR: 01/17/2024  
Date Made Active in Reports: 03/13/2024  
Number of Days to Update: 56

Source: EPA Region 1  
Telephone: 617-918-1313  
Last EDR Contact: 04/17/2024  
Next Scheduled EDR Contact: 07/29/2024  
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land  
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/25/2023  
Date Data Arrived at EDR: 01/17/2024  
Date Made Active in Reports: 03/13/2024  
Number of Days to Update: 56

Source: EPA Region 8  
Telephone: 303-312-6271  
Last EDR Contact: 04/17/2024  
Next Scheduled EDR Contact: 07/29/2024  
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land  
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/25/2023  
Date Data Arrived at EDR: 01/17/2024  
Date Made Active in Reports: 03/13/2024  
Number of Days to Update: 56

Source: EPA Region 7  
Telephone: 913-551-7003  
Last EDR Contact: 04/17/2024  
Next Scheduled EDR Contact: 07/29/2024  
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land  
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/25/2023  
Date Data Arrived at EDR: 01/17/2024  
Date Made Active in Reports: 03/13/2024  
Number of Days to Update: 56

Source: EPA Region 10  
Telephone: 206-553-2857  
Last EDR Contact: 04/17/2024  
Next Scheduled EDR Contact: 07/29/2024  
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land  
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/25/2023  
Date Data Arrived at EDR: 01/17/2024  
Date Made Active in Reports: 03/13/2024  
Number of Days to Update: 56

Source: EPA Region 6  
Telephone: 214-665-6597  
Last EDR Contact: 04/17/2024  
Next Scheduled EDR Contact: 07/29/2024  
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land  
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/25/2023  
Date Data Arrived at EDR: 01/17/2024  
Date Made Active in Reports: 03/13/2024  
Number of Days to Update: 56

Source: EPA Region 4  
Telephone: 404-562-8677  
Last EDR Contact: 04/17/2024  
Next Scheduled EDR Contact: 07/29/2024  
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land  
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/04/2023  
Date Data Arrived at EDR: 01/17/2024  
Date Made Active in Reports: 03/13/2024  
Number of Days to Update: 56

Source: EPA, Region 5  
Telephone: 312-886-7439  
Last EDR Contact: 04/17/2024  
Next Scheduled EDR Contact: 07/29/2024  
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)

Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/04/2023	Source: State Water Resources Control Board
Date Data Arrived at EDR: 12/05/2023	Telephone: 866-480-1028
Date Made Active in Reports: 02/27/2024	Last EDR Contact: 03/05/2024
Number of Days to Update: 84	Next Scheduled EDR Contact: 06/17/2024
	Data Release Frequency: Varies

## SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003	Source: California Regional Water Quality Control Board, North Coast Region (1)
Date Data Arrived at EDR: 04/07/2003	Telephone: 707-576-2220
Date Made Active in Reports: 04/25/2003	Last EDR Contact: 08/01/2011
Number of Days to Update: 18	Next Scheduled EDR Contact: 11/14/2011
	Data Release Frequency: No Update Planned

## SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004	Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Date Data Arrived at EDR: 10/20/2004	Telephone: 510-286-0457
Date Made Active in Reports: 11/19/2004	Last EDR Contact: 09/19/2011
Number of Days to Update: 30	Next Scheduled EDR Contact: 01/02/2012
	Data Release Frequency: No Update Planned

## SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006	Source: California Regional Water Quality Control Board Central Coast Region (3)
Date Data Arrived at EDR: 05/18/2006	Telephone: 805-549-3147
Date Made Active in Reports: 06/15/2006	Last EDR Contact: 07/18/2011
Number of Days to Update: 28	Next Scheduled EDR Contact: 10/31/2011
	Data Release Frequency: No Update Planned

## SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004	Source: Region Water Quality Control Board Los Angeles Region (4)
Date Data Arrived at EDR: 11/18/2004	Telephone: 213-576-6600
Date Made Active in Reports: 01/04/2005	Last EDR Contact: 07/01/2011
Number of Days to Update: 47	Next Scheduled EDR Contact: 10/17/2011
	Data Release Frequency: No Update Planned

## SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005	Source: Regional Water Quality Control Board Central Valley Region (5)
Date Data Arrived at EDR: 04/05/2005	Telephone: 916-464-3291
Date Made Active in Reports: 04/21/2005	Last EDR Contact: 09/12/2011
Number of Days to Update: 16	Next Scheduled EDR Contact: 12/26/2011
	Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005  
Date Data Arrived at EDR: 05/25/2005  
Date Made Active in Reports: 06/16/2005  
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch  
Telephone: 619-241-6583  
Last EDR Contact: 08/15/2011  
Next Scheduled EDR Contact: 11/28/2011  
Data Release Frequency: No Update Planned

## SLIC REG 6L: SLIC Sites

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004  
Date Data Arrived at EDR: 09/07/2004  
Date Made Active in Reports: 10/12/2004  
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region  
Telephone: 530-542-5574  
Last EDR Contact: 08/15/2011  
Next Scheduled EDR Contact: 11/28/2011  
Data Release Frequency: No Update Planned

## SLIC REG 7: SLIC List

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004  
Date Data Arrived at EDR: 11/29/2004  
Date Made Active in Reports: 01/04/2005  
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region  
Telephone: 760-346-7491  
Last EDR Contact: 08/01/2011  
Next Scheduled EDR Contact: 11/14/2011  
Data Release Frequency: No Update Planned

## SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008  
Date Data Arrived at EDR: 04/03/2008  
Date Made Active in Reports: 04/14/2008  
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)  
Telephone: 951-782-3298  
Last EDR Contact: 09/12/2011  
Next Scheduled EDR Contact: 12/26/2011  
Data Release Frequency: No Update Planned

## SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007  
Date Data Arrived at EDR: 09/11/2007  
Date Made Active in Reports: 09/28/2007  
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)  
Telephone: 858-467-2980  
Last EDR Contact: 08/08/2011  
Next Scheduled EDR Contact: 11/21/2011  
Data Release Frequency: No Update Planned

## ***Lists of state and tribal registered storage tanks***

### FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 11/16/2023  
Date Data Arrived at EDR: 11/16/2023  
Date Made Active in Reports: 02/13/2024  
Number of Days to Update: 89

Source: FEMA  
Telephone: 202-646-5797  
Last EDR Contact: 03/19/2024  
Next Scheduled EDR Contact: 07/15/2024  
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## MILITARY UST SITES: Military UST Sites (GEOTRACKER)

Military ust sites

Date of Government Version: 12/04/2023  
Date Data Arrived at EDR: 12/05/2023  
Date Made Active in Reports: 02/28/2024  
Number of Days to Update: 85

Source: State Water Resources Control Board  
Telephone: 866-480-1028  
Last EDR Contact: 03/05/2024  
Next Scheduled EDR Contact: 06/17/2024  
Data Release Frequency: Varies

## UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 12/04/2023  
Date Data Arrived at EDR: 12/05/2023  
Date Made Active in Reports: 02/28/2024  
Number of Days to Update: 85

Source: SWRCB  
Telephone: 916-341-5851  
Last EDR Contact: 03/05/2024  
Next Scheduled EDR Contact: 06/17/2024  
Data Release Frequency: Semi-Annually

## UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases

UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 11/28/2023  
Date Data Arrived at EDR: 11/30/2023  
Date Made Active in Reports: 02/27/2024  
Number of Days to Update: 89

Source: State Water Resources Control Board  
Telephone: 916-327-7844  
Last EDR Contact: 03/05/2024  
Next Scheduled EDR Contact: 06/17/2024  
Data Release Frequency: Varies

## AST: Aboveground Petroleum Storage Tank Facilities

A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016  
Date Data Arrived at EDR: 07/12/2016  
Date Made Active in Reports: 09/19/2016  
Number of Days to Update: 69

Source: California Environmental Protection Agency  
Telephone: 916-327-5092  
Last EDR Contact: 03/08/2024  
Next Scheduled EDR Contact: 06/24/2024  
Data Release Frequency: Varies

## INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/24/2023  
Date Data Arrived at EDR: 01/17/2024  
Date Made Active in Reports: 03/13/2024  
Number of Days to Update: 56

Source: EPA Region 9  
Telephone: 415-972-3368  
Last EDR Contact: 04/17/2024  
Next Scheduled EDR Contact: 07/29/2024  
Data Release Frequency: Varies

## INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/24/2023  
Date Data Arrived at EDR: 01/17/2024  
Date Made Active in Reports: 03/13/2024  
Number of Days to Update: 56

Source: EPA Region 8  
Telephone: 303-312-6137  
Last EDR Contact: 04/17/2024  
Next Scheduled EDR Contact: 07/29/2024  
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 10/24/2023	Source: EPA Region 7
Date Data Arrived at EDR: 01/17/2024	Telephone: 913-551-7003
Date Made Active in Reports: 03/13/2024	Last EDR Contact: 04/17/2024
Number of Days to Update: 56	Next Scheduled EDR Contact: 07/29/2024
	Data Release Frequency: Varies

## INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/24/2023	Source: EPA, Region 1
Date Data Arrived at EDR: 01/17/2024	Telephone: 617-918-1313
Date Made Active in Reports: 03/13/2024	Last EDR Contact: 04/17/2024
Number of Days to Update: 56	Next Scheduled EDR Contact: 07/29/2024
	Data Release Frequency: Varies

## INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/24/2023	Source: EPA Region 6
Date Data Arrived at EDR: 01/17/2024	Telephone: 214-665-7591
Date Made Active in Reports: 03/13/2024	Last EDR Contact: 04/17/2024
Number of Days to Update: 56	Next Scheduled EDR Contact: 07/29/2024
	Data Release Frequency: Varies

## INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/17/2023	Source: EPA Region 5
Date Data Arrived at EDR: 01/17/2024	Telephone: 312-886-6136
Date Made Active in Reports: 03/13/2024	Last EDR Contact: 04/17/2024
Number of Days to Update: 56	Next Scheduled EDR Contact: 07/29/2024
	Data Release Frequency: Varies

## INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/24/2023	Source: EPA Region 4
Date Data Arrived at EDR: 01/17/2024	Telephone: 404-562-9424
Date Made Active in Reports: 03/13/2024	Last EDR Contact: 04/17/2024
Number of Days to Update: 56	Next Scheduled EDR Contact: 07/29/2024
	Data Release Frequency: Varies

## INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/24/2023	Source: EPA Region 10
Date Data Arrived at EDR: 01/17/2024	Telephone: 206-553-2857
Date Made Active in Reports: 03/13/2024	Last EDR Contact: 04/17/2024
Number of Days to Update: 56	Next Scheduled EDR Contact: 07/29/2024
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## ***Lists of state and tribal voluntary cleanup sites***

### VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 01/22/2024	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 01/23/2024	Telephone: 916-323-3400
Date Made Active in Reports: 04/08/2024	Last EDR Contact: 04/23/2024
Number of Days to Update: 76	Next Scheduled EDR Contact: 08/05/2024
	Data Release Frequency: Quarterly

### INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008	Source: EPA, Region 7
Date Data Arrived at EDR: 04/22/2008	Telephone: 913-551-7365
Date Made Active in Reports: 05/19/2008	Last EDR Contact: 07/08/2021
Number of Days to Update: 27	Next Scheduled EDR Contact: 07/20/2009
	Data Release Frequency: Varies

### INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015	Source: EPA, Region 1
Date Data Arrived at EDR: 09/29/2015	Telephone: 617-918-1102
Date Made Active in Reports: 02/18/2016	Last EDR Contact: 03/18/2024
Number of Days to Update: 142	Next Scheduled EDR Contact: 07/01/2024
	Data Release Frequency: Varies

## ***Lists of state and tribal brownfield sites***

### BROWNFIELDS: Considered Brownfields Sites Listing

A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 12/13/2023	Source: State Water Resources Control Board
Date Data Arrived at EDR: 12/13/2023	Telephone: 916-323-7905
Date Made Active in Reports: 03/07/2024	Last EDR Contact: 03/19/2024
Number of Days to Update: 85	Next Scheduled EDR Contact: 07/01/2024
	Data Release Frequency: Quarterly

## **ADDITIONAL ENVIRONMENTAL RECORDS**

### ***Local Brownfield lists***

#### US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 03/11/2024	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/12/2024	Telephone: 202-566-2777
Date Made Active in Reports: 05/10/2024	Last EDR Contact: 03/12/2024
Number of Days to Update: 59	Next Scheduled EDR Contact: 06/24/2024
	Data Release Frequency: Semi-Annually

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## Local Lists of Landfill / Solid Waste Disposal Sites

### WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000	Source: State Water Resources Control Board
Date Data Arrived at EDR: 04/10/2000	Telephone: 916-227-4448
Date Made Active in Reports: 05/10/2000	Last EDR Contact: 04/19/2024
Number of Days to Update: 30	Next Scheduled EDR Contact: 08/05/2024
	Data Release Frequency: No Update Planned

### SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 11/29/2023	Source: Department of Conservation
Date Data Arrived at EDR: 11/29/2023	Telephone: 916-323-3836
Date Made Active in Reports: 02/23/2024	Last EDR Contact: 03/05/2024
Number of Days to Update: 86	Next Scheduled EDR Contact: 06/17/2024
	Data Release Frequency: Quarterly

### HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 04/04/2024	Source: Integrated Waste Management Board
Date Data Arrived at EDR: 04/05/2024	Telephone: 916-341-6422
Date Made Active in Reports: 04/15/2024	Last EDR Contact: 04/05/2024
Number of Days to Update: 10	Next Scheduled EDR Contact: 08/19/2024
	Data Release Frequency: Varies

### INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/03/2007	Telephone: 703-308-8245
Date Made Active in Reports: 01/24/2008	Last EDR Contact: 04/22/2024
Number of Days to Update: 52	Next Scheduled EDR Contact: 08/05/2024
	Data Release Frequency: Varies

### ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/09/2004	Telephone: 800-424-9346
Date Made Active in Reports: 09/17/2004	Last EDR Contact: 06/09/2004
Number of Days to Update: 39	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

### DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009	Source: EPA, Region 9
Date Data Arrived at EDR: 05/07/2009	Telephone: 415-947-4219
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 04/15/2024
Number of Days to Update: 137	Next Scheduled EDR Contact: 07/29/2024
	Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014	Source: Department of Health & Human Services, Indian Health Service
Date Data Arrived at EDR: 08/06/2014	Telephone: 301-443-1452
Date Made Active in Reports: 01/29/2015	Last EDR Contact: 04/19/2024
Number of Days to Update: 176	Next Scheduled EDR Contact: 08/04/2024
	Data Release Frequency: Varies

## Local Lists of Hazardous waste / Contaminated Sites

### US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 12/31/2023	Source: Drug Enforcement Administration
Date Data Arrived at EDR: 02/21/2024	Telephone: 202-307-1000
Date Made Active in Reports: 04/04/2024	Last EDR Contact: 05/21/2024
Number of Days to Update: 43	Next Scheduled EDR Contact: 09/02/2024
	Data Release Frequency: No Update Planned

### HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005	Source: Department of Toxic Substance Control
Date Data Arrived at EDR: 08/03/2006	Telephone: 916-323-3400
Date Made Active in Reports: 08/24/2006	Last EDR Contact: 02/23/2009
Number of Days to Update: 21	Next Scheduled EDR Contact: 05/25/2009
	Data Release Frequency: No Update Planned

### SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 01/22/2024	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 01/23/2024	Telephone: 916-323-3400
Date Made Active in Reports: 04/08/2024	Last EDR Contact: 04/23/2024
Number of Days to Update: 76	Next Scheduled EDR Contact: 08/05/2024
	Data Release Frequency: Quarterly

### CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2021	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 09/28/2023	Telephone: 916-255-6504
Date Made Active in Reports: 12/18/2023	Last EDR Contact: 05/09/2024
Number of Days to Update: 81	Next Scheduled EDR Contact: 08/12/2024
	Data Release Frequency: Varies

### TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995	Source: State Water Resources Control Board
Date Data Arrived at EDR: 08/30/1995	Telephone: 916-227-4364
Date Made Active in Reports: 09/26/1995	Last EDR Contact: 01/26/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 04/27/2009
	Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## CERS HAZ WASTE: California Environmental Reporting System Hazardous Waste

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 01/16/2024	Source: CalEPA
Date Data Arrived at EDR: 01/16/2024	Telephone: 916-323-2514
Date Made Active in Reports: 04/03/2024	Last EDR Contact: 04/16/2024
Number of Days to Update: 78	Next Scheduled EDR Contact: 07/29/2024
	Data Release Frequency: Quarterly

## US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 12/31/2023	Source: Drug Enforcement Administration
Date Data Arrived at EDR: 02/21/2024	Telephone: 202-307-1000
Date Made Active in Reports: 04/04/2024	Last EDR Contact: 05/21/2024
Number of Days to Update: 43	Next Scheduled EDR Contact: 09/02/2024
	Data Release Frequency: Quarterly

## Local Lists of Registered Storage Tanks

### SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994	Source: State Water Resources Control Board
Date Data Arrived at EDR: 07/07/2005	Telephone: N/A
Date Made Active in Reports: 08/11/2005	Last EDR Contact: 06/03/2005
Number of Days to Update: 35	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

### HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990	Source: State Water Resources Control Board
Date Data Arrived at EDR: 01/25/1991	Telephone: 916-341-5851
Date Made Active in Reports: 02/12/1991	Last EDR Contact: 07/26/2001
Number of Days to Update: 18	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

### SAN FRANCISCO AST: Aboveground Storage Tank Site Listing

Aboveground storage tank sites

Date of Government Version: 02/01/2024	Source: San Francisco County Department of Public Health
Date Data Arrived at EDR: 02/01/2024	Telephone: 415-252-3896
Date Made Active in Reports: 04/24/2024	Last EDR Contact: 04/25/2024
Number of Days to Update: 83	Next Scheduled EDR Contact: 08/12/2024
	Data Release Frequency: Varies

### CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/31/1994  
Date Data Arrived at EDR: 09/05/1995  
Date Made Active in Reports: 09/29/1995  
Number of Days to Update: 24

Source: California Environmental Protection Agency  
Telephone: 916-341-5851  
Last EDR Contact: 12/28/1998  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: No Update Planned

## CERS TANKS: California Environmental Reporting System (CERS) Tanks

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 01/16/2024  
Date Data Arrived at EDR: 01/16/2024  
Date Made Active in Reports: 04/03/2024  
Number of Days to Update: 78

Source: California Environmental Protection Agency  
Telephone: 916-323-2514  
Last EDR Contact: 04/16/2024  
Next Scheduled EDR Contact: 07/29/2024  
Data Release Frequency: Quarterly

## Local Land Records

### LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 02/26/2024  
Date Data Arrived at EDR: 02/27/2024  
Date Made Active in Reports: 05/15/2024  
Number of Days to Update: 78

Source: Department of Toxic Substances Control  
Telephone: 916-323-3400  
Last EDR Contact: 02/26/2024  
Next Scheduled EDR Contact: 06/10/2024  
Data Release Frequency: Varies

### LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/29/2024  
Date Data Arrived at EDR: 03/01/2024  
Date Made Active in Reports: 03/27/2024  
Number of Days to Update: 26

Source: Environmental Protection Agency  
Telephone: 202-564-6023  
Last EDR Contact: 05/01/2024  
Next Scheduled EDR Contact: 07/08/2024  
Data Release Frequency: Semi-Annually

### DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 02/26/2024  
Date Data Arrived at EDR: 02/27/2024  
Date Made Active in Reports: 05/14/2024  
Number of Days to Update: 77

Source: DTSC and SWRCB  
Telephone: 916-323-3400  
Last EDR Contact: 02/27/2024  
Next Scheduled EDR Contact: 06/10/2024  
Data Release Frequency: Semi-Annually

## Records of Emergency Release Reports

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/12/2023	Source: U.S. Department of Transportation
Date Data Arrived at EDR: 12/13/2023	Telephone: 202-366-4555
Date Made Active in Reports: 02/28/2024	Last EDR Contact: 03/20/2024
Number of Days to Update: 77	Next Scheduled EDR Contact: 07/01/2024
	Data Release Frequency: Quarterly

## CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/2023	Source: Office of Emergency Services
Date Data Arrived at EDR: 01/23/2024	Telephone: 916-845-8400
Date Made Active in Reports: 04/09/2024	Last EDR Contact: 04/16/2024
Number of Days to Update: 77	Next Scheduled EDR Contact: 07/29/2024
	Data Release Frequency: Semi-Annually

## LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/04/2023	Source: State Water Quality Control Board
Date Data Arrived at EDR: 12/05/2023	Telephone: 866-480-1028
Date Made Active in Reports: 02/27/2024	Last EDR Contact: 03/05/2024
Number of Days to Update: 84	Next Scheduled EDR Contact: 06/17/2024
	Data Release Frequency: Quarterly

## MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/04/2023	Source: State Water Resources Control Board
Date Data Arrived at EDR: 12/05/2023	Telephone: 866-480-1028
Date Made Active in Reports: 02/28/2024	Last EDR Contact: 03/05/2024
Number of Days to Update: 85	Next Scheduled EDR Contact: 06/17/2024
	Data Release Frequency: Quarterly

## SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012	Source: FirstSearch
Date Data Arrived at EDR: 01/03/2013	Telephone: N/A
Date Made Active in Reports: 02/22/2013	Last EDR Contact: 01/03/2013
Number of Days to Update: 50	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

## **Other Ascertainable Records**

### RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/04/2023  
Date Data Arrived at EDR: 12/06/2023  
Date Made Active in Reports: 12/12/2023  
Number of Days to Update: 6

Source: Environmental Protection Agency  
Telephone: (415) 495-8895  
Last EDR Contact: 03/19/2024  
Next Scheduled EDR Contact: 07/01/2024  
Data Release Frequency: Quarterly

## FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/30/2024  
Date Data Arrived at EDR: 02/13/2024  
Date Made Active in Reports: 04/04/2024  
Number of Days to Update: 51

Source: U.S. Army Corps of Engineers  
Telephone: 202-528-4285  
Last EDR Contact: 05/14/2024  
Next Scheduled EDR Contact: 08/26/2024  
Data Release Frequency: Varies

## DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021  
Date Data Arrived at EDR: 07/13/2021  
Date Made Active in Reports: 03/09/2022  
Number of Days to Update: 239

Source: USGS  
Telephone: 888-275-8747  
Last EDR Contact: 04/11/2024  
Next Scheduled EDR Contact: 07/22/2024  
Data Release Frequency: Varies

## FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018  
Date Data Arrived at EDR: 04/11/2018  
Date Made Active in Reports: 11/06/2019  
Number of Days to Update: 574

Source: U.S. Geological Survey  
Telephone: 888-275-8747  
Last EDR Contact: 04/04/2024  
Next Scheduled EDR Contact: 07/15/2024  
Data Release Frequency: N/A

## SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 07/30/2021  
Date Data Arrived at EDR: 02/03/2023  
Date Made Active in Reports: 02/10/2023  
Number of Days to Update: 7

Source: Environmental Protection Agency  
Telephone: 615-532-8599  
Last EDR Contact: 05/09/2024  
Next Scheduled EDR Contact: 08/19/2024  
Data Release Frequency: Varies

## US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 12/11/2023  
Date Data Arrived at EDR: 12/13/2023  
Date Made Active in Reports: 02/28/2024  
Number of Days to Update: 77

Source: Environmental Protection Agency  
Telephone: 202-566-1917  
Last EDR Contact: 03/13/2024  
Next Scheduled EDR Contact: 07/01/2024  
Data Release Frequency: Quarterly

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### EPA WATCH LIST: EPA Watch List

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/21/2014	Telephone: 617-520-3000
Date Made Active in Reports: 06/17/2014	Last EDR Contact: 04/29/2024
Number of Days to Update: 88	Next Scheduled EDR Contact: 08/12/2024
	Data Release Frequency: No Update Planned

### 2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 05/08/2018	Telephone: 703-308-4044
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 05/02/2024
Number of Days to Update: 73	Next Scheduled EDR Contact: 08/12/2024
	Data Release Frequency: Varies

### TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2020	Source: EPA
Date Data Arrived at EDR: 06/14/2022	Telephone: 202-260-5521
Date Made Active in Reports: 03/24/2023	Last EDR Contact: 03/14/2024
Number of Days to Update: 283	Next Scheduled EDR Contact: 06/24/2024
	Data Release Frequency: Every 4 Years

### TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2022	Source: EPA
Date Data Arrived at EDR: 11/13/2023	Telephone: 202-566-0250
Date Made Active in Reports: 02/07/2024	Last EDR Contact: 05/16/2024
Number of Days to Update: 86	Next Scheduled EDR Contact: 08/26/2024
	Data Release Frequency: Annually

### SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 01/16/2024	Source: EPA
Date Data Arrived at EDR: 01/17/2024	Telephone: 202-564-4203
Date Made Active in Reports: 03/27/2024	Last EDR Contact: 04/17/2024
Number of Days to Update: 70	Next Scheduled EDR Contact: 07/29/2024
	Data Release Frequency: Annually

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 02/29/2024	Source: EPA
Date Data Arrived at EDR: 03/01/2024	Telephone: 703-416-0223
Date Made Active in Reports: 03/27/2024	Last EDR Contact: 05/01/2024
Number of Days to Update: 26	Next Scheduled EDR Contact: 06/10/2024
	Data Release Frequency: Annually

## RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 02/01/2024	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/08/2024	Telephone: 202-564-8600
Date Made Active in Reports: 04/04/2024	Last EDR Contact: 04/15/2024
Number of Days to Update: 56	Next Scheduled EDR Contact: 07/29/2024
	Data Release Frequency: Varies

## RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995	Source: EPA
Date Data Arrived at EDR: 07/03/1995	Telephone: 202-564-4104
Date Made Active in Reports: 08/07/1995	Last EDR Contact: 06/02/2008
Number of Days to Update: 35	Next Scheduled EDR Contact: 09/01/2008
	Data Release Frequency: No Update Planned

## PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 09/19/2023	Source: EPA
Date Data Arrived at EDR: 10/03/2023	Telephone: 202-564-6023
Date Made Active in Reports: 10/19/2023	Last EDR Contact: 05/01/2024
Number of Days to Update: 16	Next Scheduled EDR Contact: 08/12/2024
	Data Release Frequency: Quarterly

## PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 03/20/2023	Source: EPA
Date Data Arrived at EDR: 04/04/2023	Telephone: 202-566-0500
Date Made Active in Reports: 06/09/2023	Last EDR Contact: 04/04/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 07/15/2024
	Data Release Frequency: Annually

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/23/2016	Telephone: 202-564-2501
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 03/28/2024
Number of Days to Update: 79	Next Scheduled EDR Contact: 07/15/2024
	Data Release Frequency: Quarterly

**FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)**  
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: No Update Planned

**FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)**  
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009	Source: EPA
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: No Update Planned

## MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/02/2024	Source: Nuclear Regulatory Commission
Date Data Arrived at EDR: 01/16/2024	Telephone: 301-415-0717
Date Made Active in Reports: 03/13/2024	Last EDR Contact: 04/15/2024
Number of Days to Update: 57	Next Scheduled EDR Contact: 07/29/2024
	Data Release Frequency: Quarterly

## COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2022	Source: Department of Energy
Date Data Arrived at EDR: 11/27/2023	Telephone: 202-586-8719
Date Made Active in Reports: 02/22/2024	Last EDR Contact: 02/23/2024
Number of Days to Update: 87	Next Scheduled EDR Contact: 06/10/2024
	Data Release Frequency: Varies

## COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/05/2019	Telephone: N/A
Date Made Active in Reports: 11/11/2019	Last EDR Contact: 02/23/2024
Number of Days to Update: 251	Next Scheduled EDR Contact: 06/10/2024
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/06/2019	Telephone: 202-566-0517
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 05/02/2024
Number of Days to Update: 96	Next Scheduled EDR Contact: 08/12/2024
	Data Release Frequency: Varies

## RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/01/2019	Telephone: 202-343-9775
Date Made Active in Reports: 09/23/2019	Last EDR Contact: 03/25/2024
Number of Days to Update: 84	Next Scheduled EDR Contact: 07/08/2024
	Data Release Frequency: Quarterly

## HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2007
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

## HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2008
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

## DOT OPS: Incident and Accident Data

Department of Transportation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020	Source: Department of Transportation, Office of Pipeline Safety
Date Data Arrived at EDR: 01/28/2020	Telephone: 202-366-4595
Date Made Active in Reports: 04/17/2020	Last EDR Contact: 04/23/2024
Number of Days to Update: 80	Next Scheduled EDR Contact: 08/05/2024
	Data Release Frequency: Quarterly

## CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2023  
Date Data Arrived at EDR: 01/11/2024  
Date Made Active in Reports: 01/16/2024  
Number of Days to Update: 5

Source: Department of Justice, Consent Decree Library  
Telephone: Varies  
Last EDR Contact: 03/28/2024  
Next Scheduled EDR Contact: 07/15/2024  
Data Release Frequency: Varies

## BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2021  
Date Data Arrived at EDR: 03/09/2023  
Date Made Active in Reports: 03/20/2023  
Number of Days to Update: 11

Source: EPA/NTIS  
Telephone: 800-424-9346  
Last EDR Contact: 03/19/2024  
Next Scheduled EDR Contact: 07/01/2024  
Data Release Frequency: Biennially

## INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014  
Date Data Arrived at EDR: 07/14/2015  
Date Made Active in Reports: 01/10/2017  
Number of Days to Update: 546

Source: USGS  
Telephone: 202-208-3710  
Last EDR Contact: 04/04/2024  
Next Scheduled EDR Contact: 07/15/2024  
Data Release Frequency: Semi-Annually

## FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 03/03/2023  
Date Data Arrived at EDR: 03/03/2023  
Date Made Active in Reports: 06/09/2023  
Number of Days to Update: 98

Source: Department of Energy  
Telephone: 202-586-3559  
Last EDR Contact: 04/26/2024  
Next Scheduled EDR Contact: 08/12/2024  
Data Release Frequency: Varies

## UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019  
Date Data Arrived at EDR: 11/15/2019  
Date Made Active in Reports: 01/28/2020  
Number of Days to Update: 74

Source: Department of Energy  
Telephone: 505-845-0011  
Last EDR Contact: 05/16/2024  
Next Scheduled EDR Contact: 08/26/2024  
Data Release Frequency: Varies

## LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 02/29/2024  
Date Data Arrived at EDR: 03/01/2024  
Date Made Active in Reports: 03/27/2024  
Number of Days to Update: 26

Source: Environmental Protection Agency  
Telephone: 703-603-8787  
Last EDR Contact: 05/01/2024  
Next Scheduled EDR Contact: 07/08/2024  
Data Release Frequency: Varies

## LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931 and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/05/2001  
Date Data Arrived at EDR: 10/27/2010  
Date Made Active in Reports: 12/02/2010  
Number of Days to Update: 36

Source: American Journal of Public Health  
Telephone: 703-305-6451  
Last EDR Contact: 12/02/2009  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: No Update Planned

## US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016  
Date Data Arrived at EDR: 10/26/2016  
Date Made Active in Reports: 02/03/2017  
Number of Days to Update: 100

Source: EPA  
Telephone: 202-564-2496  
Last EDR Contact: 09/26/2017  
Next Scheduled EDR Contact: 01/08/2018  
Data Release Frequency: Annually

## US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016  
Date Data Arrived at EDR: 10/26/2016  
Date Made Active in Reports: 02/03/2017  
Number of Days to Update: 100

Source: EPA  
Telephone: 202-564-2496  
Last EDR Contact: 09/26/2017  
Next Scheduled EDR Contact: 01/08/2018  
Data Release Frequency: Annually

## MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 01/02/2024  
Date Data Arrived at EDR: 01/03/2024  
Date Made Active in Reports: 01/04/2024  
Number of Days to Update: 1

Source: DOL, Mine Safety & Health Admi  
Telephone: 202-693-9424  
Last EDR Contact: 04/04/2024  
Next Scheduled EDR Contact: 08/19/2024  
Data Release Frequency: Quarterly

## US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/05/2024  
Date Data Arrived at EDR: 02/21/2024  
Date Made Active in Reports: 04/04/2024  
Number of Days to Update: 43

Source: Department of Labor, Mine Safety and Health Administration  
Telephone: 303-231-5959  
Last EDR Contact: 05/21/2024  
Next Scheduled EDR Contact: 09/02/2024  
Data Release Frequency: Semi-Annually

## US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 01/07/2022  
Date Data Arrived at EDR: 02/24/2023  
Date Made Active in Reports: 05/17/2023  
Number of Days to Update: 82

Source: USGS  
Telephone: 703-648-7709  
Last EDR Contact: 02/22/2024  
Next Scheduled EDR Contact: 06/03/2024  
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011	Source: USGS
Date Data Arrived at EDR: 06/08/2011	Telephone: 703-648-7709
Date Made Active in Reports: 09/13/2011	Last EDR Contact: 02/22/2024
Number of Days to Update: 97	Next Scheduled EDR Contact: 06/03/2024
	Data Release Frequency: Varies

## MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

Date of Government Version: 08/23/2022	Source: USGS
Date Data Arrived at EDR: 11/22/2022	Telephone: 703-648-6533
Date Made Active in Reports: 02/28/2023	Last EDR Contact: 02/22/2024
Number of Days to Update: 98	Next Scheduled EDR Contact: 06/03/2024
	Data Release Frequency: Varies

## ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 11/28/2023	Source: Department of Interior
Date Data Arrived at EDR: 11/29/2023	Telephone: 202-208-2609
Date Made Active in Reports: 12/11/2023	Last EDR Contact: 03/15/2024
Number of Days to Update: 12	Next Scheduled EDR Contact: 06/17/2024
	Data Release Frequency: Quarterly

## FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/03/2023	Source: EPA
Date Data Arrived at EDR: 11/08/2023	Telephone: (415) 947-8000
Date Made Active in Reports: 11/20/2023	Last EDR Contact: 02/27/2024
Number of Days to Update: 12	Next Scheduled EDR Contact: 06/10/2024
	Data Release Frequency: Quarterly

## UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/06/2023	Source: Department of Defense
Date Data Arrived at EDR: 09/13/2023	Telephone: 703-704-1564
Date Made Active in Reports: 12/11/2023	Last EDR Contact: 04/08/2024
Number of Days to Update: 89	Next Scheduled EDR Contact: 07/22/2024
	Data Release Frequency: Varies

## ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/17/2023  
Date Data Arrived at EDR: 12/28/2023  
Date Made Active in Reports: 03/04/2024  
Number of Days to Update: 67

Source: Environmental Protection Agency  
Telephone: 202-564-2280  
Last EDR Contact: 04/04/2024  
Next Scheduled EDR Contact: 07/15/2024  
Data Release Frequency: Quarterly

## DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021  
Date Data Arrived at EDR: 05/21/2021  
Date Made Active in Reports: 08/11/2021  
Number of Days to Update: 82

Source: Environmental Protection Agency  
Telephone: 202-564-0527  
Last EDR Contact: 05/17/2024  
Next Scheduled EDR Contact: 09/02/2024  
Data Release Frequency: Varies

## FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/12/2024  
Date Data Arrived at EDR: 02/13/2024  
Date Made Active in Reports: 04/04/2024  
Number of Days to Update: 51

Source: EPA  
Telephone: 800-385-6164  
Last EDR Contact: 05/14/2024  
Next Scheduled EDR Contact: 08/26/2024  
Data Release Frequency: Quarterly

## PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

Date of Government Version: 12/28/2023  
Date Data Arrived at EDR: 12/28/2023  
Date Made Active in Reports: 03/04/2024  
Number of Days to Update: 67

Source: Environmental Protection Agency  
Telephone: 703-603-8895  
Last EDR Contact: 04/05/2024  
Next Scheduled EDR Contact: 07/15/2024  
Data Release Frequency: Varies

## PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 12/28/2023  
Date Data Arrived at EDR: 12/28/2023  
Date Made Active in Reports: 03/04/2024  
Number of Days to Update: 67

Source: Environmental Protection Agency  
Telephone: 202-272-0167  
Last EDR Contact: 04/05/2024  
Next Scheduled EDR Contact: 07/15/2024  
Data Release Frequency: Varies

## PFAS TRIS: List of PFAS Added to the TRI

Section 7321 of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) immediately added certain per- and polyfluoroalkyl substances (PFAS) to the list of chemicals covered by the Toxics Release Inventory (TRI) under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and provided a framework for additional PFAS to be added to TRI on an annual basis.

Date of Government Version: 12/28/2023  
Date Data Arrived at EDR: 12/28/2023  
Date Made Active in Reports: 01/04/2024  
Number of Days to Update: 7

Source: Environmental Protection Agency  
Telephone: 202-566-0250  
Last EDR Contact: 04/05/2024  
Next Scheduled EDR Contact: 07/15/2024  
Data Release Frequency: Varies

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 12/28/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/28/2023	Telephone: 202-272-0167
Date Made Active in Reports: 01/04/2024	Last EDR Contact: 04/05/2024
Number of Days to Update: 7	Next Scheduled EDR Contact: 07/15/2024
	Data Release Frequency: Varies

### PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST\_HANDLING\_INSTR), Non-hazardous waste description (NON\_HAZ\_WASTE\_DESCRIPTION), DOT printed information (DOT\_PRINTED\_INFORMATION), Waste line handling instructions (WASTE\_LINE\_HANDLING\_INSTR), Waste residue comments (WASTE\_RESIDUE\_COMMENTS).

Date of Government Version: 12/28/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/28/2023	Telephone: 202-272-0167
Date Made Active in Reports: 01/04/2024	Last EDR Contact: 04/05/2024
Number of Days to Update: 7	Next Scheduled EDR Contact: 07/15/2024
	Data Release Frequency: Varies

### PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 06/24/2020	Source: Department of Health & Human Services
Date Data Arrived at EDR: 03/17/2021	Telephone: 202-741-5770
Date Made Active in Reports: 11/08/2022	Last EDR Contact: 04/22/2024
Number of Days to Update: 601	Next Scheduled EDR Contact: 08/05/2024
	Data Release Frequency: Varies

### PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

Date of Government Version: 12/28/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/28/2023	Telephone: 202-272-0167
Date Made Active in Reports: 03/04/2024	Last EDR Contact: 04/05/2024
Number of Days to Update: 67	Next Scheduled EDR Contact: 07/15/2024
	Data Release Frequency: Varies

### PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits. Caveats and Limitations: Less than half of states have required PFAS monitoring for at least one of their permittees and fewer states have established PFAS effluent limits for permittees. New rulemakings have been initiated that may increase the number of facilities monitoring for PFAS in the future.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/28/2023  
Date Data Arrived at EDR: 12/28/2023  
Date Made Active in Reports: 03/04/2024  
Number of Days to Update: 67

Source: Environmental Protection Agency  
Telephone: 202-272-0167  
Last EDR Contact: 04/05/2024  
Next Scheduled EDR Contact: 07/15/2024  
Data Release Frequency: Varies

## PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 12/28/2023  
Date Data Arrived at EDR: 12/28/2023  
Date Made Active in Reports: 03/04/2024  
Number of Days to Update: 67

Source: Environmental Protection Agency  
Telephone: 202-272-0167  
Last EDR Contact: 04/05/2024  
Next Scheduled EDR Contact: 07/15/2024  
Data Release Frequency: Varies

## PFAS ECHO FIRE TRAINING: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facility's name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

Date of Government Version: 12/28/2023  
Date Data Arrived at EDR: 12/28/2023  
Date Made Active in Reports: 03/04/2024  
Number of Days to Update: 67

Source: Environmental Protection Agency  
Telephone: 202-272-0167  
Last EDR Contact: 04/05/2024  
Next Scheduled EDR Contact: 07/15/2024  
Data Release Frequency: Varies

## PFAS PART 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration's document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 12/28/2023  
Date Data Arrived at EDR: 12/28/2023  
Date Made Active in Reports: 03/04/2024  
Number of Days to Update: 67

Source: Environmental Protection Agency  
Telephone: 202-272-0167  
Last EDR Contact: 04/05/2024  
Next Scheduled EDR Contact: 07/15/2024  
Data Release Frequency: Varies

## AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 12/28/2023  
Date Data Arrived at EDR: 12/28/2023  
Date Made Active in Reports: 03/04/2024  
Number of Days to Update: 67

Source: Environmental Protection Agency  
Telephone: 202-267-2675  
Last EDR Contact: 04/05/2024  
Next Scheduled EDR Contact: 07/15/2024  
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014  
Date Data Arrived at EDR: 02/05/2015  
Date Made Active in Reports: 03/06/2015  
Number of Days to Update: 29

Source: EPA  
Telephone: 202-564-2497  
Last EDR Contact: 03/29/2024  
Next Scheduled EDR Contact: 07/15/2024  
Data Release Frequency: Varies

## PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 12/16/2016  
Date Data Arrived at EDR: 01/06/2017  
Date Made Active in Reports: 03/10/2017  
Number of Days to Update: 63

Source: EPA, Office of Water  
Telephone: 202-564-2496  
Last EDR Contact: 03/29/2024  
Next Scheduled EDR Contact: 07/15/2024  
Data Release Frequency: No Update Planned

## BIOSOLIDS: ICIS-NPDES Biosolids Facility Data

The data reflects compliance information about facilities in the biosolids program.

Date of Government Version: 12/31/2023  
Date Data Arrived at EDR: 01/03/2024  
Date Made Active in Reports: 01/16/2024  
Number of Days to Update: 13

Source: Environmental Protection Agency  
Telephone: 202-564-4700  
Last EDR Contact: 04/16/2024  
Next Scheduled EDR Contact: 07/29/2024  
Data Release Frequency: Varies

## PFAS: PFAS Contamination Site Location Listing

A listing of PFAS sites included in the Envirostor and GeoTracker databases. Locations of potential sources of per - and polyfluoroalkyl substances (PFAS). This does not mean that PFAS has been produced, used, or discharged at these sites.

Date of Government Version: 11/30/2023  
Date Data Arrived at EDR: 11/30/2023  
Date Made Active in Reports: 02/26/2024  
Number of Days to Update: 88

Source: State Water Resources Control Board  
Telephone: 866-480-1028  
Last EDR Contact: 03/06/2024  
Next Scheduled EDR Contact: 06/17/2024  
Data Release Frequency: Varies

## AQUEOUS FOAM: Former Fire Training Facility Assessments Listing

Airports shown on this list are those believed to use Aqueous Film Forming Foam (AFFF), and certified by the Federal Aviation Administration (FAA) under Title 14, Code of Federal Regulations (CFR), Part 139 (14 CFR Part 139). This list was created by SWRCB using information available from the FAA. Location points shown are from the latitude and longitude listed on the FAA airport master record.

Date of Government Version: 11/30/2023  
Date Data Arrived at EDR: 11/30/2023  
Date Made Active in Reports: 02/23/2024  
Number of Days to Update: 85

Source: State Water Resources Control Board  
Telephone: 916-341-5455  
Last EDR Contact: 03/05/2024  
Next Scheduled EDR Contact: 06/17/2024  
Data Release Frequency: Varies

## CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989  
Date Data Arrived at EDR: 07/27/1994  
Date Made Active in Reports: 08/02/1994  
Number of Days to Update: 6

Source: Department of Health Services  
Telephone: 916-255-2118  
Last EDR Contact: 05/31/1994  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## CHROME PLATING: Chrome Plating Facilities Listing

This listing represents chrome plating facilities the California State Water Resources Control Board staff identified as possibly being a source of Per- and polyfluoroalkyl substance (PFAS) contamination. Sites and locations were identified by staff with the Division of Water Quality in the California State Water Board. Data was collected from the CA Air Resources Board 2013 and 2018 - Cr VI emission survey, CA Emission Inventory, CA HAZ Waste discharge database and by reviewing storm water permits. Former chrome plating sites are also included that are open site investigation or remediation cases with the Regional Water Quality Control Boards and the Department of Toxic Substances Control.

Date of Government Version: 11/30/2023	Source: State Water Resources Control Board
Date Data Arrived at EDR: 11/30/2023	Telephone: 916-341-5455
Date Made Active in Reports: 02/23/2024	Last EDR Contact: 03/05/2024
Number of Days to Update: 85	Next Scheduled EDR Contact: 06/17/2024
	Data Release Frequency: Varies

## CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 12/13/2023	Source: CAL EPA/Office of Emergency Information
Date Data Arrived at EDR: 12/13/2023	Telephone: 916-323-3400
Date Made Active in Reports: 03/07/2024	Last EDR Contact: 03/19/2024
Number of Days to Update: 85	Next Scheduled EDR Contact: 07/01/2024
	Data Release Frequency: Quarterly

## CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 02/14/2024	Source: Livermore-Pleasanton Fire Department
Date Data Arrived at EDR: 02/21/2024	Telephone: 925-454-2361
Date Made Active in Reports: 05/08/2024	Last EDR Contact: 05/09/2024
Number of Days to Update: 77	Next Scheduled EDR Contact: 08/19/2024
	Data Release Frequency: Varies

## DRYCLEAN VENTURA CO DIST: Drycleaner Facility Listing

A listing of drycleaner facility locations, for the Ventura County Air Pollution Control District.

Date of Government Version: 01/04/2024	Source: Ventura County Air Pollution Control District
Date Data Arrived at EDR: 01/16/2024	Telephone: 805-645-1421
Date Made Active in Reports: 02/08/2024	Last EDR Contact: 01/03/2024
Number of Days to Update: 23	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

## DRYCLEAN AMADOR: Amador Air District Drycleaner Facility Listing

A listing of drycleaner facility locations, for the Amador Air Quality Management District

Date of Government Version: 04/26/2023	Source: Amador Air Quality Management District
Date Data Arrived at EDR: 04/27/2023	Telephone: 209-257-0112
Date Made Active in Reports: 07/13/2023	Last EDR Contact: 01/03/2024
Number of Days to Update: 77	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

## DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 02/20/2024	Source: South Coast Air Quality Management District
Date Data Arrived at EDR: 02/22/2024	Telephone: 909-396-3211
Date Made Active in Reports: 05/08/2024	Last EDR Contact: 05/17/2024
Number of Days to Update: 76	Next Scheduled EDR Contact: 09/02/2024
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

**DRYCLEAN MOJAVE DESERT DIST:** Mojave Desert Air Quality Management District Drycleaner Facility Listing  
A listing of drycleaner facility locations, for the Mojave Desert Air Quality Management District.

Date of Government Version: 04/15/2024	Source: Mojave Desert Air Quality Management District
Date Data Arrived at EDR: 04/17/2024	Telephone: 760-245-1661
Date Made Active in Reports: 04/24/2024	Last EDR Contact: 04/16/2024
Number of Days to Update: 7	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

**DRYCLEAN BUTTE CO DIST:** Butte County Air Quality Management District Drycleaner Facility Listing  
Butte County Air Quality Management District Drycleaner Facility Listing.

Date of Government Version: 04/25/2023	Source: Butte County Air Quality Management District
Date Data Arrived at EDR: 10/18/2023	Telephone: 530-332-9400
Date Made Active in Reports: 01/16/2024	Last EDR Contact: 01/03/2024
Number of Days to Update: 90	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

**DRYCLEAN FEATHER RIVER DIST:** Feather River Air Quality Management District Drycleaner Facility Listing  
A listing of drycleaner facility locations, for the Feather River Air Quality Management District.

Date of Government Version: 03/08/2023	Source: Feather River Air Quality Management District
Date Data Arrived at EDR: 03/09/2023	Telephone: 530-634-7659
Date Made Active in Reports: 06/05/2023	Last EDR Contact: 01/03/2024
Number of Days to Update: 88	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

**DRYCLEAN SAN DIEGO CO DIST:** San Diego County Air Pollution Control District Drycleaner Facility Listing  
A listing of drycleaner facility locations, for the San Diego County Air Pollution Control District.

Date of Government Version: 03/19/2024	Source: San Diego County Air Pollution Control District
Date Data Arrived at EDR: 03/21/2024	Telephone: 858-586-2616
Date Made Active in Reports: 04/12/2024	Last EDR Contact: 03/19/2024
Number of Days to Update: 22	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

**DRYCLEANERS:** Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 04/02/2024	Source: Department of Toxic Substance Control
Date Data Arrived at EDR: 04/05/2024	Telephone: 916-327-4498
Date Made Active in Reports: 04/15/2024	Last EDR Contact: 03/08/2024
Number of Days to Update: 10	Next Scheduled EDR Contact: 06/10/2024
	Data Release Frequency: Annually

**DRYCLEAN GRANT:** Grant Recipients List

Assembly Bill 998 (AB 998) established the Non-Toxic Dry Cleaning Incentive Program to provide financial assistance to the dry cleaning industry to switch from systems using perchloroethylene (Perc), an identified toxic air contaminant and potential human carcinogen, to non-toxic and non-smog forming alternatives.

Date of Government Version: 12/31/2021	Source: California Air Resources Board
Date Data Arrived at EDR: 01/26/2024	Telephone: 916-323-0006
Date Made Active in Reports: 04/16/2024	Last EDR Contact: 04/25/2024
Number of Days to Update: 81	Next Scheduled EDR Contact: 08/05/2024
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

**DRYCLEAN LAKE CO DIST:** Lake County Air Quality Management District Drycleaner Facility Listing  
A listing of drycleaner facility locations, for the Lake County Air Quality Management District,

Date of Government Version: 02/15/2024	Source: Lake County Air Quality Management District
Date Data Arrived at EDR: 02/16/2024	Telephone: 707-263-7000
Date Made Active in Reports: 05/02/2024	Last EDR Contact: 01/03/2024
Number of Days to Update: 76	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

**DRYCLEAN AVAQMD:** Antelope Valley Air Quality Management District Drycleaner Listing  
A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 02/26/2024	Source: Antelope Valley Air Quality Management District
Date Data Arrived at EDR: 02/27/2024	Telephone: 661-723-8070
Date Made Active in Reports: 05/15/2024	Last EDR Contact: 02/26/2024
Number of Days to Update: 78	Next Scheduled EDR Contact: 06/10/2024
	Data Release Frequency: Varies

**DRYCLEAN MENDO CO DIST:** Mendocino County Air Quality Management District Drycleaner Facility Listing  
A listing of drycleaner facility locations, for the Mendocino County Air Quality Management District.

Date of Government Version: 02/26/2024	Source: Mendocino County Air Quality Management District
Date Data Arrived at EDR: 02/28/2024	Telephone: 707-463-4354
Date Made Active in Reports: 05/15/2024	Last EDR Contact: 01/03/2024
Number of Days to Update: 77	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

**DRYCLEAN EAST KERN DIST:** Eastern Kern Air Pollution Control District District Drycleaner Facility Listing  
A listing of drycleaner facility locations, for the Eastern Kern Air Pollution Control District.

Date of Government Version: 01/12/2023	Source: Eastern Kern Air Pollution Control District
Date Data Arrived at EDR: 04/26/2023	Telephone: 661-862-9684
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/03/2024
Number of Days to Update: 79	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

**DRYCLEAN IMPERIAL CO DIST:** Imperial County Air Pollution Control District Drycleaner Facility Listing  
A listing of drycleaner facility locations, for the Imperial County Air Pollution Control District

Date of Government Version: 04/25/2023	Source: Imperial County Air Pollution Control District
Date Data Arrived at EDR: 04/26/2023	Telephone: 442-265-1800
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/03/2024
Number of Days to Update: 79	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

**DRYCLEAN YOLO-SOLANO DIST:** Yolo-Solano Air Quality Management District Drycleaner Facility Listing  
A listing of drycleaner facility locations, for the Yolo-Solano Air Quality Management District.

Date of Government Version: 01/04/2024	Source: Yolo-Solano Air Quality Management District
Date Data Arrived at EDR: 01/05/2024	Telephone: 530-757-3650
Date Made Active in Reports: 03/20/2024	Last EDR Contact: 01/03/2024
Number of Days to Update: 75	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

**DRYCLEAN SHASTA CO DIST:** Shasta County Air Quality Management District District Drycleaner Facility Listing  
A listing of drycleaner facility locations, for the Shasta County Air Quality Management District.

Date of Government Version: 04/26/2023	Source: Shasta County Air Quality Management District
Date Data Arrived at EDR: 04/27/2023	Telephone: 530-225-5674
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/03/2024
Number of Days to Update: 78	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

**DRYCLEAN MONTEREY BAY DIST:** Monterey Bay Air Quality Management District Drycleaner Facility Listing  
A listing of drycleaner facility locations, for the Monterey Bay Air Quality Management District.

Date of Government Version: 01/03/2024	Source: Monterey Bay Air Quality Management District
Date Data Arrived at EDR: 01/05/2024	Telephone: 831-647-9411
Date Made Active in Reports: 03/20/2024	Last EDR Contact: 01/03/2024
Number of Days to Update: 75	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

**DRYCLEAN SAN LUIS OB CO DIST:** San Luis Obispo County Air Pollution Control District Drycleaner Facility Listing  
A listing of drycleaner facility locations, for the San Luis Obispo County Air Pollution Control District.

Date of Government Version: 01/03/2024	Source: San Luis Obispo County Air Pollution Control District
Date Data Arrived at EDR: 01/04/2024	Telephone: 805-781-5756
Date Made Active in Reports: 03/20/2024	Last EDR Contact: 01/03/2024
Number of Days to Update: 76	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

**DRYCLEAN PLACER CO DIST:** Placer County Air Quality Management District Drycleaner Facility Listing  
A listing of drycleaner facility locations, for the Placer County Air Quality Management District.

Date of Government Version: 05/15/2023	Source: Placer County Air Quality Management District
Date Data Arrived at EDR: 05/17/2023	Telephone: 530-745-2335
Date Made Active in Reports: 08/14/2023	Last EDR Contact: 01/03/2024
Number of Days to Update: 89	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

**DRYCLEAN SAN JOAQ VAL DIST:** San Joaquin Valley Air Pollution Control District District Drycleaner Facility Listing  
A listing of drycleaner facility locations, for the San Joaquin Valley Air Pollution Control District.

Date of Government Version: 01/04/2024	Source: San Joaquin Valley Air Pollution Control District
Date Data Arrived at EDR: 01/04/2024	Telephone: 559-230-6001
Date Made Active in Reports: 03/21/2024	Last EDR Contact: 01/03/2024
Number of Days to Update: 77	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

**DRYCLEAN BAY AREA DIST:** Bay Area Air Quality Management District Drycleaner Facility Listing  
Bay Area Air Quality Management District Drycleaner Facility Listing.

Date of Government Version: 02/20/2019	Source: Bay Area Air Quality Management District
Date Data Arrived at EDR: 05/30/2019	Telephone: 415-516-1916
Date Made Active in Reports: 05/01/2023	Last EDR Contact: 01/03/2024
Number of Days to Update: 1432	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

**DRYCLEAN CALAVERAS CO DIST:** Calaveras County Environmental Management Agency Drycleaner Facility Listing  
A listing of drycleaner facility locations, for the Calaveras County Environmental Management Agency.

Date of Government Version: 06/17/2019	Source: Calaveras County Environmental Management Agency
Date Data Arrived at EDR: 06/19/2019	Telephone: 209-754-6399
Date Made Active in Reports: 05/01/2023	Last EDR Contact: 01/03/2024
Number of Days to Update: 1412	Next Scheduled EDR Contact: 09/16/2019
	Data Release Frequency: Varies

**DRYCLEAN NO COAST UNIFIED DIST:** North Coast Unified Air Quality Management District Drycleaner Facility Listing  
A listing of drycleaner facility locations, for the North Coast Unified Air Quality Management District.

Date of Government Version: 11/30/2016	Source: North Coast Unified Air Quality Management District
Date Data Arrived at EDR: 04/19/2019	Telephone: 707-443-3093
Date Made Active in Reports: 05/01/2023	Last EDR Contact: 01/03/2024
Number of Days to Update: 1473	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

**DRYCLEAN NO SIERRA DIST:** Northern Sierra Air Quality Management District Drycleaner Facility Listing  
A listing of drycleaner facility locations, for the Northern Sierra Air Quality Management District,

Date of Government Version: 05/07/2019	Source: Northern Sierra Air Quality Management District
Date Data Arrived at EDR: 05/07/2019	Telephone: 530-274-9350
Date Made Active in Reports: 05/01/2023	Last EDR Contact: 01/03/2024
Number of Days to Update: 1455	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

**DRYCLEAN SANTA BARB CO DIST:** Santa Barbara County Air Pollution Control District Drycleaner Facility Listing  
A listing of drycleaner facility locations, for the Santa Barbara County Air Pollution Control District.

Date of Government Version: 02/19/2019	Source: Santa Barbara County Air Pollution Control District
Date Data Arrived at EDR: 04/17/2019	Telephone: 805-961-8867
Date Made Active in Reports: 05/01/2023	Last EDR Contact: 01/03/2024
Number of Days to Update: 1475	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

**DRYCLEAN TEHAMA CO DIST:** Tehama County Air Pollution Control District Drycleaner Facility Listing  
A listing of drycleaner facility locations, for the Tehama County Air Pollution Control District.

Date of Government Version: 04/24/2019	Source: Tehama County Air Pollution Control District
Date Data Arrived at EDR: 04/24/2019	Telephone: 530-527-3717
Date Made Active in Reports: 05/01/2023	Last EDR Contact: 01/03/2024
Number of Days to Update: 1468	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

**DRYCLEAN GLENN CO DIST:** Glenn County Air Pollution Control District Drycleaner Facility Listing  
A listing of drycleaner facility locations, for the Glenn County Air Pollution Control District.

Date of Government Version: 01/08/2024	Source: Glenn County Air Pollution Control District
Date Data Arrived at EDR: 01/10/2024	Telephone: 530-934-6500
Date Made Active in Reports: 03/27/2024	Last EDR Contact: 01/03/2024
Number of Days to Update: 77	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

**DRYCLEAN NO SONOMA CO DIST:** Northern Sonoma County County Air Pollution Control District Drycleaner Facility Listing  
A listing of drycleaner facility locations, for the Northern Sonoma County Air Pollution Control District.,

Date of Government Version: 01/05/2024	Source: Santa Barbara County Air Pollution Control District
Date Data Arrived at EDR: 01/10/2024	Telephone: 707-433-5911
Date Made Active in Reports: 03/27/2024	Last EDR Contact: 01/03/2024
Number of Days to Update: 77	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

**DRYCLEAN SACRAMENTO METO DIST:** Sacramento Metropolitan Air Quality Management District Drycleaner Facility Listing  
A listing of drycleaner facility locations, for the Sacramento Metropolitan Air Quality Management District.

Date of Government Version: 01/03/2024	Source: Sacramento Metropolitan Air Quality Management District
Date Data Arrived at EDR: 01/10/2024	Telephone: 916-874-3958
Date Made Active in Reports: 03/27/2024	Last EDR Contact: 01/03/2024
Number of Days to Update: 77	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

**EMI:** Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2021	Source: California Air Resources Board
Date Data Arrived at EDR: 06/09/2023	Telephone: 916-322-2990
Date Made Active in Reports: 08/30/2023	Last EDR Contact: 03/14/2024
Number of Days to Update: 82	Next Scheduled EDR Contact: 06/24/2024
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 01/16/2024	Source: State Water Resources Control Board
Date Data Arrived at EDR: 01/16/2024	Telephone: 916-445-9379
Date Made Active in Reports: 04/03/2024	Last EDR Contact: 04/16/2024
Number of Days to Update: 78	Next Scheduled EDR Contact: 07/29/2024
	Data Release Frequency: Varies

## FIN ASSURANCE 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 01/11/2024	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 01/16/2024	Telephone: 916-255-3628
Date Made Active in Reports: 04/03/2024	Last EDR Contact: 04/12/2024
Number of Days to Update: 78	Next Scheduled EDR Contact: 07/29/2024
	Data Release Frequency: Varies

## FIN ASSURANCE 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/07/2024	Source: California Integrated Waste Management Board
Date Data Arrived at EDR: 02/28/2024	Telephone: 916-341-6066
Date Made Active in Reports: 05/15/2024	Last EDR Contact: 05/02/2024
Number of Days to Update: 77	Next Scheduled EDR Contact: 08/19/2024
	Data Release Frequency: Varies

## ICE: Inspection, Compliance and Enforcement

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 02/07/2024	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 02/07/2024	Telephone: 877-786-9427
Date Made Active in Reports: 02/07/2024	Last EDR Contact: 05/14/2024
Number of Days to Update: 0	Next Scheduled EDR Contact: 08/26/2024
	Data Release Frequency: Quarterly

## HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSTITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 01/22/2009	Telephone: 916-323-3400
Date Made Active in Reports: 04/08/2009	Last EDR Contact: 01/22/2009
Number of Days to Update: 76	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

## HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 02/07/2024	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 02/07/2024	Telephone: 916-323-3400
Date Made Active in Reports: 02/07/2024	Last EDR Contact: 05/14/2024
Number of Days to Update: 0	Next Scheduled EDR Contact: 08/26/2024
	Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 01/02/2024	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 01/03/2024	Telephone: 916-440-7145
Date Made Active in Reports: 03/21/2024	Last EDR Contact: 04/04/2024
Number of Days to Update: 78	Next Scheduled EDR Contact: 07/15/2024
	Data Release Frequency: Quarterly

## HWTS: Hazardous Waste Tracking System

DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

Date of Government Version: 01/26/2024	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 01/30/2024	Telephone: 916-324-2444
Date Made Active in Reports: 04/17/2024	Last EDR Contact: 05/09/2024
Number of Days to Update: 78	Next Scheduled EDR Contact: 07/15/2024
	Data Release Frequency: Varies

## HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2023	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 01/03/2024	Telephone: 916-255-1136
Date Made Active in Reports: 03/21/2024	Last EDR Contact: 04/04/2024
Number of Days to Update: 78	Next Scheduled EDR Contact: 07/15/2024
	Data Release Frequency: Annually

## MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 11/29/2023	Source: Department of Conservation
Date Data Arrived at EDR: 11/29/2023	Telephone: 916-322-1080
Date Made Active in Reports: 02/23/2024	Last EDR Contact: 03/05/2024
Number of Days to Update: 86	Next Scheduled EDR Contact: 06/17/2024
	Data Release Frequency: Quarterly

## MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 01/23/2024	Source: Department of Public Health
Date Data Arrived at EDR: 02/27/2024	Telephone: 916-558-1784
Date Made Active in Reports: 05/16/2024	Last EDR Contact: 02/27/2024
Number of Days to Update: 79	Next Scheduled EDR Contact: 06/10/2024
	Data Release Frequency: Varies

## NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 02/05/2024	Source: State Water Resources Control Board
Date Data Arrived at EDR: 02/06/2024	Telephone: 916-445-9379
Date Made Active in Reports: 04/25/2024	Last EDR Contact: 05/07/2024
Number of Days to Update: 79	Next Scheduled EDR Contact: 08/19/2024
	Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 02/26/2024	Source: Department of Pesticide Regulation
Date Data Arrived at EDR: 02/27/2024	Telephone: 916-445-4038
Date Made Active in Reports: 05/17/2024	Last EDR Contact: 02/27/2024
Number of Days to Update: 80	Next Scheduled EDR Contact: 06/10/2024
	Data Release Frequency: Quarterly

## PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 11/29/2023	Source: Department of Conservation
Date Data Arrived at EDR: 11/29/2023	Telephone: 916-323-3836
Date Made Active in Reports: 02/23/2024	Last EDR Contact: 03/05/2024
Number of Days to Update: 86	Next Scheduled EDR Contact: 06/17/2024
	Data Release Frequency: Quarterly

## NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 12/06/2023	Source: State Water Resources Control Board
Date Data Arrived at EDR: 12/06/2023	Telephone: 916-445-3846
Date Made Active in Reports: 02/29/2024	Last EDR Contact: 03/08/2024
Number of Days to Update: 85	Next Scheduled EDR Contact: 06/24/2024
	Data Release Frequency: No Update Planned

## SAN JOSE HAZMAT: Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/03/2020	Source: City of San Jose Fire Department
Date Data Arrived at EDR: 11/05/2020	Telephone: 408-535-7694
Date Made Active in Reports: 01/26/2021	Last EDR Contact: 04/25/2024
Number of Days to Update: 82	Next Scheduled EDR Contact: 08/12/2024
	Data Release Frequency: Annually

## SANTA CRUZ CO SITE MITI: Site Mitigation Listing

Sites may become contaminated with toxic chemicals through illegal dumping or disposal, from leaking underground storage tanks, or through industrial or commercial activities. The goal of the site mitigation program is to protect the public health and the environment while facilitating completion of contaminated site clean-up projects in a timely manner.

Date of Government Version: 12/03/2018	Source: Santa Cruz Environmental Health Services
Date Data Arrived at EDR: 06/23/2023	Telephone: 831-454-2761
Date Made Active in Reports: 07/13/2023	Last EDR Contact: 05/09/2024
Number of Days to Update: 20	Next Scheduled EDR Contact: 08/26/2024
	Data Release Frequency: Varies

## UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 11/29/2023	Source: Department of Conservation
Date Data Arrived at EDR: 11/29/2023	Telephone: 916-445-2408
Date Made Active in Reports: 02/27/2024	Last EDR Contact: 03/05/2024
Number of Days to Update: 90	Next Scheduled EDR Contact: 06/17/2024
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## UIC GEO: Underground Injection Control Sites (GEOTRACKER)

Underground control injection sites

Date of Government Version: 12/04/2023  
Date Data Arrived at EDR: 12/05/2023  
Date Made Active in Reports: 02/28/2024  
Number of Days to Update: 85

Source: State Water Resource Control Board  
Telephone: 866-480-1028  
Last EDR Contact: 03/05/2024  
Next Scheduled EDR Contact: 06/17/2024  
Data Release Frequency: Varies

## WASTEWATER PITS: Oil Wastewater Pits Listing

Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 02/11/2021  
Date Data Arrived at EDR: 07/01/2021  
Date Made Active in Reports: 09/29/2021  
Number of Days to Update: 90

Source: RWQCB, Central Valley Region  
Telephone: 559-445-5577  
Last EDR Contact: 04/04/2024  
Next Scheduled EDR Contact: 07/15/2024  
Data Release Frequency: Varies

## WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007  
Date Data Arrived at EDR: 06/20/2007  
Date Made Active in Reports: 06/29/2007  
Number of Days to Update: 9

Source: State Water Resources Control Board  
Telephone: 916-341-5227  
Last EDR Contact: 05/09/2024  
Next Scheduled EDR Contact: 08/26/2024  
Data Release Frequency: No Update Planned

## WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009  
Date Data Arrived at EDR: 07/21/2009  
Date Made Active in Reports: 08/03/2009  
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board  
Telephone: 213-576-6726  
Last EDR Contact: 03/15/2024  
Next Scheduled EDR Contact: 07/01/2024  
Data Release Frequency: No Update Planned

## MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)

Military privatized sites

Date of Government Version: 12/04/2023  
Date Data Arrived at EDR: 12/05/2023  
Date Made Active in Reports: 02/28/2024  
Number of Days to Update: 85

Source: State Water Resources Control Board  
Telephone: 866-480-1028  
Last EDR Contact: 03/05/2024  
Next Scheduled EDR Contact: 06/17/2024  
Data Release Frequency: Varies

## PROJECT: Project Sites (GEOTRACKER)

Projects sites

Date of Government Version: 12/04/2023  
Date Data Arrived at EDR: 12/05/2023  
Date Made Active in Reports: 02/28/2024  
Number of Days to Update: 85

Source: State Water Resources Control Board  
Telephone: 866-480-1028  
Last EDR Contact: 03/05/2024  
Next Scheduled EDR Contact: 06/17/2024  
Data Release Frequency: Varies

## WDR: Waste Discharge Requirements Listing

In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 11/29/2023  
Date Data Arrived at EDR: 11/29/2023  
Date Made Active in Reports: 02/22/2024  
Number of Days to Update: 85

Source: State Water Resources Control Board  
Telephone: 916-341-5810  
Last EDR Contact: 03/05/2024  
Next Scheduled EDR Contact: 06/17/2024  
Data Release Frequency: Quarterly

## CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 02/26/2024  
Date Data Arrived at EDR: 02/27/2024  
Date Made Active in Reports: 05/14/2024  
Number of Days to Update: 77

Source: State Water Resources Control Board  
Telephone: 866-794-4977  
Last EDR Contact: 02/27/2024  
Next Scheduled EDR Contact: 06/10/2024  
Data Release Frequency: Varies

## CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 01/16/2024  
Date Data Arrived at EDR: 01/16/2024  
Date Made Active in Reports: 04/03/2024  
Number of Days to Update: 78

Source: California Environmental Protection Agency  
Telephone: 916-323-2514  
Last EDR Contact: 04/16/2024  
Next Scheduled EDR Contact: 07/29/2024  
Data Release Frequency: Varies

## NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 12/04/2023  
Date Data Arrived at EDR: 12/05/2023  
Date Made Active in Reports: 02/28/2024  
Number of Days to Update: 85

Source: State Water Resources Control Board  
Telephone: 866-480-1028  
Last EDR Contact: 03/05/2024  
Next Scheduled EDR Contact: 06/17/2024  
Data Release Frequency: Varies

## OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 12/04/2023  
Date Data Arrived at EDR: 12/05/2023  
Date Made Active in Reports: 02/28/2024  
Number of Days to Update: 85

Source: State Water Resources Control Board  
Telephone: 866-480-1028  
Last EDR Contact: 03/05/2024  
Next Scheduled EDR Contact: 06/17/2024  
Data Release Frequency: Varies

## PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)

Produced water ponds sites

Date of Government Version: 12/04/2023  
Date Data Arrived at EDR: 12/05/2023  
Date Made Active in Reports: 02/28/2024  
Number of Days to Update: 85

Source: State Water Resources Control Board  
Telephone: 866-480-1028  
Last EDR Contact: 03/05/2024  
Next Scheduled EDR Contact: 06/17/2024  
Data Release Frequency: Varies

## SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)

Sampling point - public sites

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/04/2023  
Date Data Arrived at EDR: 12/05/2023  
Date Made Active in Reports: 02/28/2024  
Number of Days to Update: 85

Source: State Water Resources Control Board  
Telephone: 866-480-1028  
Last EDR Contact: 03/05/2024  
Next Scheduled EDR Contact: 06/17/2024  
Data Release Frequency: Varies

## WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)

Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 12/04/2023  
Date Data Arrived at EDR: 12/05/2023  
Date Made Active in Reports: 02/28/2024  
Number of Days to Update: 85

Source: State Water Resources Control Board  
Telephone: 866-480-1028  
Last EDR Contact: 03/05/2024  
Next Scheduled EDR Contact: 06/17/2024  
Data Release Frequency: Varies

## UST FINDER: UST Finder Database

EPA developed UST Finder, a web map application containing a comprehensive, state-sourced national map of underground storage tank (UST) and leaking UST (LUST) data. It provides the attributes and locations of active and closed USTs, UST facilities, and LUST sites from states and from Tribal lands and US territories. UST Finder contains information about proximity of UST facilities and LUST sites to: surface and groundwater public drinking water protection areas; estimated number of private domestic wells and number of people living nearby; and flooding and wildfires.

Date of Government Version: 06/08/2023  
Date Data Arrived at EDR: 10/04/2023  
Date Made Active in Reports: 01/18/2024  
Number of Days to Update: 106

Source: Environmental Protection Agency  
Telephone: 202-564-0394  
Last EDR Contact: 05/08/2024  
Next Scheduled EDR Contact: 08/19/2024  
Data Release Frequency: Varies

## UST FINDER RELEASE: UST Finder Releases Database

US EPA's UST Finder data is a national composite of leaking underground storage tanks. This data contains information about, and locations of, leaking underground storage tanks. Data was collected from state sources and standardized into a national profile by EPA's Office of Underground Storage Tanks, Office of Research and Development, and the Association of State and Territorial Solid Waste Management Officials.

Date of Government Version: 06/08/2023  
Date Data Arrived at EDR: 10/31/2023  
Date Made Active in Reports: 01/18/2024  
Number of Days to Update: 79

Source: Environmental Protection Agency  
Telephone: 202-564-0394  
Last EDR Contact: 05/08/2024  
Next Scheduled EDR Contact: 08/19/2024  
Data Release Frequency: Semi-Annually

## EDR HIGH RISK HISTORICAL RECORDS

### ***EDR Exclusive Records***

#### EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A  
Date Data Arrived at EDR: N/A  
Date Made Active in Reports: N/A  
Number of Days to Update: N/A

Source: EDR, Inc.  
Telephone: N/A  
Last EDR Contact: N/A  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A	Source: EDR, Inc.
Date Data Arrived at EDR: N/A	Telephone: N/A
Date Made Active in Reports: N/A	Last EDR Contact: N/A
Number of Days to Update: N/A	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

## EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A	Source: EDR, Inc.
Date Data Arrived at EDR: N/A	Telephone: N/A
Date Made Active in Reports: N/A	Last EDR Contact: N/A
Number of Days to Update: N/A	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

## EDR RECOVERED GOVERNMENT ARCHIVES

### *Exclusive Recovered Govt. Archives*

#### RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A	Source: Department of Resources Recycling and Recovery
Date Data Arrived at EDR: 07/01/2013	Telephone: N/A
Date Made Active in Reports: 01/13/2014	Last EDR Contact: 06/01/2012
Number of Days to Update: 196	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

#### RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A	Source: State Water Resources Control Board
Date Data Arrived at EDR: 07/01/2013	Telephone: N/A
Date Made Active in Reports: 12/30/2013	Last EDR Contact: 06/01/2012
Number of Days to Update: 182	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## COUNTY RECORDS

### ALAMEDA COUNTY:

#### CS ALAMEDA: Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019  
Date Data Arrived at EDR: 01/11/2019  
Date Made Active in Reports: 03/05/2019  
Number of Days to Update: 53

Source: Alameda County Environmental Health Services  
Telephone: 510-567-6700  
Last EDR Contact: 03/28/2024  
Next Scheduled EDR Contact: 07/15/2024  
Data Release Frequency: Semi-Annually

#### UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 12/26/2023  
Date Data Arrived at EDR: 12/26/2023  
Date Made Active in Reports: 03/19/2024  
Number of Days to Update: 84

Source: Alameda County Environmental Health Services  
Telephone: 510-567-6700  
Last EDR Contact: 03/28/2024  
Next Scheduled EDR Contact: 07/15/2024  
Data Release Frequency: Semi-Annually

### AMADOR COUNTY:

#### CUPA AMADOR: CUPA Facility List

Cupa Facility List

Date of Government Version: 04/27/2023  
Date Data Arrived at EDR: 04/27/2023  
Date Made Active in Reports: 07/13/2023  
Number of Days to Update: 77

Source: Amador County Environmental Health  
Telephone: 209-223-6439  
Last EDR Contact: 04/25/2024  
Next Scheduled EDR Contact: 08/12/2024  
Data Release Frequency: Varies

### BUTTE COUNTY:

#### CUPA BUTTE: CUPA Facility Listing

Cupa facility list.

Date of Government Version: 04/21/2017  
Date Data Arrived at EDR: 04/25/2017  
Date Made Active in Reports: 08/09/2017  
Number of Days to Update: 106

Source: Public Health Department  
Telephone: 530-538-7149  
Last EDR Contact: 03/28/2024  
Next Scheduled EDR Contact: 07/15/2024  
Data Release Frequency: No Update Planned

### CALVERAS COUNTY:

#### CUPA CALVERAS: CUPA Facility Listing

Cupa Facility Listing

Date of Government Version: 12/18/2023  
Date Data Arrived at EDR: 12/18/2023  
Date Made Active in Reports: 03/13/2024  
Number of Days to Update: 86

Source: Calveras County Environmental Health  
Telephone: 209-754-6399  
Last EDR Contact: 03/15/2024  
Next Scheduled EDR Contact: 07/01/2024  
Data Release Frequency: Quarterly

### COLUSA COUNTY:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## CUPA COLUSA: CUPA Facility List Cupa facility list.

Date of Government Version: 04/06/2020  
Date Data Arrived at EDR: 04/23/2020  
Date Made Active in Reports: 07/10/2020  
Number of Days to Update: 78

Source: Health & Human Services  
Telephone: 530-458-0396  
Last EDR Contact: 04/25/2024  
Next Scheduled EDR Contact: 08/12/2024  
Data Release Frequency: Semi-Annually

## CONTRA COSTA COUNTY:

### SL CONTRA COSTA: Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 01/19/2024  
Date Data Arrived at EDR: 01/24/2024  
Date Made Active in Reports: 04/09/2024  
Number of Days to Update: 76

Source: Contra Costa Health Services Department  
Telephone: 925-646-2286  
Last EDR Contact: 04/19/2024  
Next Scheduled EDR Contact: 08/05/2024  
Data Release Frequency: Semi-Annually

## DEL NORTE COUNTY:

### CUPA DEL NORTE: CUPA Facility List Cupa Facility list

Date of Government Version: 02/05/2024  
Date Data Arrived at EDR: 02/08/2024  
Date Made Active in Reports: 04/26/2024  
Number of Days to Update: 78

Source: Del Norte County Environmental Health Division  
Telephone: 707-465-0426  
Last EDR Contact: 04/19/2024  
Next Scheduled EDR Contact: 08/05/2024  
Data Release Frequency: Varies

## EL DORADO COUNTY:

### CUPA EL DORADO: CUPA Facility List CUPA facility list.

Date of Government Version: 08/08/2022  
Date Data Arrived at EDR: 08/09/2022  
Date Made Active in Reports: 09/01/2022  
Number of Days to Update: 23

Source: El Dorado County Environmental Management Department  
Telephone: 530-621-6623  
Last EDR Contact: 04/19/2024  
Next Scheduled EDR Contact: 08/05/2024  
Data Release Frequency: Varies

## FRESNO COUNTY:

### CUPA FRESNO: CUPA Resources List

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 06/28/2021  
Date Data Arrived at EDR: 12/21/2021  
Date Made Active in Reports: 03/03/2022  
Number of Days to Update: 72

Source: Dept. of Community Health  
Telephone: 559-445-3271  
Last EDR Contact: 03/28/2024  
Next Scheduled EDR Contact: 07/08/2024  
Data Release Frequency: Semi-Annually

## GLENN COUNTY:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA GLENN: CUPA Facility List  
Cupa facility list

Date of Government Version: 01/22/2018  
Date Data Arrived at EDR: 01/24/2018  
Date Made Active in Reports: 03/14/2018  
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District  
Telephone: 830-934-6500  
Last EDR Contact: 04/12/2024  
Next Scheduled EDR Contact: 07/29/2024  
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List  
CUPA facility list.

Date of Government Version: 08/12/2021  
Date Data Arrived at EDR: 08/12/2021  
Date Made Active in Reports: 11/08/2021  
Number of Days to Update: 88

Source: Humboldt County Environmental Health  
Telephone: N/A  
Last EDR Contact: 05/09/2024  
Next Scheduled EDR Contact: 08/26/2024  
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List  
Cupa facility list.

Date of Government Version: 01/17/2024  
Date Data Arrived at EDR: 01/18/2024  
Date Made Active in Reports: 04/03/2024  
Number of Days to Update: 76

Source: San Diego Border Field Office  
Telephone: 760-339-2777  
Last EDR Contact: 04/12/2024  
Next Scheduled EDR Contact: 07/29/2024  
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List  
Cupa facility list.

Date of Government Version: 04/02/2018  
Date Data Arrived at EDR: 04/03/2018  
Date Made Active in Reports: 06/14/2018  
Number of Days to Update: 72

Source: Inyo County Environmental Health Services  
Telephone: 760-878-0238  
Last EDR Contact: 05/09/2024  
Next Scheduled EDR Contact: 08/26/2024  
Data Release Frequency: Varies

KERN COUNTY:

CUPA KERN: CUPA Facility List  
A listing of sites included in the Kern County Hazardous Material Business Plan.

Date of Government Version: 10/30/2023  
Date Data Arrived at EDR: 11/01/2023  
Date Made Active in Reports: 01/23/2024  
Number of Days to Update: 83

Source: Kern County Public Health  
Telephone: 661-321-3000  
Last EDR Contact: 04/25/2024  
Next Scheduled EDR Contact: 08/12/2024  
Data Release Frequency: Varies

UST KERN: Underground Storage Tank Sites & Tank Listing  
Kern County Sites and Tanks Listing.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/25/2024  
Date Data Arrived at EDR: 05/01/2024  
Date Made Active in Reports: 05/08/2024  
Number of Days to Update: 7

Source: Kern County Environment Health Services Department  
Telephone: 661-862-8700  
Last EDR Contact: 04/25/2024  
Next Scheduled EDR Contact: 08/12/2024  
Data Release Frequency: Quarterly

## KINGS COUNTY:

### CUPA KINGS: CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 12/03/2020  
Date Data Arrived at EDR: 01/26/2021  
Date Made Active in Reports: 04/14/2021  
Number of Days to Update: 78

Source: Kings County Department of Public Health  
Telephone: 559-584-1411  
Last EDR Contact: 05/09/2024  
Next Scheduled EDR Contact: 08/26/2024  
Data Release Frequency: Varies

## LAKE COUNTY:

### CUPA LAKE: CUPA Facility List

Cupa facility list

Date of Government Version: 02/05/2024  
Date Data Arrived at EDR: 02/08/2024  
Date Made Active in Reports: 04/26/2024  
Number of Days to Update: 78

Source: Lake County Environmental Health  
Telephone: 707-263-1164  
Last EDR Contact: 04/08/2024  
Next Scheduled EDR Contact: 07/22/2024  
Data Release Frequency: Varies

## LASSEN COUNTY:

### CUPA LASSEN: CUPA Facility List

Cupa facility list

Date of Government Version: 07/31/2020  
Date Data Arrived at EDR: 08/21/2020  
Date Made Active in Reports: 11/09/2020  
Number of Days to Update: 80

Source: Lassen County Environmental Health  
Telephone: 530-251-8528  
Last EDR Contact: 04/12/2024  
Next Scheduled EDR Contact: 07/29/2024  
Data Release Frequency: Varies

## LOS ANGELES COUNTY:

### AOCONCERN: Key Areas of Concerns in Los Angeles County

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009  
Date Data Arrived at EDR: 03/31/2009  
Date Made Active in Reports: 10/23/2009  
Number of Days to Update: 206

Source: N/A  
Telephone: N/A  
Last EDR Contact: 03/08/2024  
Next Scheduled EDR Contact: 06/24/2024  
Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## HMS LOS ANGELES: HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 01/16/2024	Source: Department of Public Works
Date Data Arrived at EDR: 01/18/2024	Telephone: 626-458-3517
Date Made Active in Reports: 03/26/2024	Last EDR Contact: 04/12/2024
Number of Days to Update: 68	Next Scheduled EDR Contact: 07/15/2024
	Data Release Frequency: Semi-Annually

## LF LOS ANGELES: List of Solid Waste Facilities Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/09/2024	Source: La County Department of Public Works
Date Data Arrived at EDR: 01/10/2024	Telephone: 818-458-5185
Date Made Active in Reports: 03/27/2024	Last EDR Contact: 04/09/2024
Number of Days to Update: 77	Next Scheduled EDR Contact: 07/22/2024
	Data Release Frequency: Varies

## LF LOS ANGELES CITY: City of Los Angeles Landfills

Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 12/31/2022	Source: Engineering & Construction Division
Date Data Arrived at EDR: 01/12/2023	Telephone: 213-473-7869
Date Made Active in Reports: 03/29/2023	Last EDR Contact: 04/05/2024
Number of Days to Update: 76	Next Scheduled EDR Contact: 07/22/2024
	Data Release Frequency: Varies

## LOS ANGELES AST: Active & Inactive AST Inventory

A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019	Source: Los Angeles Fire Department
Date Data Arrived at EDR: 06/25/2019	Telephone: 213-978-3800
Date Made Active in Reports: 08/22/2019	Last EDR Contact: 03/19/2024
Number of Days to Update: 58	Next Scheduled EDR Contact: 07/01/2024
	Data Release Frequency: Varies

## LOS ANGELES CO LF METHANE: Methane Producing Landfills

This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/13/2023	Source: Los Angeles County Department of Public Works
Date Data Arrived at EDR: 07/13/2023	Telephone: 626-458-6973
Date Made Active in Reports: 09/27/2023	Last EDR Contact: 04/11/2024
Number of Days to Update: 76	Next Scheduled EDR Contact: 07/22/2024
	Data Release Frequency: No Update Planned

## LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory

A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 12/01/2023	Source: Los Angeles Fire Department
Date Data Arrived at EDR: 12/13/2023	Telephone: 213-978-3800
Date Made Active in Reports: 12/14/2023	Last EDR Contact: 03/19/2024
Number of Days to Update: 1	Next Scheduled EDR Contact: 07/01/2024
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## LOS ANGELES UST: Active & Inactive UST Inventory

A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 12/01/2023	Source: Los Angeles Fire Department
Date Data Arrived at EDR: 12/13/2023	Telephone: 213-978-3800
Date Made Active in Reports: 03/07/2024	Last EDR Contact: 03/19/2024
Number of Days to Update: 85	Next Scheduled EDR Contact: 07/01/2024
	Data Release Frequency: Varies

## SITE MIT LOS ANGELES: Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 07/11/2023	Source: Community Health Services
Date Data Arrived at EDR: 10/17/2023	Telephone: 323-890-7806
Date Made Active in Reports: 01/09/2024	Last EDR Contact: 04/18/2024
Number of Days to Update: 84	Next Scheduled EDR Contact: 07/29/2024
	Data Release Frequency: Annually

## UST EL SEGUNDO: City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017	Source: City of El Segundo Fire Department
Date Data Arrived at EDR: 04/19/2017	Telephone: 310-524-2236
Date Made Active in Reports: 05/10/2017	Last EDR Contact: 04/05/2024
Number of Days to Update: 21	Next Scheduled EDR Contact: 07/22/2024
	Data Release Frequency: No Update Planned

## UST LONG BEACH: City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019	Source: City of Long Beach Fire Department
Date Data Arrived at EDR: 04/23/2019	Telephone: 562-570-2563
Date Made Active in Reports: 06/27/2019	Last EDR Contact: 04/12/2024
Number of Days to Update: 65	Next Scheduled EDR Contact: 07/29/2024
	Data Release Frequency: Varies

## UST TORRANCE: City of Torrance Underground Storage Tank

Underground storage tank sites located in the city of Torrance.

Date of Government Version: 04/12/2023	Source: City of Torrance Fire Department
Date Data Arrived at EDR: 05/02/2023	Telephone: 310-618-2973
Date Made Active in Reports: 06/13/2023	Last EDR Contact: 04/12/2024
Number of Days to Update: 42	Next Scheduled EDR Contact: 07/29/2024
	Data Release Frequency: Semi-Annually

## MADERA COUNTY:

### CUPA MADERA: CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 08/10/2020	Source: Madera County Environmental Health
Date Data Arrived at EDR: 08/12/2020	Telephone: 559-675-7823
Date Made Active in Reports: 10/23/2020	Last EDR Contact: 05/09/2024
Number of Days to Update: 72	Next Scheduled EDR Contact: 08/26/2024
	Data Release Frequency: Varies

## MARIN COUNTY:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST MARIN: Underground Storage Tank Sites  
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018  
Date Data Arrived at EDR: 10/04/2018  
Date Made Active in Reports: 11/02/2018  
Number of Days to Update: 29

Source: Public Works Department Waste Management  
Telephone: 415-473-6647  
Last EDR Contact: 03/22/2024  
Next Scheduled EDR Contact: 07/08/2024  
Data Release Frequency: Semi-Annually

MENDOCINO COUNTY:

UST MENDOCINO: Mendocino County UST Database  
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/22/2021  
Date Data Arrived at EDR: 11/18/2021  
Date Made Active in Reports: 11/22/2021  
Number of Days to Update: 4

Source: Department of Public Health  
Telephone: 707-463-4466  
Last EDR Contact: 05/17/2024  
Next Scheduled EDR Contact: 09/02/2024  
Data Release Frequency: Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List  
CUPA facility list.

Date of Government Version: 11/15/2023  
Date Data Arrived at EDR: 11/20/2023  
Date Made Active in Reports: 02/15/2024  
Number of Days to Update: 87

Source: Merced County Environmental Health  
Telephone: 209-381-1094  
Last EDR Contact: 05/08/2024  
Next Scheduled EDR Contact: 08/26/2024  
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List  
CUPA Facility List

Date of Government Version: 02/22/2021  
Date Data Arrived at EDR: 03/02/2021  
Date Made Active in Reports: 05/19/2021  
Number of Days to Update: 78

Source: Mono County Health Department  
Telephone: 760-932-5580  
Last EDR Contact: 05/17/2024  
Next Scheduled EDR Contact: 09/02/2024  
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing  
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 10/04/2021  
Date Data Arrived at EDR: 10/06/2021  
Date Made Active in Reports: 12/29/2021  
Number of Days to Update: 84

Source: Monterey County Health Department  
Telephone: 831-796-1297  
Last EDR Contact: 03/22/2024  
Next Scheduled EDR Contact: 07/08/2024  
Data Release Frequency: Varies

NAPA COUNTY:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## LUST NAPA: Sites With Reported Contamination

A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017  
Date Data Arrived at EDR: 01/11/2017  
Date Made Active in Reports: 03/02/2017  
Number of Days to Update: 50

Source: Napa County Department of Environmental Management  
Telephone: 707-253-4269  
Last EDR Contact: 05/17/2024  
Next Scheduled EDR Contact: 09/02/2024  
Data Release Frequency: No Update Planned

## UST NAPA: Closed and Operating Underground Storage Tank Sites

Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019  
Date Data Arrived at EDR: 09/09/2019  
Date Made Active in Reports: 10/31/2019  
Number of Days to Update: 52

Source: Napa County Department of Environmental Management  
Telephone: 707-253-4269  
Last EDR Contact: 05/17/2024  
Next Scheduled EDR Contact: 09/02/2024  
Data Release Frequency: No Update Planned

## NEVADA COUNTY:

### CUPA NEVADA: CUPA Facility List

CUPA facility list.

Date of Government Version: 10/31/2023  
Date Data Arrived at EDR: 11/03/2023  
Date Made Active in Reports: 01/23/2024  
Number of Days to Update: 81

Source: Community Development Agency  
Telephone: 530-265-1467  
Last EDR Contact: 04/16/2024  
Next Scheduled EDR Contact: 08/05/2024  
Data Release Frequency: Varies

## ORANGE COUNTY:

### IND\_SITE ORANGE: List of Industrial Site Cleanups

Petroleum and non-petroleum spills.

Date of Government Version: 10/10/2023  
Date Data Arrived at EDR: 11/01/2023  
Date Made Active in Reports: 01/23/2024  
Number of Days to Update: 83

Source: Health Care Agency  
Telephone: 714-834-3446  
Last EDR Contact: 05/02/2024  
Next Scheduled EDR Contact: 08/12/2024  
Data Release Frequency: Annually

### LUST ORANGE: List of Underground Storage Tank Cleanups

Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 10/10/2023  
Date Data Arrived at EDR: 11/01/2023  
Date Made Active in Reports: 01/23/2024  
Number of Days to Update: 83

Source: Health Care Agency  
Telephone: 714-834-3446  
Last EDR Contact: 05/02/2024  
Next Scheduled EDR Contact: 08/12/2024  
Data Release Frequency: Quarterly

### UST ORANGE: List of Underground Storage Tank Facilities

Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 10/10/2023  
Date Data Arrived at EDR: 11/01/2023  
Date Made Active in Reports: 01/23/2024  
Number of Days to Update: 83

Source: Health Care Agency  
Telephone: 714-834-3446  
Last EDR Contact: 05/02/2024  
Next Scheduled EDR Contact: 08/12/2024  
Data Release Frequency: Quarterly

## PLACER COUNTY:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## MS PLACER: Master List of Facilities

List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 02/28/2024  
Date Data Arrived at EDR: 02/28/2024  
Date Made Active in Reports: 05/16/2024  
Number of Days to Update: 78

Source: Placer County Health and Human Services  
Telephone: 530-745-2363  
Last EDR Contact: 02/26/2024  
Next Scheduled EDR Contact: 06/10/2024  
Data Release Frequency: Semi-Annually

## PLUMAS COUNTY:

### CUPA PLUMAS: CUPA Facility List

Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019  
Date Data Arrived at EDR: 04/23/2019  
Date Made Active in Reports: 06/26/2019  
Number of Days to Update: 64

Source: Plumas County Environmental Health  
Telephone: 530-283-6355  
Last EDR Contact: 04/12/2024  
Next Scheduled EDR Contact: 07/29/2024  
Data Release Frequency: Varies

## RIVERSIDE COUNTY:

### LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites

Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 01/04/2024  
Date Data Arrived at EDR: 01/04/2024  
Date Made Active in Reports: 03/29/2024  
Number of Days to Update: 85

Source: Department of Environmental Health  
Telephone: 951-358-5055  
Last EDR Contact: 12/05/2023  
Next Scheduled EDR Contact: 06/24/2024  
Data Release Frequency: Quarterly

### UST RIVERSIDE: Underground Storage Tank Tank List

Underground storage tank sites located in Riverside county.

Date of Government Version: 01/04/2024  
Date Data Arrived at EDR: 01/04/2024  
Date Made Active in Reports: 03/21/2024  
Number of Days to Update: 77

Source: Department of Environmental Health  
Telephone: 951-358-5055  
Last EDR Contact: 03/08/2024  
Next Scheduled EDR Contact: 06/24/2024  
Data Release Frequency: Quarterly

## SACRAMENTO COUNTY:

### CS SACRAMENTO: Toxic Site Clean-Up List

List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 11/07/2022  
Date Data Arrived at EDR: 12/21/2022  
Date Made Active in Reports: 03/16/2023  
Number of Days to Update: 85

Source: Sacramento County Environmental Management  
Telephone: 916-875-8406  
Last EDR Contact: 03/25/2024  
Next Scheduled EDR Contact: 07/08/2024  
Data Release Frequency: Quarterly

### ML SACRAMENTO: Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 11/07/2022  
Date Data Arrived at EDR: 12/09/2022  
Date Made Active in Reports: 03/01/2023  
Number of Days to Update: 82

Source: Sacramento County Environmental Management  
Telephone: 916-875-8406  
Last EDR Contact: 03/25/2024  
Next Scheduled EDR Contact: 07/08/2024  
Data Release Frequency: Quarterly

## SAN BENITO COUNTY:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## CUPA SAN BENITO: CUPA Facility List

Cupa facility list

Date of Government Version: 01/17/2024  
Date Data Arrived at EDR: 01/18/2024  
Date Made Active in Reports: 01/26/2024  
Number of Days to Update: 8

Source: San Benito County Environmental Health  
Telephone: N/A  
Last EDR Contact: 05/09/2024  
Next Scheduled EDR Contact: 08/12/2024  
Data Release Frequency: Varies

## SAN BERNARDINO COUNTY:

### PERMITS SAN BERNARDINO: Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 02/13/2024  
Date Data Arrived at EDR: 02/14/2024  
Date Made Active in Reports: 05/02/2024  
Number of Days to Update: 78

Source: San Bernardino County Fire Department Hazardous Materials Division  
Telephone: 909-387-3041  
Last EDR Contact: 04/25/2024  
Next Scheduled EDR Contact: 08/12/2024  
Data Release Frequency: Quarterly

## SAN DIEGO COUNTY:

### HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 11/27/2023  
Date Data Arrived at EDR: 11/27/2023  
Date Made Active in Reports: 02/16/2024  
Number of Days to Update: 81

Source: Hazardous Materials Management Division  
Telephone: 619-338-2268  
Last EDR Contact: 02/27/2024  
Next Scheduled EDR Contact: 06/10/2024  
Data Release Frequency: Quarterly

### LF SAN DIEGO: Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/01/2023  
Date Data Arrived at EDR: 01/31/2024  
Date Made Active in Reports: 04/17/2024  
Number of Days to Update: 77

Source: Department of Health Services  
Telephone: 619-338-2209  
Last EDR Contact: 04/12/2024  
Next Scheduled EDR Contact: 07/29/2024  
Data Release Frequency: Varies

### SAN DIEGO CO LOP: Local Oversight Program Listing

A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 07/22/2021  
Date Data Arrived at EDR: 10/19/2021  
Date Made Active in Reports: 01/13/2022  
Number of Days to Update: 86

Source: Department of Environmental Health  
Telephone: 858-505-6874  
Last EDR Contact: 04/12/2024  
Next Scheduled EDR Contact: 07/29/2024  
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## SAN DIEGO CO SAM: Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010	Source: San Diego County Department of Environmental Health
Date Data Arrived at EDR: 06/15/2010	Telephone: 619-338-2371
Date Made Active in Reports: 07/09/2010	Last EDR Contact: 02/23/2024
Number of Days to Update: 24	Next Scheduled EDR Contact: 06/10/2024
	Data Release Frequency: No Update Planned

## SAN FRANCISCO COUNTY:

### CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 02/01/2024	Source: San Francisco County Department of Environmental Health
Date Data Arrived at EDR: 02/01/2024	Telephone: 415-252-3896
Date Made Active in Reports: 04/24/2024	Last EDR Contact: 04/25/2024
Number of Days to Update: 83	Next Scheduled EDR Contact: 08/12/2024
	Data Release Frequency: Varies

### LUST SAN FRANCISCO: Local Oversight Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008	Source: Department Of Public Health San Francisco County
Date Data Arrived at EDR: 09/19/2008	Telephone: 415-252-3920
Date Made Active in Reports: 09/29/2008	Last EDR Contact: 04/25/2024
Number of Days to Update: 10	Next Scheduled EDR Contact: 08/12/2024
	Data Release Frequency: No Update Planned

### UST SAN FRANCISCO: Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 02/01/2024	Source: Department of Public Health
Date Data Arrived at EDR: 02/01/2024	Telephone: 415-252-3920
Date Made Active in Reports: 04/24/2024	Last EDR Contact: 04/25/2024
Number of Days to Update: 83	Next Scheduled EDR Contact: 08/12/2024
	Data Release Frequency: Quarterly

## SAN FRANCISCO COUNTY:

### SAN FRANCISCO MAHER: Maher Ordinance Property Listing

a listing of properties that fall within a Maher Ordinance, for all of San Francisco

Date of Government Version: 01/15/2024	Source: San Francisco Planning
Date Data Arrived at EDR: 01/18/2024	Telephone: 628-652-7483
Date Made Active in Reports: 04/05/2024	Last EDR Contact: 04/16/2024
Number of Days to Update: 78	Next Scheduled EDR Contact: 07/29/2024
	Data Release Frequency: Varies

## SAN JOAQUIN COUNTY:

### UST SAN JOAQUIN: San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018	Source: Environmental Health Department
Date Data Arrived at EDR: 06/26/2018	Telephone: N/A
Date Made Active in Reports: 07/11/2018	Last EDR Contact: 03/08/2024
Number of Days to Update: 15	Next Scheduled EDR Contact: 06/24/2024
	Data Release Frequency: Semi-Annually

## SAN LUIS OBISPO COUNTY:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## CUPA SAN LUIS OBISPO: CUPA Facility List Cupa Facility List.

Date of Government Version: 02/14/2024  
Date Data Arrived at EDR: 02/14/2024  
Date Made Active in Reports: 05/02/2024  
Number of Days to Update: 78

Source: San Luis Obispo County Public Health Department  
Telephone: 805-781-5596  
Last EDR Contact: 05/09/2024  
Next Scheduled EDR Contact: 08/26/2024  
Data Release Frequency: Varies

## SAN MATEO COUNTY:

### BI SAN MATEO: Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020  
Date Data Arrived at EDR: 02/20/2020  
Date Made Active in Reports: 04/24/2020  
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division  
Telephone: 650-363-1921  
Last EDR Contact: 03/07/2024  
Next Scheduled EDR Contact: 06/17/2024  
Data Release Frequency: Annually

### LUST SAN MATEO: Fuel Leak List

A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019  
Date Data Arrived at EDR: 03/29/2019  
Date Made Active in Reports: 05/29/2019  
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division  
Telephone: 650-363-1921  
Last EDR Contact: 03/01/2024  
Next Scheduled EDR Contact: 06/17/2024  
Data Release Frequency: Semi-Annually

## SANTA BARBARA COUNTY:

### CUPA SANTA BARBARA: CUPA Facility Listing

CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011  
Date Data Arrived at EDR: 09/09/2011  
Date Made Active in Reports: 10/07/2011  
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department  
Telephone: 805-686-8167  
Last EDR Contact: 05/09/2024  
Next Scheduled EDR Contact: 08/26/2024  
Data Release Frequency: No Update Planned

## SANTA CLARA COUNTY:

### CUPA SANTA CLARA: Cupa Facility List

Cupa facility list

Date of Government Version: 02/21/2024  
Date Data Arrived at EDR: 02/22/2024  
Date Made Active in Reports: 05/08/2024  
Number of Days to Update: 76

Source: Department of Environmental Health  
Telephone: 408-918-1973  
Last EDR Contact: 05/09/2024  
Next Scheduled EDR Contact: 08/26/2024  
Data Release Frequency: Varies

### HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005  
Date Data Arrived at EDR: 03/30/2005  
Date Made Active in Reports: 04/21/2005  
Number of Days to Update: 22

Source: Santa Clara Valley Water District  
Telephone: 408-265-2600  
Last EDR Contact: 03/23/2009  
Next Scheduled EDR Contact: 06/22/2009  
Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## LUST SANTA CLARA: LOP Listing

A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014  
Date Data Arrived at EDR: 03/05/2014  
Date Made Active in Reports: 03/18/2014  
Number of Days to Update: 13

Source: Department of Environmental Health  
Telephone: 408-918-3417  
Last EDR Contact: 05/17/2024  
Next Scheduled EDR Contact: 09/02/2024  
Data Release Frequency: No Update Planned

## SANTA CRUZ COUNTY:

### CUPA SANTA CRUZ: CUPA Facility List CUPA facility listing.

Date of Government Version: 01/21/2017  
Date Data Arrived at EDR: 02/22/2017  
Date Made Active in Reports: 05/23/2017  
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health  
Telephone: 831-464-2761  
Last EDR Contact: 05/09/2024  
Next Scheduled EDR Contact: 08/26/2024  
Data Release Frequency: Varies

## SHASTA COUNTY:

### CUPA SHASTA: CUPA Facility List Cupa Facility List.

Date of Government Version: 06/15/2017  
Date Data Arrived at EDR: 06/19/2017  
Date Made Active in Reports: 08/09/2017  
Number of Days to Update: 51

Source: Shasta County Department of Resource Management  
Telephone: 530-225-5789  
Last EDR Contact: 05/09/2024  
Next Scheduled EDR Contact: 08/26/2024  
Data Release Frequency: Varies

## SOLANO COUNTY:

### LUST SOLANO: Leaking Underground Storage Tanks

A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019  
Date Data Arrived at EDR: 06/06/2019  
Date Made Active in Reports: 08/13/2019  
Number of Days to Update: 68

Source: Solano County Department of Environmental Management  
Telephone: 707-784-6770  
Last EDR Contact: 02/23/2024  
Next Scheduled EDR Contact: 06/10/2024  
Data Release Frequency: Quarterly

### UST SOLANO: Underground Storage Tanks

Underground storage tank sites located in Solano county.

Date of Government Version: 09/15/2021  
Date Data Arrived at EDR: 09/16/2021  
Date Made Active in Reports: 12/09/2021  
Number of Days to Update: 84

Source: Solano County Department of Environmental Management  
Telephone: 707-784-6770  
Last EDR Contact: 02/23/2024  
Next Scheduled EDR Contact: 06/10/2024  
Data Release Frequency: Quarterly

## SONOMA COUNTY:

### CUPA SONOMA: Cupa Facility List Cupa Facility list

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 07/02/2021  
Date Data Arrived at EDR: 07/06/2021  
Date Made Active in Reports: 07/14/2021  
Number of Days to Update: 8

Source: County of Sonoma Fire & Emergency Services Department  
Telephone: 707-565-1174  
Last EDR Contact: 03/15/2024  
Next Scheduled EDR Contact: 07/01/2024  
Data Release Frequency: Varies

## LUST SONOMA: Leaking Underground Storage Tank Sites

A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 06/30/2021  
Date Data Arrived at EDR: 06/30/2021  
Date Made Active in Reports: 09/24/2021  
Number of Days to Update: 86

Source: Department of Health Services  
Telephone: 707-565-6565  
Last EDR Contact: 03/15/2024  
Next Scheduled EDR Contact: 07/01/2024  
Data Release Frequency: Quarterly

## STANISLAUS COUNTY:

### CUPA STANISLAUS: CUPA Facility List

Cupa facility list

Date of Government Version: 02/08/2022  
Date Data Arrived at EDR: 02/10/2022  
Date Made Active in Reports: 05/04/2022  
Number of Days to Update: 83

Source: Stanislaus County Department of Environmental Protection  
Telephone: 209-525-6751  
Last EDR Contact: 04/05/2024  
Next Scheduled EDR Contact: 07/22/2024  
Data Release Frequency: Varies

## SUTTER COUNTY:

### UST SUTTER: Underground Storage Tanks

Underground storage tank sites located in Sutter county.

Date of Government Version: 08/03/2023  
Date Data Arrived at EDR: 08/24/2023  
Date Made Active in Reports: 09/12/2023  
Number of Days to Update: 19

Source: Sutter County Environmental Health Services  
Telephone: 530-822-7500  
Last EDR Contact: 02/26/2024  
Next Scheduled EDR Contact: 06/10/2024  
Data Release Frequency: Semi-Annually

## TEHAMA COUNTY:

### CUPA TEHAMA: CUPA Facility List

Cupa facilities

Date of Government Version: 12/05/2023  
Date Data Arrived at EDR: 02/01/2024  
Date Made Active in Reports: 02/28/2024  
Number of Days to Update: 27

Source: Tehama County Department of Environmental Health  
Telephone: 530-527-8020  
Last EDR Contact: 05/09/2024  
Next Scheduled EDR Contact: 08/12/2024  
Data Release Frequency: Varies

## TRINITY COUNTY:

### CUPA TRINITY: CUPA Facility List

Cupa facility list

Date of Government Version: 01/17/2024  
Date Data Arrived at EDR: 01/18/2024  
Date Made Active in Reports: 04/03/2024  
Number of Days to Update: 76

Source: Department of Toxic Substances Control  
Telephone: 760-352-0381  
Last EDR Contact: 04/12/2024  
Next Scheduled EDR Contact: 07/29/2024  
Data Release Frequency: Varies

## TULARE COUNTY:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## CUPA TULARE: CUPA Facility List Cupa program facilities

Date of Government Version: 10/07/2022  
Date Data Arrived at EDR: 10/07/2022  
Date Made Active in Reports: 12/21/2022  
Number of Days to Update: 75

Source: Tulare County Environmental Health Services Division  
Telephone: 559-624-7400  
Last EDR Contact: 04/25/2024  
Next Scheduled EDR Contact: 08/12/2024  
Data Release Frequency: Varies

## TUOLUMNE COUNTY:

### CUPA TUOLUMNE: CUPA Facility List Cupa facility list

Date of Government Version: 04/23/2018  
Date Data Arrived at EDR: 04/25/2018  
Date Made Active in Reports: 06/25/2018  
Number of Days to Update: 61

Source: Divison of Environmental Health  
Telephone: 209-533-5633  
Last EDR Contact: 04/12/2024  
Next Scheduled EDR Contact: 07/29/2024  
Data Release Frequency: Varies

## VENTURA COUNTY:

### BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 12/26/2023  
Date Data Arrived at EDR: 01/24/2024  
Date Made Active in Reports: 04/08/2024  
Number of Days to Update: 75

Source: Ventura County Environmental Health Division  
Telephone: 805-654-2813  
Last EDR Contact: 04/15/2024  
Next Scheduled EDR Contact: 07/29/2024  
Data Release Frequency: Quarterly

### LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011  
Date Data Arrived at EDR: 12/01/2011  
Date Made Active in Reports: 01/19/2012  
Number of Days to Update: 49

Source: Environmental Health Division  
Telephone: 805-654-2813  
Last EDR Contact: 03/22/2024  
Next Scheduled EDR Contact: 07/08/2024  
Data Release Frequency: No Update Planned

### LUST VENTURA: Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008  
Date Data Arrived at EDR: 06/24/2008  
Date Made Active in Reports: 07/31/2008  
Number of Days to Update: 37

Source: Environmental Health Division  
Telephone: 805-654-2813  
Last EDR Contact: 05/02/2024  
Next Scheduled EDR Contact: 08/19/2024  
Data Release Frequency: No Update Planned

### MED WASTE VENTURA: Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 12/26/2023  
Date Data Arrived at EDR: 01/23/2024  
Date Made Active in Reports: 04/09/2024  
Number of Days to Update: 77

Source: Ventura County Resource Management Agency  
Telephone: 805-654-2813  
Last EDR Contact: 04/15/2024  
Next Scheduled EDR Contact: 07/29/2024  
Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## UST VENTURA: Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 11/28/2023  
Date Data Arrived at EDR: 11/29/2023  
Date Made Active in Reports: 02/26/2024  
Number of Days to Update: 89

Source: Environmental Health Division  
Telephone: 805-654-2813  
Last EDR Contact: 03/05/2024  
Next Scheduled EDR Contact: 06/17/2024  
Data Release Frequency: Quarterly

## YOLO COUNTY:

### UST YOLO: Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 12/18/2023  
Date Data Arrived at EDR: 12/26/2023  
Date Made Active in Reports: 03/19/2024  
Number of Days to Update: 84

Source: Yolo County Department of Health  
Telephone: 530-666-8646  
Last EDR Contact: 03/22/2024  
Next Scheduled EDR Contact: 07/08/2024  
Data Release Frequency: Annually

## YUBA COUNTY:

### CUPA YUBA: CUPA Facility List

CUPA facility listing for Yuba County.

Date of Government Version: 01/22/2024  
Date Data Arrived at EDR: 01/23/2024  
Date Made Active in Reports: 04/08/2024  
Number of Days to Update: 76

Source: Yuba County Environmental Health Department  
Telephone: 530-749-7523  
Last EDR Contact: 04/19/2024  
Next Scheduled EDR Contact: 08/05/2024  
Data Release Frequency: Varies

## OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

### CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 02/05/2024  
Date Data Arrived at EDR: 02/06/2024  
Date Made Active in Reports: 04/25/2024  
Number of Days to Update: 79

Source: Department of Energy & Environmental Protection  
Telephone: 860-424-3375  
Last EDR Contact: 05/07/2024  
Next Scheduled EDR Contact: 08/19/2024  
Data Release Frequency: No Update Planned

### NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2018  
Date Data Arrived at EDR: 04/10/2019  
Date Made Active in Reports: 05/16/2019  
Number of Days to Update: 36

Source: Department of Environmental Protection  
Telephone: N/A  
Last EDR Contact: 03/29/2024  
Next Scheduled EDR Contact: 07/15/2024  
Data Release Frequency: Annually

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2019  
Date Data Arrived at EDR: 11/30/2023  
Date Made Active in Reports: 12/01/2023  
Number of Days to Update: 1

Source: Department of Environmental Conservation  
Telephone: 518-402-8651  
Last EDR Contact: 04/25/2024  
Next Scheduled EDR Contact: 08/05/2024  
Data Release Frequency: Quarterly

## PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 06/30/2018  
Date Data Arrived at EDR: 07/19/2019  
Date Made Active in Reports: 09/10/2019  
Number of Days to Update: 53

Source: Department of Environmental Protection  
Telephone: 717-783-8990  
Last EDR Contact: 04/08/2024  
Next Scheduled EDR Contact: 07/22/2024  
Data Release Frequency: Annually

## RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2018  
Date Data Arrived at EDR: 11/30/2021  
Date Made Active in Reports: 02/18/2022  
Number of Days to Update: 80

Source: Department of Environmental Management  
Telephone: 401-222-2797  
Last EDR Contact: 05/13/2024  
Next Scheduled EDR Contact: 08/26/2024  
Data Release Frequency: Annually

## WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 05/31/2018  
Date Data Arrived at EDR: 06/19/2019  
Date Made Active in Reports: 09/03/2019  
Number of Days to Update: 76

Source: Department of Natural Resources  
Telephone: N/A  
Last EDR Contact: 03/01/2024  
Next Scheduled EDR Contact: 06/17/2024  
Data Release Frequency: Annually

## Oil/Gas Pipelines

Source: Endeavor Business Media

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

## Electric Power Transmission Line Data

Source: Endeavor Business Media

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**Sensitive Receptors:** There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

## AHA Hospitals:

Source: American Hospital Association, Inc.  
Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

## Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services  
Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

## Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

## Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

## Daycare Centers: Licensed Facilities

Source: Department of Social Services

Telephone: 916-657-4041

**Flood Zone Data:** This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

**NWI:** National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

## State Wetlands Data: Wetland Inventory

Source: Department of Fish and Wildlife

Telephone: 916-445-0411

## Current USGS 7.5 Minute Topographic Map

Source: U.S. Geological Survey

## **STREET AND ADDRESS INFORMATION**

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## GEOCHECK<sup>®</sup> - PHYSICAL SETTING SOURCE ADDENDUM

### TARGET PROPERTY ADDRESS

401 SANTA CLARA AVE  
401 SANTA CLARA AVENUE  
OAKLAND, CA 94610

### TARGET PROPERTY COORDINATES

Latitude (North):	37.812997 - 37° 48' 46.79"
Longitude (West):	122.249113 - 122° 14' 56.81"
Universal Transverse Mercator:	Zone 10
UTM X (Meters):	566095.1
UTM Y (Meters):	4185127.2
Elevation:	48 ft. above sea level

### USGS TOPOGRAPHIC MAP

Target Property Map:	50005377 OAKLAND EAST, CA
Version Date:	2021
West Map:	50005378 OAKLAND WEST, CA
Version Date:	2021

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

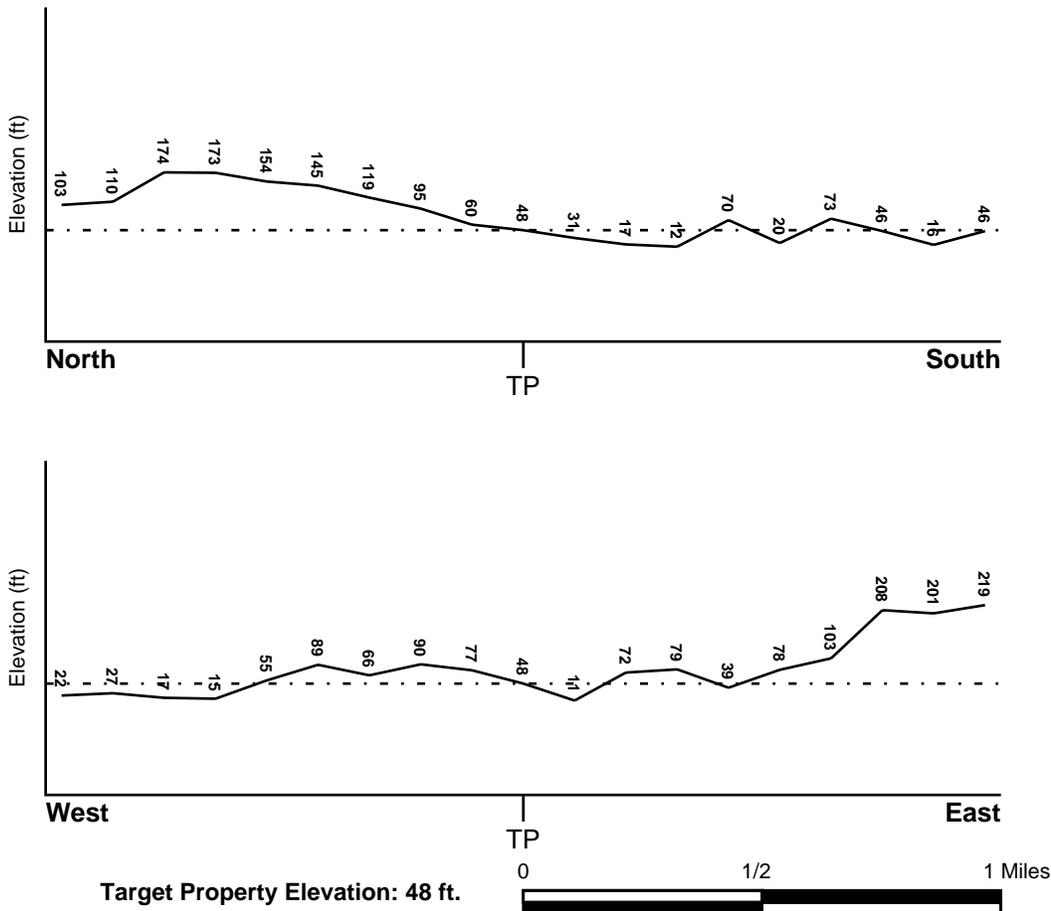
## TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

## TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General South

## SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

## **FEMA FLOOD ZONE**

<u>Flood Plain Panel at Target Property</u>	<u>FEMA Source Type</u>
06013C0405F	FEMA FIRM Flood data
<u>Additional Panels in search area:</u>	<u>FEMA Source Type</u>
06001C0059G	FEMA FIRM Flood data
06001C0067G	FEMA FIRM Flood data
06001C0086G	FEMA FIRM Flood data

## **NATIONAL WETLAND INVENTORY**

<u>NWI Quad at Target Property</u>	<u>NWI Electronic Data Coverage</u>
OAKLAND EAST	YES - refer to the Overview Map and Detail Map

## **HYDROGEOLOGIC INFORMATION**

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

### ***Site-Specific Hydrogeological Data\*:***

Search Radius:	1.25 miles
Status:	Not found

## **AQUIFLOW®**

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
A1	1/8 - 1/4 Mile SE	N
B16	1/4 - 1/2 Mile SSE	Varies
C19	1/4 - 1/2 Mile SSW	S
C20	1/4 - 1/2 Mile SW	NW
24	1/4 - 1/2 Mile NW	Varies
D26	1/4 - 1/2 Mile WSW	SW

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
H58	1/2 - 1 Mile West	N,W,Varies
H59	1/2 - 1 Mile West	N
60	1/2 - 1 Mile West	Varies
O100	1/2 - 1 Mile West	SW
N107	1/2 - 1 Mile WNW	Varies
O110	1/2 - 1 Mile West	NE
M112	1/2 - 1 Mile NNW	SW
N121	1/2 - 1 Mile WNW	S
P124	1/2 - 1 Mile SSW	E
P125	1/2 - 1 Mile SSW	E
Q128	1/2 - 1 Mile South	SW,W,Varies
Q129	1/2 - 1 Mile South	SW,W,Varies
Q130	1/2 - 1 Mile South	SW,W,Varies
R131	1/2 - 1 Mile West	SE
R132	1/2 - 1 Mile West	SW
R133	1/2 - 1 Mile West	E, W
134	1/2 - 1 Mile WSW	E
1G	1/2 - 1 Mile NNW	SW
2G	1/4 - 1/2 Mile NW	Varies
3G	1/2 - 1 Mile WNW	Varies
4G	1/2 - 1 Mile WNW	S
5G	1/2 - 1 Mile West	SW
6G	1/2 - 1 Mile West	NE
7G	1/2 - 1 Mile West	Varies
8G	1/2 - 1 Mile West	SE
9G	1/2 - 1 Mile West	SW
10G	1/2 - 1 Mile West	E, W
11G	1/2 - 1 Mile West	N,W,Varies
12G	1/2 - 1 Mile West	N
13G	1/8 - 1/4 Mile SE	N
14G	1/4 - 1/2 Mile WSW	SW
15G	1/4 - 1/2 Mile SW	NW
16G	1/4 - 1/2 Mile SSW	S
17G	1/4 - 1/2 Mile SSE	Varies
18G	1/2 - 1 Mile WSW	E
19G	1/2 - 1 Mile SSW	E
20G	1/2 - 1 Mile SSW	E
21G	1/2 - 1 Mile South	SW,W,Varies
22G	1/2 - 1 Mile South	SW,W,Varies
23G	1/2 - 1 Mile South	SW,W,Varies

For additional site information, refer to Physical Setting Source Map Findings.

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

### GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

#### **ROCK STRATIGRAPHIC UNIT**

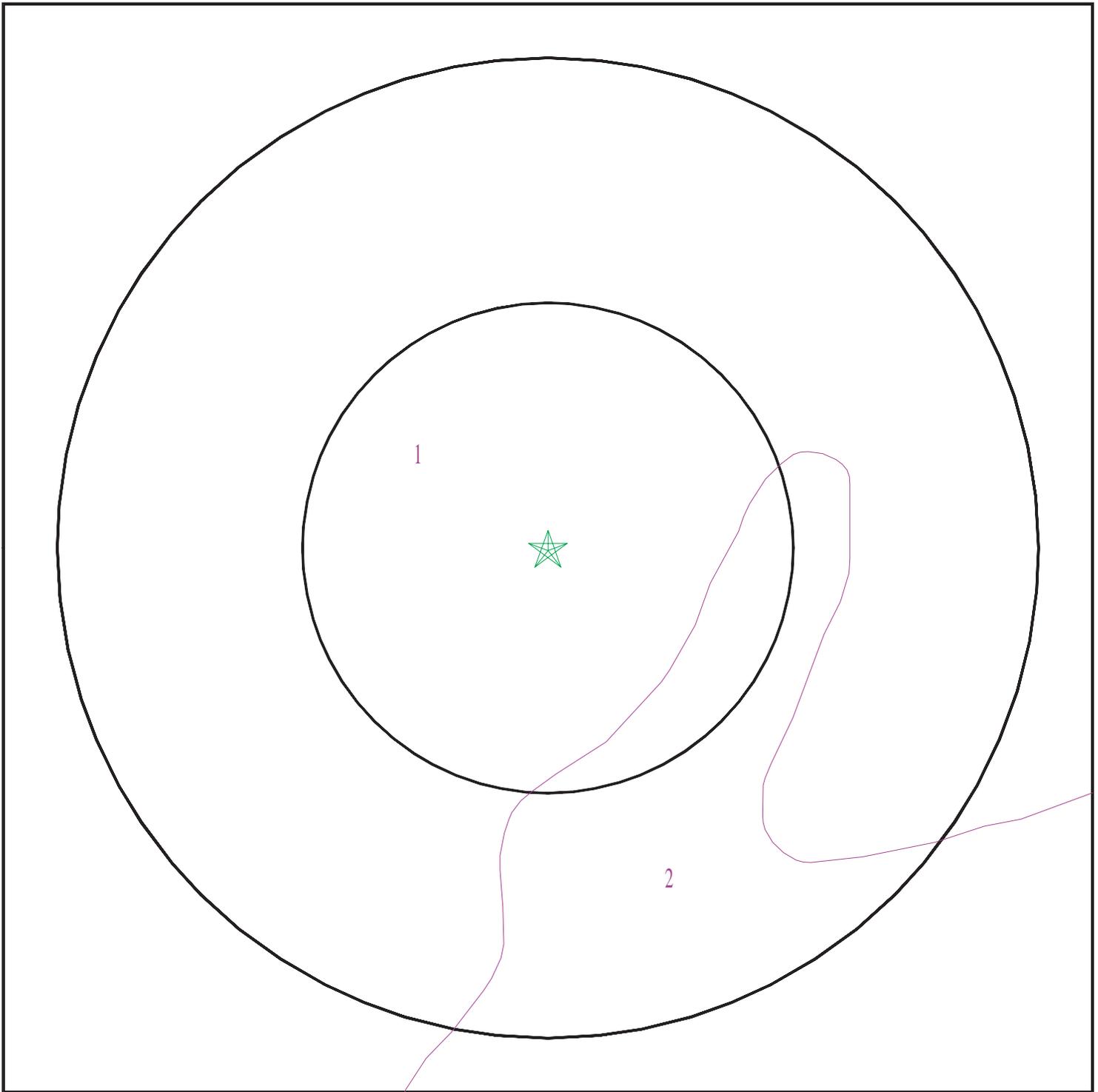
Era: Cenozoic  
System: Quaternary  
Series: Quaternary  
Code: Q (*decoded above as Era, System & Series*)

#### **GEOLOGIC AGE IDENTIFICATION**

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

# SSURGO SOIL MAP - 7660283.2s



- ★ Target Property
- ∩ SSURGO Soil
- ∩ Water



SITE NAME: 401 Santa Clara Ave  
ADDRESS: 401 Santa Clara Avenue  
Oakland CA 94610  
LAT/LONG: 37.812997 / 122.249113

CLIENT: Ninyo & Moore  
CONTACT: Luke Swickard  
INQUIRY #: 7660283.2s  
DATE: May 22, 2024 2:49 pm

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

### Soil Map ID: 1

Soil Component Name: Tierra

Soil Surface Texture: loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	11 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 1.4 Min: 0.42	Max: 8.4 Min: 5.6
2	11 inches	31 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 1.4 Min: 0.42	Max: 8.4 Min: 5.6
3	31 inches	59 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 1.4 Min: 0.42	Max: 8.4 Min: 5.6

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## Soil Map ID: 2

Soil Component Name: Urban land

Soil Surface Texture: loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class:  
Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

## LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

## WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

## FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No Wells Found		

## FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
B2	CAEDF0000050586	1/4 - 1/2 Mile SSE
A3	CAEDF0000081362	1/4 - 1/2 Mile SE
B4	CAEDF0000021299	1/4 - 1/2 Mile SSE
A5	CAEDF0000031876	1/4 - 1/2 Mile SE
A6	CAEDF0000102684	1/4 - 1/2 Mile SE
B7	CAEDF0000008624	1/4 - 1/2 Mile SSE
B8	CAEDF0000067249	1/4 - 1/2 Mile SSE
B9	CAEDF0000111832	1/4 - 1/2 Mile SSE
B10	CAEDF0000002008	1/4 - 1/2 Mile SSE
A11	CAEDF0000126904	1/4 - 1/2 Mile SE
B12	CAEDF0000032095	1/4 - 1/2 Mile SSE
A13	CAEDF0000088700	1/4 - 1/2 Mile SE
B14	CAEDF0000051851	1/4 - 1/2 Mile SSE
B15	CAEDF0000088672	1/4 - 1/2 Mile SSE
B17	CAEDF0000070819	1/4 - 1/2 Mile SSE
18	CAEDF0000122136	1/4 - 1/2 Mile SE
D21	CAEDF0000058286	1/4 - 1/2 Mile SW
D22	CAEDF0000137153	1/4 - 1/2 Mile SW
E23	CAEDF0000065574	1/4 - 1/2 Mile NNE
D25	CAEDF0000051186	1/4 - 1/2 Mile SW
D27	CAEDF0000033600	1/4 - 1/2 Mile SW
E28	CAEDF0000036821	1/4 - 1/2 Mile NNE
D29	CAEDF0000107581	1/4 - 1/2 Mile SW
E30	CAEDF0000080960	1/4 - 1/2 Mile NNE
F31	CAEDF0000004319	1/4 - 1/2 Mile NNW
E32	CAEDF0000125419	1/2 - 1 Mile NNE
F33	CAEDF0000066106	1/2 - 1 Mile NNW
E34	CAEDF0000143782	1/2 - 1 Mile NNE
F35	CAEDF0000071273	1/2 - 1 Mile NNW
F36	CAEDF0000031589	1/2 - 1 Mile NNW
F37	CAEDF0000099752	1/2 - 1 Mile NNW
F38	CAEDF0000090931	1/2 - 1 Mile NNW
F39	CAEDF0000004436	1/2 - 1 Mile NNW
F40	CAEDF0000086207	1/2 - 1 Mile NNW
F41	CAEDF0000051773	1/2 - 1 Mile NNW
42	CAEDF0000110351	1/2 - 1 Mile NNW
G43	CAEDF0000122892	1/2 - 1 Mile West
G44	CAEDF0000136846	1/2 - 1 Mile West
G45	CAEDF0000143617	1/2 - 1 Mile West
G46	CAEDF0000138403	1/2 - 1 Mile West
H47	CAEDF0000046342	1/2 - 1 Mile WSW
G48	CAEDF0000141594	1/2 - 1 Mile West
H49	CAEDF0000080876	1/2 - 1 Mile WSW
H50	CAEDF0000103712	1/2 - 1 Mile WSW
G51	CAEDF0000056285	1/2 - 1 Mile West
G52	CAEDF0000093340	1/2 - 1 Mile West
H53	CAEDF0000087897	1/2 - 1 Mile WSW
G54	CAEDF0000133385	1/2 - 1 Mile West
G55	CAEDF0000033437	1/2 - 1 Mile West
G56	CAEDF0000037198	1/2 - 1 Mile West
G57	CAEDF0000036118	1/2 - 1 Mile West
I61	CAEDF0000043225	1/2 - 1 Mile WNW

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## STATE DATABASE WELL INFORMATION

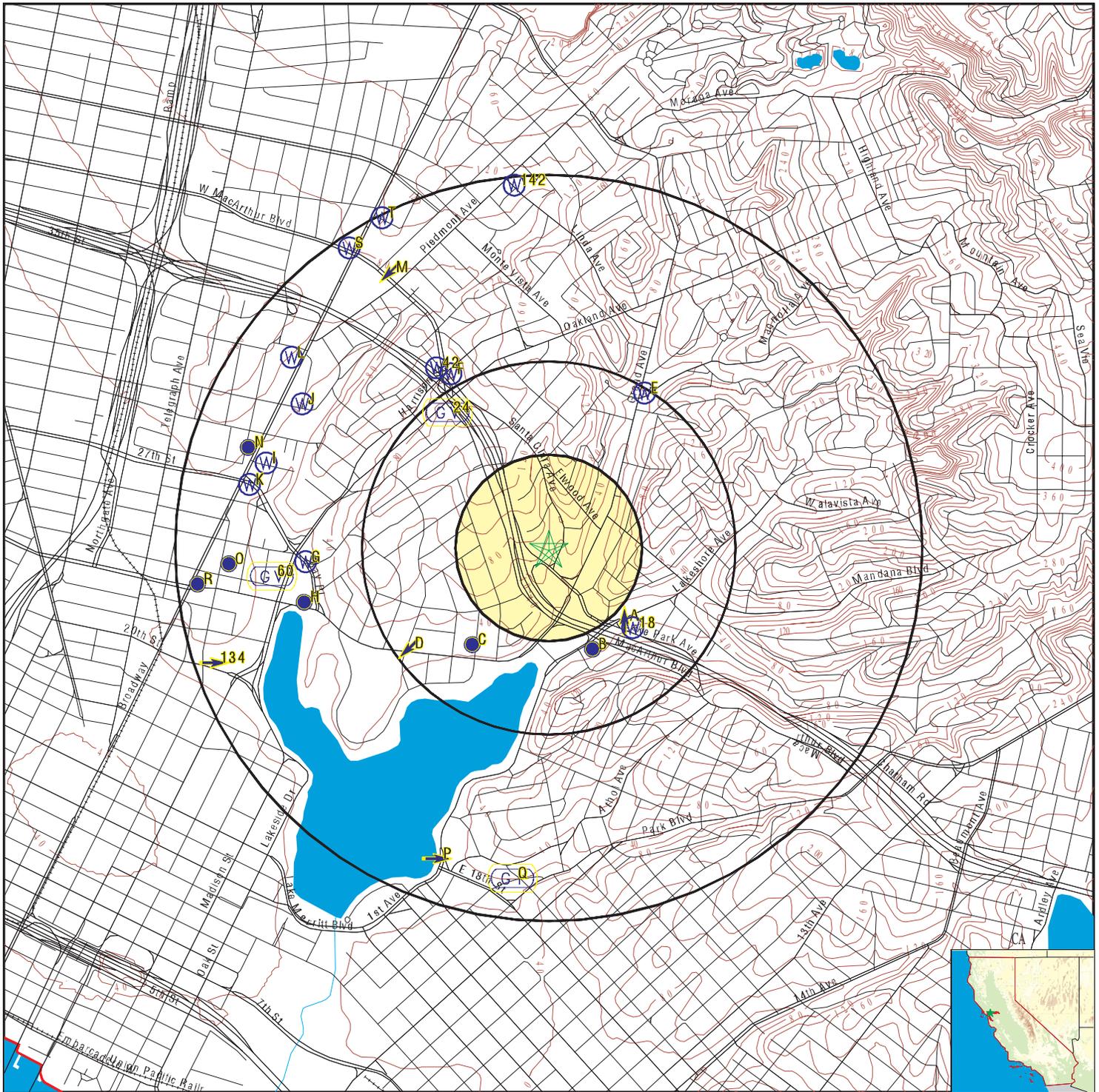
MAP ID	WELL ID	LOCATION FROM TP
J62	CAEDF0000143736	1/2 - 1 Mile WNW
J63	CAEDF0000111808	1/2 - 1 Mile WNW
I64	CAEDF0000116057	1/2 - 1 Mile WNW
J65	CAEDF0000094016	1/2 - 1 Mile WNW
I66	CAEDF0000034790	1/2 - 1 Mile WNW
J67	CAEDF0000071154	1/2 - 1 Mile WNW
J68	CAEDF0000080656	1/2 - 1 Mile WNW
K69	CAEDF0000054597	1/2 - 1 Mile WNW
I70	CAEDF0000007528	1/2 - 1 Mile WNW
I71	CAEDF0000100586	1/2 - 1 Mile WNW
I72	CAEDF0000007750	1/2 - 1 Mile WNW
I73	CAEDF0000045277	1/2 - 1 Mile WNW
I74	CAEDF0000057223	1/2 - 1 Mile WNW
K75	CAEDF0000109155	1/2 - 1 Mile West
I76	CAEDF0000106617	1/2 - 1 Mile WNW
K77	CAEDF0000139323	1/2 - 1 Mile West
I78	CAEDF0000102096	1/2 - 1 Mile WNW
L79	CAEDF0000018104	1/2 - 1 Mile NW
K80	CAEDF0000121328	1/2 - 1 Mile WNW
K81	CAEDF0000060650	1/2 - 1 Mile WNW
K82	CAEDF0000055742	1/2 - 1 Mile WNW
M83	CAEDF0000081121	1/2 - 1 Mile NNW
K84	CAEDF0000109167	1/2 - 1 Mile WNW
M85	CAEDF0000054037	1/2 - 1 Mile NNW
K86	CAEDF0000007258	1/2 - 1 Mile West
L87	CAEDF0000071778	1/2 - 1 Mile NW
L88	CAEDF0000057556	1/2 - 1 Mile NW
N89	CAEDF0000003584	1/2 - 1 Mile WNW
M90	CAEDF0000092614	1/2 - 1 Mile NNW
L91	CAEDF0000114192	1/2 - 1 Mile NW
L92	CAEDF0000122074	1/2 - 1 Mile NW
N93	CAEDF0000049019	1/2 - 1 Mile WNW
L94	CAEDF0000012548	1/2 - 1 Mile NW
N95	CAEDF0000004885	1/2 - 1 Mile WNW
M96	CAEDF0000120924	1/2 - 1 Mile NNW
M97	CAEDF0000054652	1/2 - 1 Mile NNW
M98	CAEDF0000015646	1/2 - 1 Mile NNW
K99	CAEDF0000039052	1/2 - 1 Mile WNW
L101	CAEDF0000001977	1/2 - 1 Mile NW
L102	CAEDF0000101705	1/2 - 1 Mile NW
L103	CAEDF0000109325	1/2 - 1 Mile NW
L104	CAEDF0000066024	1/2 - 1 Mile NW
M105	CAEDF0000125230	1/2 - 1 Mile NNW
M106	CAEDF0000059364	1/2 - 1 Mile NNW
M108	CAEDF0000042188	1/2 - 1 Mile NNW
L109	CAEDF0000048141	1/2 - 1 Mile NW
M111	CAEDF0000108943	1/2 - 1 Mile NNW
L113	CAEDF0000106262	1/2 - 1 Mile NW
M114	CAEDF0000082954	1/2 - 1 Mile NNW
L115	CAEDF0000129067	1/2 - 1 Mile NW
M116	CAEDF0000034332	1/2 - 1 Mile NNW
L117	CAEDF0000050615	1/2 - 1 Mile NW

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### STATE DATABASE WELL INFORMATION

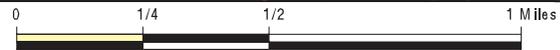
MAP ID	WELL ID	LOCATION FROM TP
L118	CAEDF0000136996	1/2 - 1 Mile NW
L119	CAEDF0000129473	1/2 - 1 Mile NW
L120	CAEDF0000056040	1/2 - 1 Mile NW
M122	CAEDF0000137936	1/2 - 1 Mile NNW
L123	CAEDF0000115771	1/2 - 1 Mile NW
L126	CAEDF0000016222	1/2 - 1 Mile NW
L127	CAEDF0000110792	1/2 - 1 Mile NW
S135	CAEDF0000143931	1/2 - 1 Mile NNW
S136	CAEDF0000088821	1/2 - 1 Mile NNW
S137	CAEDF0000013157	1/2 - 1 Mile NW
S138	CAEDF0000041806	1/2 - 1 Mile NNW
S139	CAEDF0000036170	1/2 - 1 Mile NNW
S140	CAEDF0000114025	1/2 - 1 Mile NW
S141	CAEDF0000078873	1/2 - 1 Mile NW
142	CAEDF0000067309	1/2 - 1 Mile North
S143	CAEDF0000066436	1/2 - 1 Mile NW
T144	CAEDF0000110866	1/2 - 1 Mile NNW
T145	CAEDF0000109161	1/2 - 1 Mile NNW
T146	CAEDF0000085488	1/2 - 1 Mile NNW

# PHYSICAL SETTING SOURCE MAP - 7660283.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells



SITE NAME: 401 Santa Clara Ave  
 ADDRESS: 401 Santa Clara Avenue  
 Oakland CA 94610  
 LAT/LONG: 37.812997 / 122.249113

CLIENT: Ninyo & Moore  
 CONTACT: Luke Swickard  
 INQUIRY #: 7660283.2s  
 DATE: May 22, 2024 2:48 pm

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**A1**  
**SE**  
**1/8 - 1/4 Mile**  
**Lower**

Site ID: 01-1588  
Groundwater Flow: N  
Shallow Water Depth: Not Reported  
Deep Water Depth: Not Reported  
Average Water Depth: 12-15  
Date: 06/21/1996

**AQUIFLOW      63828**

**B2**  
**SSE**  
**1/4 - 1/2 Mile**  
**Lower**

Well ID: T0600100328-MW-7      Well Type: MONITORING  
Source: EDF      Other Name: MW-7  
GAMA PFAS Testing: Not Reported  
Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600100328&assigned\\_name=MW-7&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600100328&assigned_name=MW-7&store_num=)  
GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600100328&assigned\\_name=MW-7](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600100328&assigned_name=MW-7)

**CA WELLS      CAEDF0000050586**

**A3**  
**SE**  
**1/4 - 1/2 Mile**  
**Lower**

Well ID: T0600101463-U-5      Well Type: MONITORING  
Source: EDF      Other Name: U-5  
GAMA PFAS Testing: Not Reported  
Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600101463&assigned\\_name=U-5&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600101463&assigned_name=U-5&store_num=)  
GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600101463&assigned\\_name=U-5](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600101463&assigned_name=U-5)

**CA WELLS      CAEDF0000081362**

**B4**  
**SSE**  
**1/4 - 1/2 Mile**  
**Lower**

Well ID: T0600100328-MW-2A      Well Type: MONITORING  
Source: EDF      Other Name: MW-2A  
GAMA PFAS Testing: Not Reported  
Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600100328&assigned\\_name=MW-2A&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600100328&assigned_name=MW-2A&store_num=)  
GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600100328&assigned\\_name=MW-2A](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600100328&assigned_name=MW-2A)

**CA WELLS      CAEDF0000021299**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**A5**  
**SE**  
**1/4 - 1/2 Mile**  
**Lower**

**CA WELLS      CAEDF0000031876**

Well ID:	T0600101463-U-2	Well Type:	MONITORING
Source:	EDF	Other Name:	U-2
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101463&amp;assigned_name=U-2&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101463&amp;assigned_name=U-2&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101463&amp;assigned_name=U-2">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101463&amp;assigned_name=U-2</a>		

**A6**  
**SE**  
**1/4 - 1/2 Mile**  
**Lower**

**CA WELLS      CAEDF0000102684**

Well ID:	T0600101463-U-6	Well Type:	MONITORING
Source:	EDF	Other Name:	U-6
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101463&amp;assigned_name=U-6&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101463&amp;assigned_name=U-6&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101463&amp;assigned_name=U-6">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101463&amp;assigned_name=U-6</a>		

**B7**  
**SSE**  
**1/4 - 1/2 Mile**  
**Lower**

**CA WELLS      CAEDF0000008624**

Well ID:	T0600100328-MW-9	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-9
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100328&amp;assigned_name=MW-9&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100328&amp;assigned_name=MW-9&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100328&amp;assigned_name=MW-9">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100328&amp;assigned_name=MW-9</a>		

**B8**  
**SSE**  
**1/4 - 1/2 Mile**  
**Lower**

**CA WELLS      CAEDF0000067249**

Well ID:	T0600100328-MW-1	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100328&amp;assigned_name=MW-1&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100328&amp;assigned_name=MW-1&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100328&amp;assigned_name=MW-1">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100328&amp;assigned_name=MW-1</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**B9**  
**SSE**  
**1/4 - 1/2 Mile**  
**Lower**

**CA WELLS      CAEDF0000111832**

Well ID:	T0600100328-MW-4A	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-4A
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100328&amp;assigned_name=MW-4A&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100328&amp;assigned_name=MW-4A&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100328&amp;assigned_name=MW-4A">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100328&amp;assigned_name=MW-4A</a>		

**B10**  
**SSE**  
**1/4 - 1/2 Mile**  
**Lower**

**CA WELLS      CAEDF0000002008**

Well ID:	T0600100328-MW-6	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-6
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100328&amp;assigned_name=MW-6&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100328&amp;assigned_name=MW-6&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100328&amp;assigned_name=MW-6">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100328&amp;assigned_name=MW-6</a>		

**A11**  
**SE**  
**1/4 - 1/2 Mile**  
**Lower**

**CA WELLS      CAEDF0000126904**

Well ID:	T0600101463-U-1	Well Type:	MONITORING
Source:	EDF	Other Name:	U-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101463&amp;assigned_name=U-1&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101463&amp;assigned_name=U-1&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101463&amp;assigned_name=U-1">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101463&amp;assigned_name=U-1</a>		

**B12**  
**SSE**  
**1/4 - 1/2 Mile**  
**Lower**

**CA WELLS      CAEDF0000032095**

Well ID:	T0600100328-MW-10	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-10
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100328&amp;assigned_name=MW-10&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100328&amp;assigned_name=MW-10&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100328&amp;assigned_name=MW-10">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100328&amp;assigned_name=MW-10</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**A13**  
**SE**  
**1/4 - 1/2 Mile**  
**Lower**

**CA WELLS      CAEDF0000088700**

Well ID:	T0600101463-U-3	Well Type:	MONITORING
Source:	EDF	Other Name:	U-3
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101463&amp;assigned_name=U-3&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101463&amp;assigned_name=U-3&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101463&amp;assigned_name=U-3">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101463&amp;assigned_name=U-3</a>		

**B14**  
**SSE**  
**1/4 - 1/2 Mile**  
**Lower**

**CA WELLS      CAEDF0000051851**

Well ID:	T0600100328-MW-8	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-8
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100328&amp;assigned_name=MW-8&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100328&amp;assigned_name=MW-8&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100328&amp;assigned_name=MW-8">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100328&amp;assigned_name=MW-8</a>		

**B15**  
**SSE**  
**1/4 - 1/2 Mile**  
**Lower**

**CA WELLS      CAEDF0000088672**

Well ID:	T0600100328-MW-3A	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-3A
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100328&amp;assigned_name=MW-3A&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100328&amp;assigned_name=MW-3A&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100328&amp;assigned_name=MW-3A">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100328&amp;assigned_name=MW-3A</a>		

**B16**  
**SSE**  
**1/4 - 1/2 Mile**  
**Lower**

**AQUIFLOW      63702**

Site ID:	01-0866
Groundwater Flow:	Varies
Shallow Water Depth:	Not Reported
Deep Water Depth:	Not Reported
Average Water Depth:	Not Reported
Date:	03/19/1989

**B17**  
**SSE**  
**1/4 - 1/2 Mile**  
**Lower**

**CA WELLS      CAEDF0000070819**

Well ID:	T0600100328-MW-5	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-5

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

GAMA PFAS Testing: Not Reported  
 Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600100328&assigned\\_name=MW-5&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600100328&assigned_name=MW-5&store_num=)  
 GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600100328&assigned\\_name=MW-5](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600100328&assigned_name=MW-5)

**18  
SE  
1/4 - 1/2 Mile  
Lower**

**CA WELLS      CAEDF0000122136**

Well ID: T0600101463-U-4      Well Type: MONITORING  
 Source: EDF      Other Name: U-4  
 GAMA PFAS Testing: Not Reported  
 Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600101463&assigned\\_name=U-4&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600101463&assigned_name=U-4&store_num=)  
 GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600101463&assigned\\_name=U-4](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600101463&assigned_name=U-4)

**C19  
SSW  
1/4 - 1/2 Mile  
Lower**

**AQUIFLOW      67429**

Site ID: 01-1467  
 Groundwater Flow: S  
 Shallow Water Depth: Not Reported  
 Deep Water Depth: Not Reported  
 Average Water Depth: 0.05  
 Date: 06/10/1986

**C20  
SW  
1/4 - 1/2 Mile  
Lower**

**AQUIFLOW      51910**

Site ID: 01-0878  
 Groundwater Flow: NW  
 Shallow Water Depth: Not Reported  
 Deep Water Depth: Not Reported  
 Average Water Depth: 12 ft  
 Date: 06/12/1995

**D21  
SW  
1/4 - 1/2 Mile  
Lower**

**CA WELLS      CAEDF0000058286**

Well ID: T0600101255-S-3      Well Type: MONITORING  
 Source: EDF      Other Name: S-3  
 GAMA PFAS Testing: Not Reported  
 Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600101255&assigned\\_name=S-3&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600101255&assigned_name=S-3&store_num=)  
 GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600101255&assigned\\_name=S-3](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600101255&assigned_name=S-3)

**D22  
SW  
1/4 - 1/2 Mile  
Lower**

**CA WELLS      CAEDF0000137153**

Well ID: T0600101255-S-1      Well Type: MONITORING  
 Source: EDF      Other Name: S-1  
 GAMA PFAS Testing: Not Reported

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600101255&assigned\\_name=S-1&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600101255&assigned_name=S-1&store_num=)  
 GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600101255&assigned\\_name=S-1](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600101255&assigned_name=S-1)

**E23  
NNE  
1/4 - 1/2 Mile  
Lower**

**CA WELLS      CAEDF0000065574**

Well ID: T0600101246-MW-5      Well Type: MONITORING  
 Source: EDF      Other Name: MW-5  
 GAMA PFAS Testing: Not Reported  
 Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600101246&assigned\\_name=MW-5&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600101246&assigned_name=MW-5&store_num=)  
 GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600101246&assigned\\_name=MW-5](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600101246&assigned_name=MW-5)

**24  
NW  
1/4 - 1/2 Mile  
Higher**

**AQUIFLOW      66613**

Site ID: 01-1618  
 Groundwater Flow: Varies  
 Shallow Water Depth: Not Reported  
 Deep Water Depth: Not Reported  
 Average Water Depth: 80 ft  
 Date: 11/26/1997

**D25  
SW  
1/4 - 1/2 Mile  
Lower**

**CA WELLS      CAEDF0000051186**

Well ID: T0600101255-S-2      Well Type: MONITORING  
 Source: EDF      Other Name: S-2  
 GAMA PFAS Testing: Not Reported  
 Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600101255&assigned\\_name=S-2&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600101255&assigned_name=S-2&store_num=)  
 GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600101255&assigned\\_name=S-2](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600101255&assigned_name=S-2)

**D26  
WSW  
1/4 - 1/2 Mile  
Lower**

**AQUIFLOW      63687**

Site ID: 01-1360  
 Groundwater Flow: SW  
 Shallow Water Depth: Not Reported  
 Deep Water Depth: Not Reported  
 Average Water Depth: 5  
 Date: 11/17/1994

**D27  
SW  
1/4 - 1/2 Mile  
Lower**

**CA WELLS      CAEDF0000033600**

Well ID: T0600101255-S-4      Well Type: MONITORING  
 Source: EDF      Other Name: S-4  
 GAMA PFAS Testing: Not Reported  
 Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600101255&assigned\\_name=S-4&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600101255&assigned_name=S-4&store_num=)

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600101255&assigned\\_name=S-4](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600101255&assigned_name=S-4)

**E28**  
**NNE**  
**1/4 - 1/2 Mile**  
**Lower**

**CA WELLS CAEDF0000036821**

Well ID: T0600101246-MW-4 Well Type: MONITORING  
Source: EDF Other Name: MW-4  
GAMA PFAS Testing: Not Reported  
Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600101246&assigned\\_name=MW-4&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600101246&assigned_name=MW-4&store_num=)  
GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600101246&assigned\\_name=MW-4](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600101246&assigned_name=MW-4)

**D29**  
**SW**  
**1/4 - 1/2 Mile**  
**Lower**

**CA WELLS CAEDF0000107581**

Well ID: T0600101255-S-5 Well Type: MONITORING  
Source: EDF Other Name: S-5  
GAMA PFAS Testing: Not Reported  
Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600101255&assigned\\_name=S-5&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600101255&assigned_name=S-5&store_num=)  
GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600101255&assigned\\_name=S-5](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600101255&assigned_name=S-5)

**E30**  
**NNE**  
**1/4 - 1/2 Mile**  
**Lower**

**CA WELLS CAEDF0000080960**

Well ID: T0600101246-MW-3 Well Type: MONITORING  
Source: EDF Other Name: MW-3  
GAMA PFAS Testing: Not Reported  
Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600101246&assigned\\_name=MW-3&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600101246&assigned_name=MW-3&store_num=)  
GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600101246&assigned\\_name=MW-3](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600101246&assigned_name=MW-3)

**F31**  
**NNW**  
**1/4 - 1/2 Mile**  
**Higher**

**CA WELLS CAEDF0000004319**

Well ID: T0600100908-MW-2 Well Type: MONITORING  
Source: EDF Other Name: MW-2  
GAMA PFAS Testing: Not Reported  
Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600100908&assigned\\_name=MW-2&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600100908&assigned_name=MW-2&store_num=)  
GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600100908&assigned\\_name=MW-2](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600100908&assigned_name=MW-2)

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**E32**  
**NNE**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000125419**

Well ID:	T0600101246-MW-2	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-2
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101246&amp;assigned_name=MW-2&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101246&amp;assigned_name=MW-2&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101246&amp;assigned_name=MW-2">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101246&amp;assigned_name=MW-2</a>		

**F33**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000066106**

Well ID:	T0600100908-MW-1	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100908&amp;assigned_name=MW-1&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100908&amp;assigned_name=MW-1&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100908&amp;assigned_name=MW-1">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100908&amp;assigned_name=MW-1</a>		

**E34**  
**NNE**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000143782**

Well ID:	T0600101246-MW-1	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101246&amp;assigned_name=MW-1&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101246&amp;assigned_name=MW-1&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101246&amp;assigned_name=MW-1">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101246&amp;assigned_name=MW-1</a>		

**F35**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000071273**

Well ID:	T0600100908-MW-3	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-3
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100908&amp;assigned_name=MW-3&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100908&amp;assigned_name=MW-3&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100908&amp;assigned_name=MW-3">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100908&amp;assigned_name=MW-3</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**F36**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000031589**

Well ID:	T0600101493-MW-11	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-11
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101493&amp;assigned_name=MW-11&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101493&amp;assigned_name=MW-11&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101493&amp;assigned_name=MW-11">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101493&amp;assigned_name=MW-11</a>		

**F37**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000099752**

Well ID:	T0600101493-MW-10	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-10
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101493&amp;assigned_name=MW-10&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101493&amp;assigned_name=MW-10&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101493&amp;assigned_name=MW-10">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101493&amp;assigned_name=MW-10</a>		

**F38**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000090931**

Well ID:	T0600101493-MW-1	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101493&amp;assigned_name=MW-1&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101493&amp;assigned_name=MW-1&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101493&amp;assigned_name=MW-1">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101493&amp;assigned_name=MW-1</a>		

**F39**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000004436**

Well ID:	T0600101493-MW-6	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-6
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101493&amp;assigned_name=MW-6&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101493&amp;assigned_name=MW-6&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101493&amp;assigned_name=MW-6">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101493&amp;assigned_name=MW-6</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**F40**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000086207**

Well ID:	T0600101493-MW-7	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-7
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101493&amp;assigned_name=MW-7&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101493&amp;assigned_name=MW-7&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101493&amp;assigned_name=MW-7">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101493&amp;assigned_name=MW-7</a>		

**F41**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000051773**

Well ID:	T0600101493-MW-8	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-8
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101493&amp;assigned_name=MW-8&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101493&amp;assigned_name=MW-8&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101493&amp;assigned_name=MW-8">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101493&amp;assigned_name=MW-8</a>		

**42**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000110351**

Well ID:	T0600101493-MW-9	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-9
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101493&amp;assigned_name=MW-9&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101493&amp;assigned_name=MW-9&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101493&amp;assigned_name=MW-9">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101493&amp;assigned_name=MW-9</a>		

**G43**  
**West**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000122892**

Well ID:	T0600100193-LF-1	Well Type:	MONITORING
Source:	EDF	Other Name:	LF-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100193&amp;assigned_name=LF-1&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100193&amp;assigned_name=LF-1&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100193&amp;assigned_name=LF-1">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100193&amp;assigned_name=LF-1</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**G44**  
**West**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000136846**

Well ID: T0600100193-LF-5      Well Type: MONITORING  
 Source: EDF      Other Name: LF-5  
 GAMA PFAS Testing: Not Reported  
 Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600100193&assigned\\_name=LF-5&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600100193&assigned_name=LF-5&store_num=)  
 GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600100193&assigned\\_name=LF-5](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600100193&assigned_name=LF-5)

**G45**  
**West**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000143617**

Well ID: T0600100193-LF-4      Well Type: MONITORING  
 Source: EDF      Other Name: LF-4  
 GAMA PFAS Testing: Not Reported  
 Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600100193&assigned\\_name=LF-4&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600100193&assigned_name=LF-4&store_num=)  
 GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600100193&assigned\\_name=LF-4](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600100193&assigned_name=LF-4)

**G46**  
**West**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000138403**

Well ID: T0600100193-LF-3      Well Type: MONITORING  
 Source: EDF      Other Name: LF-3  
 GAMA PFAS Testing: Not Reported  
 Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600100193&assigned\\_name=LF-3&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600100193&assigned_name=LF-3&store_num=)  
 GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600100193&assigned\\_name=LF-3](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600100193&assigned_name=LF-3)

**H47**  
**WSW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000046342**

Well ID: T0600100313-MW-5      Well Type: MONITORING  
 Source: EDF      Other Name: MW-5  
 GAMA PFAS Testing: Not Reported  
 Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600100313&assigned\\_name=MW-5&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600100313&assigned_name=MW-5&store_num=)  
 GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600100313&assigned\\_name=MW-5](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600100313&assigned_name=MW-5)

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**G48**  
**West**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000141594**

Well ID:	T0600100193-LF-2	Well Type:	MONITORING
Source:	EDF	Other Name:	LF-2
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100193&amp;assigned_name=LF-2&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100193&amp;assigned_name=LF-2&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100193&amp;assigned_name=LF-2">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100193&amp;assigned_name=LF-2</a>		

**H49**  
**WSW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000080876**

Well ID:	T0600100313-MW-8	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-8
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100313&amp;assigned_name=MW-8&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100313&amp;assigned_name=MW-8&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100313&amp;assigned_name=MW-8">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100313&amp;assigned_name=MW-8</a>		

**H50**  
**WSW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000103712**

Well ID:	T0600100313-MW-4	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-4
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100313&amp;assigned_name=MW-4&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100313&amp;assigned_name=MW-4&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100313&amp;assigned_name=MW-4">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100313&amp;assigned_name=MW-4</a>		

**G51**  
**West**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000056285**

Well ID:	T0600102237-S-5	Well Type:	MONITORING
Source:	EDF	Other Name:	S-5
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600102237&amp;assigned_name=S-5&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600102237&amp;assigned_name=S-5&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600102237&amp;assigned_name=S-5">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600102237&amp;assigned_name=S-5</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**G52**  
**West**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000093340**

Well ID:	T0600102237-S-4	Well Type:	MONITORING
Source:	EDF	Other Name:	S-4
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600102237&amp;assigned_name=S-4&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600102237&amp;assigned_name=S-4&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600102237&amp;assigned_name=S-4">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600102237&amp;assigned_name=S-4</a>		

**H53**  
**WSW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000087897**

Well ID:	T0600100313-MW-6	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-6
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100313&amp;assigned_name=MW-6&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100313&amp;assigned_name=MW-6&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100313&amp;assigned_name=MW-6">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100313&amp;assigned_name=MW-6</a>		

**G54**  
**West**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000133385**

Well ID:	T0600102237-S-3	Well Type:	MONITORING
Source:	EDF	Other Name:	S-3
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600102237&amp;assigned_name=S-3&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600102237&amp;assigned_name=S-3&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600102237&amp;assigned_name=S-3">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600102237&amp;assigned_name=S-3</a>		

**G55**  
**West**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000033437**

Well ID:	T0600102237-S-6	Well Type:	MONITORING
Source:	EDF	Other Name:	S-6
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600102237&amp;assigned_name=S-6&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600102237&amp;assigned_name=S-6&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600102237&amp;assigned_name=S-6">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600102237&amp;assigned_name=S-6</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**G56**  
**West**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000037198**

Well ID:	T0600102237-S-2	Well Type:	MONITORING
Source:	EDF	Other Name:	S-2
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600102237&amp;assigned_name=S-2&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600102237&amp;assigned_name=S-2&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600102237&amp;assigned_name=S-2">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600102237&amp;assigned_name=S-2</a>		

**G57**  
**West**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000036118**

Well ID:	T0600102237-S-1	Well Type:	MONITORING
Source:	EDF	Other Name:	S-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600102237&amp;assigned_name=S-1&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600102237&amp;assigned_name=S-1&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600102237&amp;assigned_name=S-1">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600102237&amp;assigned_name=S-1</a>		

**H58**  
**West**  
**1/2 - 1 Mile**  
**Lower**

**AQUIFLOW      55836**

Site ID:	01-0341
Groundwater Flow:	N,W,Varies
Shallow Water Depth:	Not Reported
Deep Water Depth:	Not Reported
Average Water Depth:	20
Date:	09/14/1989

**H59**  
**West**  
**1/2 - 1 Mile**  
**Lower**

**AQUIFLOW      55837**

Site ID:	01-0341
Groundwater Flow:	N
Shallow Water Depth:	Not Reported
Deep Water Depth:	Not Reported
Average Water Depth:	Not Reported
Date:	08/17/1988

**60**  
**West**  
**1/2 - 1 Mile**  
**Lower**

**AQUIFLOW      63897**

Site ID:	01-1846
Groundwater Flow:	Varies
Shallow Water Depth:	Not Reported
Deep Water Depth:	Not Reported
Average Water Depth:	20
Date:	08/11/1993

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**I61**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000043225**

Well ID:	T10000008417-MW3	Well Type:	MONITORING
Source:	EDF	Other Name:	MW3
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T10000008417&amp;assigned_name=MW3&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T10000008417&amp;assigned_name=MW3&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T10000008417&amp;assigned_name=MW3">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T10000008417&amp;assigned_name=MW3</a>		

**J62**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000143736**

Well ID:	T10000010020-GW-4	Well Type:	MONITORING
Source:	EDF	Other Name:	GW-4
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T10000010020&amp;assigned_name=GW-4&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T10000010020&amp;assigned_name=GW-4&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T10000010020&amp;assigned_name=GW-4">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T10000010020&amp;assigned_name=GW-4</a>		

**J63**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000111808**

Well ID:	T10000010020-GW-5	Well Type:	MONITORING
Source:	EDF	Other Name:	GW-5
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T10000010020&amp;assigned_name=GW-5&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T10000010020&amp;assigned_name=GW-5&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T10000010020&amp;assigned_name=GW-5">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T10000010020&amp;assigned_name=GW-5</a>		

**I64**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000116057**

Well ID:	T10000008417-MW1	Well Type:	MONITORING
Source:	EDF	Other Name:	MW1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T10000008417&amp;assigned_name=MW1&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T10000008417&amp;assigned_name=MW1&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T10000008417&amp;assigned_name=MW1">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T10000008417&amp;assigned_name=MW1</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**J65**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000094016**

Well ID:	T10000010020-GW-3	Well Type:	MONITORING
Source:	EDF	Other Name:	GW-3
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T10000010020&amp;assigned_name=GW-3&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T10000010020&amp;assigned_name=GW-3&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T10000010020&amp;assigned_name=GW-3">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T10000010020&amp;assigned_name=GW-3</a>		

**I66**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000034790**

Well ID:	T10000008417-MW2	Well Type:	MONITORING
Source:	EDF	Other Name:	MW2
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T10000008417&amp;assigned_name=MW2&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T10000008417&amp;assigned_name=MW2&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T10000008417&amp;assigned_name=MW2">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T10000008417&amp;assigned_name=MW2</a>		

**J67**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000071154**

Well ID:	T10000010020-GW-2	Well Type:	MONITORING
Source:	EDF	Other Name:	GW-2
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T10000010020&amp;assigned_name=GW-2&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T10000010020&amp;assigned_name=GW-2&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T10000010020&amp;assigned_name=GW-2">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T10000010020&amp;assigned_name=GW-2</a>		

**J68**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000080656**

Well ID:	T10000010020-GW-1	Well Type:	MONITORING
Source:	EDF	Other Name:	GW-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T10000010020&amp;assigned_name=GW-1&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T10000010020&amp;assigned_name=GW-1&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T10000010020&amp;assigned_name=GW-1">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T10000010020&amp;assigned_name=GW-1</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**K69**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000054597**

Well ID:	T0600101812-B-12	Well Type:	MONITORING
Source:	EDF	Other Name:	B-12
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101812&amp;assigned_name=B-12&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101812&amp;assigned_name=B-12&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101812&amp;assigned_name=B-12">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101812&amp;assigned_name=B-12</a>		

**I70**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000007528**

Well ID:	T0600100227-MW-1	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100227&amp;assigned_name=MW-1&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100227&amp;assigned_name=MW-1&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100227&amp;assigned_name=MW-1">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100227&amp;assigned_name=MW-1</a>		

**I71**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000100586**

Well ID:	T0600100227-MW-9	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-9
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100227&amp;assigned_name=MW-9&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100227&amp;assigned_name=MW-9&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100227&amp;assigned_name=MW-9">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100227&amp;assigned_name=MW-9</a>		

**I72**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000007750**

Well ID:	T0600100227-VW-3	Well Type:	MONITORING
Source:	EDF	Other Name:	VW-3
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100227&amp;assigned_name=VW-3&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100227&amp;assigned_name=VW-3&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100227&amp;assigned_name=VW-3">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100227&amp;assigned_name=VW-3</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**I73**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000045277**

Well ID:	T0600100227-VW-2	Well Type:	MONITORING
Source:	EDF	Other Name:	VW-2
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100227&amp;assigned_name=VW-2&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100227&amp;assigned_name=VW-2&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100227&amp;assigned_name=VW-2">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100227&amp;assigned_name=VW-2</a>		

**I74**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000057223**

Well ID:	T0600100227-MW-3	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-3
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100227&amp;assigned_name=MW-3&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100227&amp;assigned_name=MW-3&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100227&amp;assigned_name=MW-3">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100227&amp;assigned_name=MW-3</a>		

**K75**  
**West**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000109155**

Well ID:	T0600101812-B-8	Well Type:	MONITORING
Source:	EDF	Other Name:	B-8
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101812&amp;assigned_name=B-8&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101812&amp;assigned_name=B-8&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101812&amp;assigned_name=B-8">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101812&amp;assigned_name=B-8</a>		

**I76**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000106617**

Well ID:	T0600100227-VW-1	Well Type:	MONITORING
Source:	EDF	Other Name:	VW-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100227&amp;assigned_name=VW-1&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100227&amp;assigned_name=VW-1&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100227&amp;assigned_name=VW-1">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100227&amp;assigned_name=VW-1</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**K77**  
**West**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000139323**

Well ID:	T0600101812-B-7	Well Type:	MONITORING
Source:	EDF	Other Name:	B-7
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101812&amp;assigned_name=B-7&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101812&amp;assigned_name=B-7&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101812&amp;assigned_name=B-7">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101812&amp;assigned_name=B-7</a>		

**I78**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000102096**

Well ID:	T0600100227-MW-8	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-8
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100227&amp;assigned_name=MW-8&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100227&amp;assigned_name=MW-8&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100227&amp;assigned_name=MW-8">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100227&amp;assigned_name=MW-8</a>		

**L79**  
**NW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000018104**

Well ID:	T0600100406-MW-13	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-13
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-13&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-13&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-13">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-13</a>		

**K80**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000121328**

Well ID:	T0600101812-B-11	Well Type:	MONITORING
Source:	EDF	Other Name:	B-11
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101812&amp;assigned_name=B-11&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101812&amp;assigned_name=B-11&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101812&amp;assigned_name=B-11">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101812&amp;assigned_name=B-11</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**K81**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000060650**

Well ID:	T0600101812-B-5	Well Type:	MONITORING
Source:	EDF	Other Name:	B-5
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101812&amp;assigned_name=B-5&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101812&amp;assigned_name=B-5&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101812&amp;assigned_name=B-5">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101812&amp;assigned_name=B-5</a>		

**K82**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000055742**

Well ID:	T0600100227-MW-7	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-7
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100227&amp;assigned_name=MW-7&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100227&amp;assigned_name=MW-7&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100227&amp;assigned_name=MW-7">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100227&amp;assigned_name=MW-7</a>		

**M83**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000081121**

Well ID:	T0600101240-MW-1	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101240&amp;assigned_name=MW-1&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101240&amp;assigned_name=MW-1&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101240&amp;assigned_name=MW-1">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101240&amp;assigned_name=MW-1</a>		

**K84**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000109167**

Well ID:	T0600101812-B-6	Well Type:	MONITORING
Source:	EDF	Other Name:	B-6
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101812&amp;assigned_name=B-6&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101812&amp;assigned_name=B-6&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101812&amp;assigned_name=B-6">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101812&amp;assigned_name=B-6</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**M85**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000054037**

Well ID:	T0600101240-MW-3	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-3
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101240&amp;assigned_name=MW-3&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101240&amp;assigned_name=MW-3&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101240&amp;assigned_name=MW-3">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101240&amp;assigned_name=MW-3</a>		

**K86**  
**West**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000007258**

Well ID:	T0600101812-B-1	Well Type:	MONITORING
Source:	EDF	Other Name:	B-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101812&amp;assigned_name=B-1&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101812&amp;assigned_name=B-1&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101812&amp;assigned_name=B-1">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101812&amp;assigned_name=B-1</a>		

**L87**  
**NW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000071778**

Well ID:	T0600100406-MW-26	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-26
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-26&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-26&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-26">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-26</a>		

**L88**  
**NW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000057556**

Well ID:	T0600100406-MW-27	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-27
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-27&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-27&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-27">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-27</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**N89**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF000003584**

Well ID:	T1000008417-MW6	Well Type:	MONITORING
Source:	EDF	Other Name:	MW6
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T1000008417&amp;assigned_name=MW6&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T1000008417&amp;assigned_name=MW6&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T1000008417&amp;assigned_name=MW6">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T1000008417&amp;assigned_name=MW6</a>		

**M90**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000092614**

Well ID:	T0600101240-MW-5	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-5
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101240&amp;assigned_name=MW-5&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101240&amp;assigned_name=MW-5&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101240&amp;assigned_name=MW-5">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101240&amp;assigned_name=MW-5</a>		

**L91**  
**NW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000114192**

Well ID:	T0600100406-MW-25	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-25
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-25&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-25&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-25">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-25</a>		

**L92**  
**NW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000122074**

Well ID:	T0600100406-MW-7	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-7
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-7&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-7&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-7">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-7</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**N93**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000049019**

Well ID:	T10000008417-MW4	Well Type:	MONITORING
Source:	EDF	Other Name:	MW4
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T10000008417&amp;assigned_name=MW4&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T10000008417&amp;assigned_name=MW4&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T10000008417&amp;assigned_name=MW4">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T10000008417&amp;assigned_name=MW4</a>		

**L94**  
**NW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000012548**

Well ID:	T0600100406-MW-8	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-8
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-8&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-8&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-8">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-8</a>		

**N95**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000004885**

Well ID:	T10000008417-MW5	Well Type:	MONITORING
Source:	EDF	Other Name:	MW5
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T10000008417&amp;assigned_name=MW5&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T10000008417&amp;assigned_name=MW5&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T10000008417&amp;assigned_name=MW5">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T10000008417&amp;assigned_name=MW5</a>		

**M96**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF00000120924**

Well ID:	T0600101240-MW-4	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-4
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101240&amp;assigned_name=MW-4&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101240&amp;assigned_name=MW-4&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101240&amp;assigned_name=MW-4">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101240&amp;assigned_name=MW-4</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**M97**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000054652**

Well ID:	T0600101240-MW-2	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-2
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101240&amp;assigned_name=MW-2&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101240&amp;assigned_name=MW-2&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101240&amp;assigned_name=MW-2">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101240&amp;assigned_name=MW-2</a>		

**M98**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000015646**

Well ID:	T0600102243-MW-4	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-4
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600102243&amp;assigned_name=MW-4&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600102243&amp;assigned_name=MW-4&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600102243&amp;assigned_name=MW-4">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600102243&amp;assigned_name=MW-4</a>		

**K99**  
**WNW**  
**1/2 - 1 Mile**  
**Lower**

**CA WELLS      CAEDF0000039052**

Well ID:	T0600101812-B-10	Well Type:	MONITORING
Source:	EDF	Other Name:	B-10
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101812&amp;assigned_name=B-10&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101812&amp;assigned_name=B-10&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101812&amp;assigned_name=B-10">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101812&amp;assigned_name=B-10</a>		

**O100**  
**West**  
**1/2 - 1 Mile**  
**Lower**

**AQUIFLOW      67866**

Site ID:	01-1469
Groundwater Flow:	SW
Shallow Water Depth:	Not Reported
Deep Water Depth:	Not Reported
Average Water Depth:	16-18
Date:	12/01/1988

**L101**  
**NW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000001977**

Well ID:	T0600100406-MW-6	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-6

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

GAMA PFAS Testing: Not Reported  
 Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600100406&assigned\\_name=MW-6&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600100406&assigned_name=MW-6&store_num=)  
 GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600100406&assigned\\_name=MW-6](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600100406&assigned_name=MW-6)

**L102  
NW  
1/2 - 1 Mile  
Higher**

**CA WELLS      CAEDF0000101705**

Well ID: T0600100406-MW-24      Well Type: MONITORING  
 Source: EDF      Other Name: MW-24  
 GAMA PFAS Testing: Not Reported  
 Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600100406&assigned\\_name=MW-24&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600100406&assigned_name=MW-24&store_num=)  
 GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600100406&assigned\\_name=MW-24](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600100406&assigned_name=MW-24)

**L103  
NW  
1/2 - 1 Mile  
Higher**

**CA WELLS      CAEDF0000109325**

Well ID: T0600100406-MW-4      Well Type: MONITORING  
 Source: EDF      Other Name: MW-4  
 GAMA PFAS Testing: Not Reported  
 Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600100406&assigned\\_name=MW-4&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600100406&assigned_name=MW-4&store_num=)  
 GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600100406&assigned\\_name=MW-4](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600100406&assigned_name=MW-4)

**L104  
NW  
1/2 - 1 Mile  
Higher**

**CA WELLS      CAEDF0000066024**

Well ID: T0600100406-MW-23      Well Type: MONITORING  
 Source: EDF      Other Name: MW-23  
 GAMA PFAS Testing: Not Reported  
 Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600100406&assigned\\_name=MW-23&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600100406&assigned_name=MW-23&store_num=)  
 GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600100406&assigned\\_name=MW-23](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600100406&assigned_name=MW-23)

**M105  
NNW  
1/2 - 1 Mile  
Higher**

**CA WELLS      CAEDF0000125230**

Well ID: T0600102243-MW-8      Well Type: MONITORING  
 Source: EDF      Other Name: MW-8  
 GAMA PFAS Testing: Not Reported  
 Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600102243&assigned\\_name=MW-8&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600102243&assigned_name=MW-8&store_num=)

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600102243&assigned\\_name=MW-8](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600102243&assigned_name=MW-8)

**M106  
NNW  
1/2 - 1 Mile  
Higher**

**CA WELLS    CAEDF0000059364**

Well ID:	T0600102243-MW-6	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-6
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600102243&amp;assigned_name=MW-6&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600102243&amp;assigned_name=MW-6&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600102243&amp;assigned_name=MW-6">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600102243&amp;assigned_name=MW-6</a>		

**N107  
WNW  
1/2 - 1 Mile  
Higher**

**AQUIFLOW    64091**

Site ID:	01-0575
Groundwater Flow:	Varies
Shallow Water Depth:	10.40
Deep Water Depth:	14.49
Average Water Depth:	Not Reported
Date:	08/20/1992

**M108  
NNW  
1/2 - 1 Mile  
Higher**

**CA WELLS    CAEDF0000042188**

Well ID:	T0600102243-MW-3	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-3
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600102243&amp;assigned_name=MW-3&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600102243&amp;assigned_name=MW-3&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600102243&amp;assigned_name=MW-3">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600102243&amp;assigned_name=MW-3</a>		

**L109  
NW  
1/2 - 1 Mile  
Higher**

**CA WELLS    CAEDF0000048141**

Well ID:	T0600100406-MW-3	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-3
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-3&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-3&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-3">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-3</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**O110**  
**West**  
**1/2 - 1 Mile**  
**Lower**

Site ID: 01-3663  
Groundwater Flow: NE  
Shallow Water Depth: Not Reported  
Deep Water Depth: Not Reported  
Average Water Depth: 12  
Date: 01/29/1988

**AQUIFLOW      63934**

**M111**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

Well ID: T0600102243-MW-2      Well Type: MONITORING  
Source: EDF      Other Name: MW-2  
GAMA PFAS Testing: Not Reported  
Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600102243&assigned\\_name=MW-2&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600102243&assigned_name=MW-2&store_num=)  
GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600102243&assigned\\_name=MW-2](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600102243&assigned_name=MW-2)

**CA WELLS      CAEDF0000108943**

**M112**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

Site ID: 01-1345  
Groundwater Flow: SW  
Shallow Water Depth: 13.82  
Deep Water Depth: 14.30  
Average Water Depth: Not Reported  
Date: 01/19/1995

**AQUIFLOW      63931**

**L113**  
**NW**  
**1/2 - 1 Mile**  
**Higher**

Well ID: T0600100406-MW-9      Well Type: MONITORING  
Source: EDF      Other Name: MW-9  
GAMA PFAS Testing: Not Reported  
Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600100406&assigned\\_name=MW-9&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600100406&assigned_name=MW-9&store_num=)  
GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600100406&assigned\\_name=MW-9](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600100406&assigned_name=MW-9)

**CA WELLS      CAEDF0000106262**

**M114**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

Well ID: T0600102243-MW-1      Well Type: MONITORING  
Source: EDF      Other Name: MW-1  
GAMA PFAS Testing: Not Reported  
Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600102243&assigned\\_name=MW-1&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600102243&assigned_name=MW-1&store_num=)  
GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600102243&assigned\\_name=MW-1](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600102243&assigned_name=MW-1)

**CA WELLS      CAEDF0000082954**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**L115**  
**NW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000129067**

Well ID:	T0600100406-MW-15	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-15
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-15&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-15&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-15">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-15</a>		

**M116**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000034332**

Well ID:	T0600102243-MW-5	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-5
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600102243&amp;assigned_name=MW-5&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600102243&amp;assigned_name=MW-5&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600102243&amp;assigned_name=MW-5">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600102243&amp;assigned_name=MW-5</a>		

**L117**  
**NW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000050615**

Well ID:	T0600100406-MW-16B	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-16B
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-16B&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-16B&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-16B">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-16B</a>		

**L118**  
**NW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000136996**

Well ID:	T0600100406-MW-17A	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-17A
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-17A&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-17A&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-17A">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-17A</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**L119  
NW  
1/2 - 1 Mile  
Higher**

**CA WELLS      CAEDF0000129473**

Well ID:	T0600100406-MW-21	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-21
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-21&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-21&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-21">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-21</a>		

**L120  
NW  
1/2 - 1 Mile  
Higher**

**CA WELLS      CAEDF0000056040**

Well ID:	T0600100406-MW-17B	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-17B
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-17B&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-17B&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-17B">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-17B</a>		

**N121  
WNW  
1/2 - 1 Mile  
Lower**

**AQUIFLOW      63622**

Site ID:	01-0241
Groundwater Flow:	S
Shallow Water Depth:	Not Reported
Deep Water Depth:	Not Reported
Average Water Depth:	7.9
Date:	11/28/1988

**M122  
NNW  
1/2 - 1 Mile  
Higher**

**CA WELLS      CAEDF0000137936**

Well ID:	T0600102243-MW-7	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-7
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600102243&amp;assigned_name=MW-7&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600102243&amp;assigned_name=MW-7&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600102243&amp;assigned_name=MW-7">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600102243&amp;assigned_name=MW-7</a>		

**L123  
NW  
1/2 - 1 Mile  
Higher**

**CA WELLS      CAEDF0000115771**

Well ID:	T0600100406-MW-16A	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-16A

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

GAMA PFAS Testing: Not Reported  
 Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600100406&assigned\\_name=MW-16A&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600100406&assigned_name=MW-16A&store_num=)  
 GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600100406&assigned\\_name=MW-16A](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600100406&assigned_name=MW-16A)

**P124**  
**SSW**  
**1/2 - 1 Mile**  
**Lower**

Site ID:	01-1074	<b>AQUIFLOW</b>	<b>55832</b>
Groundwater Flow:	E		
Shallow Water Depth:	Not Reported		
Deep Water Depth:	Not Reported		
Average Water Depth:	20		
Date:	01/01/1993		

**P125**  
**SSW**  
**1/2 - 1 Mile**  
**Lower**

Site ID:	01-1074	<b>AQUIFLOW</b>	<b>55833</b>
Groundwater Flow:	E		
Shallow Water Depth:	Not Reported		
Deep Water Depth:	Not Reported		
Average Water Depth:	15		
Date:	03/08/1995		

**L126**  
**NW**  
**1/2 - 1 Mile**  
**Higher**

		<b>CA WELLS</b>	<b>CAEDF0000016222</b>
Well ID:	T0600100406-MW-20	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-20
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-20&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-20&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-20">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-20</a>		

**L127**  
**NW**  
**1/2 - 1 Mile**  
**Higher**

		<b>CA WELLS</b>	<b>CAEDF00000110792</b>
Well ID:	T0600100406-MW-1	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-1&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100406&amp;assigned_name=MW-1&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-1">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100406&amp;assigned_name=MW-1</a>		

**Q128**  
**South**  
**1/2 - 1 Mile**  
**Lower**

Site ID:	01-1692	<b>AQUIFLOW</b>	<b>55818</b>
Groundwater Flow:	SW,W,Varies		
Shallow Water Depth:	Not Reported		
Deep Water Depth:	Not Reported		
Average Water Depth:	7-22		
Date:	05/1990		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

<b>Q129</b> <b>South</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-1692 SW,W,Varies 1.66 4.92 Not Reported 10/30/1995	<b>AQUIFLOW</b>	<b>55819</b>
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<b>Q130</b> <b>South</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-1692 SW,W,Varies Not Reported Not Reported 3-20 07/29/1994	<b>AQUIFLOW</b>	<b>55820</b>
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<b>R131</b> <b>West</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-0875 SE Not Reported Not Reported Not Reported 11/09/1988	<b>AQUIFLOW</b>	<b>55889</b>
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<b>R132</b> <b>West</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-0875 SW Not Reported Not Reported 13 02/15/1989	<b>AQUIFLOW</b>	<b>55890</b>
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<b>R133</b> <b>West</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-0875 E, W Not Reported Not Reported Not Reported 10/07/1992	<b>AQUIFLOW</b>	<b>55891</b>
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<b>134</b> <b>WSW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-4011 E 4 8 Not Reported 03/18/1993	<b>AQUIFLOW</b>	<b>63635</b>
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<b>S135</b> <b>NNW</b> <b>1/2 - 1 Mile</b> <b>Higher</b>			<b>CA WELLS</b>	<b>CAEDF0000143931</b>
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Well ID:	T0600100334-EA-2	Well Type:	MONITORING
Source:	EDF	Other Name:	EA-2
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100334&amp;assigned_name=EA-2&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100334&amp;assigned_name=EA-2&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100334&amp;assigned_name=EA-2">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100334&amp;assigned_name=EA-2</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**S136**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000088821**

Well ID:	T0600100334-B-2	Well Type:	MONITORING
Source:	EDF	Other Name:	B-2
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100334&amp;assigned_name=B-2&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100334&amp;assigned_name=B-2&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100334&amp;assigned_name=B-2">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100334&amp;assigned_name=B-2</a>		

**S137**  
**NW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000013157**

Well ID:	T0600100334-EA-1	Well Type:	MONITORING
Source:	EDF	Other Name:	EA-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100334&amp;assigned_name=EA-1&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100334&amp;assigned_name=EA-1&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100334&amp;assigned_name=EA-1">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100334&amp;assigned_name=EA-1</a>		

**S138**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000041806**

Well ID:	T0600100334-B-4	Well Type:	MONITORING
Source:	EDF	Other Name:	B-4
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100334&amp;assigned_name=B-4&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100334&amp;assigned_name=B-4&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100334&amp;assigned_name=B-4">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100334&amp;assigned_name=B-4</a>		

**S139**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000036170**

Well ID:	T0600100334-B-3	Well Type:	MONITORING
Source:	EDF	Other Name:	B-3
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100334&amp;assigned_name=B-3&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600100334&amp;assigned_name=B-3&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100334&amp;assigned_name=B-3">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600100334&amp;assigned_name=B-3</a>		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**S140**  
**NW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000114025**

Well ID: T0600100334-F      Well Type: MONITORING  
 Source: EDF      Other Name: F  
 GAMA PFAS Testing: Not Reported  
 Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600100334&assigned\\_name=F&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600100334&assigned_name=F&store_num=)  
 GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600100334&assigned\\_name=F](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600100334&assigned_name=F)

**S141**  
**NW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000078873**

Well ID: T0600100334-B-1      Well Type: MONITORING  
 Source: EDF      Other Name: B-1  
 GAMA PFAS Testing: Not Reported  
 Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600100334&assigned\\_name=B-1&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600100334&assigned_name=B-1&store_num=)  
 GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600100334&assigned\\_name=B-1](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600100334&assigned_name=B-1)

**142**  
**North**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000067309**

Well ID: T10000011187-MW-3      Well Type: MONITORING  
 Source: EDF      Other Name: MW-3  
 GAMA PFAS Testing: Not Reported  
 Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T10000011187&assigned\\_name=MW-3&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T10000011187&assigned_name=MW-3&store_num=)  
 GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T10000011187&assigned\\_name=MW-3](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T10000011187&assigned_name=MW-3)

**S143**  
**NW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000066436**

Well ID: T0600100334-E      Well Type: MONITORING  
 Source: EDF      Other Name: E  
 GAMA PFAS Testing: Not Reported  
 Groundwater Quality Data: [https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp\\_date=&global\\_id=T0600100334&assigned\\_name=E&store\\_num=](https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0600100334&assigned_name=E&store_num=)  
 GeoTracker Data: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?cmd=MWEDFResults&global\\_id=T0600100334&assigned\\_name=E](https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0600100334&assigned_name=E)

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**T144**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000110866**

Well ID:	T0600101108-MW-11	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-11
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101108&amp;assigned_name=MW-11&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101108&amp;assigned_name=MW-11&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101108&amp;assigned_name=MW-11">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101108&amp;assigned_name=MW-11</a>		

**T145**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000109161**

Well ID:	T0600101108-MW-7	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-7
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101108&amp;assigned_name=MW-7&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101108&amp;assigned_name=MW-7&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101108&amp;assigned_name=MW-7">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101108&amp;assigned_name=MW-7</a>		

**T146**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      CAEDF0000085488**

Well ID:	T0600101108-MW-6	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-6
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	<a href="https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101108&amp;assigned_name=MW-6&amp;store_num=">https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&amp;samp_date=&amp;global_id=T0600101108&amp;assigned_name=MW-6&amp;store_num=</a>		
GeoTracker Data:	<a href="https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101108&amp;assigned_name=MW-6">https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&amp;global_id=T0600101108&amp;assigned_name=MW-6</a>		

**1G**  
**NNW**  
**1/2 - 1 Mile**  
**Lower**

**AQUIFLOW      63931**

Site ID:	01-1345
Groundwater Flow:	SW
Shallow Water Depth:	13.82
Deep Water Depth:	14.30
Average Water Depth:	Not Reported
Date:	01/19/1995

**2G**  
**NW**  
**1/4 - 1/2 Mile**  
**Lower**

**AQUIFLOW      66613**

Site ID:	01-1618
Groundwater Flow:	Varies
Shallow Water Depth:	Not Reported
Deep Water Depth:	Not Reported
Average Water Depth:	80 ft
Date:	11/26/1997

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

<b>3G</b> <b>WNW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: 01-0575 Groundwater Flow: Varies Shallow Water Depth: 10.40 Deep Water Depth: 14.49 Average Water Depth: Not Reported Date: 08/20/1992	<b>AQUIFLOW</b>	<b>64091</b>
<b>4G</b> <b>WNW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: 01-0241 Groundwater Flow: S Shallow Water Depth: Not Reported Deep Water Depth: Not Reported Average Water Depth: 7.9 Date: 11/28/1988	<b>AQUIFLOW</b>	<b>63622</b>
<b>5G</b> <b>West</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: 01-1469 Groundwater Flow: SW Shallow Water Depth: Not Reported Deep Water Depth: Not Reported Average Water Depth: 16-18 Date: 12/01/1988	<b>AQUIFLOW</b>	<b>67866</b>
<b>6G</b> <b>West</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: 01-3663 Groundwater Flow: NE Shallow Water Depth: Not Reported Deep Water Depth: Not Reported Average Water Depth: 12 Date: 01/29/1988	<b>AQUIFLOW</b>	<b>63934</b>
<b>7G</b> <b>West</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: 01-1846 Groundwater Flow: Varies Shallow Water Depth: Not Reported Deep Water Depth: Not Reported Average Water Depth: 20 Date: 08/11/1993	<b>AQUIFLOW</b>	<b>63897</b>
<b>8G</b> <b>West</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: 01-0875 Groundwater Flow: SE Shallow Water Depth: Not Reported Deep Water Depth: Not Reported Average Water Depth: Not Reported Date: 11/09/1988	<b>AQUIFLOW</b>	<b>55889</b>
<b>9G</b> <b>West</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: 01-0875 Groundwater Flow: SW Shallow Water Depth: Not Reported Deep Water Depth: Not Reported Average Water Depth: 13 Date: 02/15/1989	<b>AQUIFLOW</b>	<b>55890</b>

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation			Database	EDR ID Number
<b>10G</b> <b>West</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-0875 E, W Not Reported Not Reported Not Reported 10/07/1992	<b>AQUIFLOW</b>	<b>55891</b>
<b>11G</b> <b>West</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-0341 N,W,Varies Not Reported Not Reported 20 09/14/1989	<b>AQUIFLOW</b>	<b>55836</b>
<b>12G</b> <b>West</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-0341 N Not Reported Not Reported Not Reported 08/17/1988	<b>AQUIFLOW</b>	<b>55837</b>
<b>13G</b> <b>SE</b> <b>1/8 - 1/4 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-1588 N Not Reported Not Reported 12-15 06/21/1996	<b>AQUIFLOW</b>	<b>63828</b>
<b>14G</b> <b>WSW</b> <b>1/4 - 1/2 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-1360 SW Not Reported Not Reported 5 11/17/1994	<b>AQUIFLOW</b>	<b>63687</b>
<b>15G</b> <b>SW</b> <b>1/4 - 1/2 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-0878 NW Not Reported Not Reported 12 ft 06/12/1995	<b>AQUIFLOW</b>	<b>51910</b>
<b>16G</b> <b>SSW</b> <b>1/4 - 1/2 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-1467 S Not Reported Not Reported 0.05 06/10/1986	<b>AQUIFLOW</b>	<b>67429</b>

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation			Database	EDR ID Number
<b>17G</b> <b>SSE</b> <b>1/4 - 1/2 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-0866 Varies Not Reported Not Reported Not Reported 03/19/1989	<b>AQUIFLOW</b>	<b>63702</b>
<b>18G</b> <b>WSW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-4011 E 4 8 Not Reported 03/18/1993	<b>AQUIFLOW</b>	<b>63635</b>
<b>19G</b> <b>SSW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-1074 E Not Reported Not Reported 20 01/01/1993	<b>AQUIFLOW</b>	<b>55832</b>
<b>20G</b> <b>SSW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-1074 E Not Reported Not Reported 15 03/08/1995	<b>AQUIFLOW</b>	<b>55833</b>
<b>21G</b> <b>South</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-1692 SW,W,Varies Not Reported Not Reported 7-22 05/1990	<b>AQUIFLOW</b>	<b>55818</b>
<b>22G</b> <b>South</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-1692 SW,W,Varies 1.66 4.92 Not Reported 10/30/1995	<b>AQUIFLOW</b>	<b>55819</b>
<b>23G</b> <b>South</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-1692 SW,W,Varies Not Reported Not Reported 3-20 07/29/1994	<b>AQUIFLOW</b>	<b>55820</b>

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

## AREA RADON INFORMATION

State Database: CA Radon

### Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
94610	19	1

Federal EPA Radon Zone for ALAMEDA County: 2

- Note: Zone 1 indoor average level > 4 pCi/L.  
 : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.  
 : Zone 3 indoor average level < 2 pCi/L.

---

### Federal Area Radon Information for ALAMEDA COUNTY, CA

Number of sites tested: 49

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.776 pCi/L	100%	0%	0%
Living Area - 2nd Floor	-0.400 pCi/L	100%	0%	0%
Basement	1.338 pCi/L	100%	0%	0%

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## TOPOGRAPHIC INFORMATION

### USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

### Current USGS 7.5 Minute Topographic Map

Source: U.S. Geological Survey

## HYDROLOGIC INFORMATION

**Flood Zone Data:** This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

**NWI:** National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

### State Wetlands Data: Wetland Inventory

Source: Department of Fish and Wildlife

Telephone: 916-445-0411

## HYDROGEOLOGIC INFORMATION

### AQUIFLOW<sup>R</sup> Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

## GEOLOGIC INFORMATION

### Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

### STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

### SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## LOCAL / REGIONAL WATER AGENCY RECORDS

### FEDERAL WATER WELLS

#### PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

#### PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

#### USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

## OTHER STATE DATABASE INFORMATION

### Groundwater Ambient Monitoring & Assessment Program

State Water Resources Control Board

Telephone: 916-341-5577

The GAMA Program is California's comprehensive groundwater quality monitoring program. GAMA collects data by testing the untreated, raw water in different types of wells for naturally-occurring and man-made chemicals. The GAMA data includes Domestic, Monitoring and Municipal well types from the following sources, Department of Water Resources, Department of Health Services, EDF, Agricultural Lands, Lawrence Livermore National Laboratory, Department of Pesticide Regulation, United States Geological Survey, Groundwater Ambient Monitoring and Assessment Program and Local Groundwater Projects.

### Water Well Database

Source: Department of Water Resources

Telephone: 916-651-9648

### California Drinking Water Quality Database

Source: Department of Public Health

Telephone: 916-324-2319

The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

### Geothermal Wells Listing

Department of Conservation

Telephone: 916-445-9686

Geothermal well means a well constructed to extract or return water to the ground after it has been used for heating or cooling purposes. Geothermal wells in California (except for wells on federal leases which are administered by the Bureau of Land Management) are permitted, drilled, operated, and permanently sealed and closed (plugged and abandoned) under requirements and procedures administered by the Geothermal Section of the Department of Conservation's Geologic Energy Management Division (CalGEM, formerly DOGGR).

### California Oil and Gas Well Locations

Source: Dept of Conservation, Geologic Energy Management Division

Telephone: 916-323-1779

Oil and Gas well locations in the state.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## California Earthquake Fault Lines

Source: California Division of Mines and Geology

The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

## RADON

### State Database: CA Radon

Source: Department of Public Health

Telephone: 916-210-8558

Radon Database for California

### Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

### EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

## OTHER

Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

## STREET AND ADDRESS INFORMATION

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**401 Santa Clara Ave**  
401 Santa Clara Avenue  
Oakland, CA 94610

Inquiry Number: 7660283.2s  
May 22, 2024

## EDR Summary Radius Map Report



6 Armstrong Road, 4th floor  
Shelton, CT 06484  
Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

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*Thank you for your business.*  
Please contact EDR at 1-800-352-0050  
with any questions or comments.

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## EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E2247 - 16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E1528 - 22) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

### TARGET PROPERTY INFORMATION

#### ADDRESS

401 SANTA CLARA AVENUE  
OAKLAND, CA 94610

#### COORDINATES

Latitude (North): 37.8129970 - 37° 48' 46.78"  
Longitude (West): 122.2491130 - 122° 14' 56.80"  
Universal Transverse Mercator: Zone 10  
UTM X (Meters): 566095.1  
UTM Y (Meters): 4185127.2  
Elevation: 48 ft. above sea level

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property: TP  
Source: U.S. Geological Survey

Target Property: W  
Source: U.S. Geological Survey

### AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20200524  
Source: USDA

MAPPED SITES SUMMARY

Target Property Address:  
401 SANTA CLARA AVENUE  
OAKLAND, CA 94610

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
<a href="#">A1</a>	GRAND LAKE GARDEN	401 SANTA CLARA AVE	FINDS, ECHO		TP
<a href="#">A2</a>	GRAND LAKE GARDEN	401 SANTA CLARA AVE	HWTS, HAZNET		TP
<a href="#">A3</a>	GRAND LAKE GARDENS	401 SANTA CLARA AVE	HWTS, HAZNET		TP
<a href="#">A4</a>	GRAND LAKE GARDEN	401 SANTA CLARA AVE	RCRA NonGen / NLR		TP
<a href="#">A5</a>	HUMANGOOD NORCAL	401 SANTA CLARA AVE.	RCRA NonGen / NLR		TP
<a href="#">A6</a>	HUMANGOOD NORCAL	401 SANTA CLARA AVE.	ECHO		TP
<a href="#">A7</a>	HUMANGOOD NORCAL	401 SANTA CLARA AVE.	HWTS, HAZNET		TP
<a href="#">A8</a>	GRAND LAKE GARDENS	401 SANTA CLARA AVEN	RCRA NonGen / NLR		TP
<a href="#">A9</a>	TRENT DEHART	370 SANTA CLARA AVEN	RCRA NonGen / NLR	Higher	55, 0.010, NW
<a href="#">A10</a>	CHARLIE KALB	370 SANTA CLARA AVEN	RCRA NonGen / NLR	Higher	55, 0.010, NW
<a href="#">A11</a>	VAUGHN MANAGEMENT GR	377 SANTA CLARA AVE	RCRA NonGen / NLR	Lower	78, 0.015, NE
<a href="#">B12</a>	CHONG WONG	414 SANTA CLARA AV	EDR Hist Cleaner	Lower	170, 0.032, SE
<a href="#">13</a>	COMMERCIAL PROPERTY	3315 GRAND AVE	SWEEPS UST	Lower	257, 0.049, East
<a href="#">B14</a>	SHERMAN JULIUS	3217 GRAND AVE	EDR Hist Cleaner	Lower	263, 0.050, SE
<a href="#">B15</a>	ALBRIGHT G E	468 SANTA CLARA AV	EDR Hist Cleaner	Lower	289, 0.055, SSE
<a href="#">B16</a>	GLEN VIEW LAUNDRY	474 SANTA CLARA AV	EDR Hist Cleaner	Lower	322, 0.061, SE
<a href="#">C17</a>	RICHARD MAHER	455 CRESCENT STREET	RCRA NonGen / NLR	Higher	334, 0.063, NW
<a href="#">C18</a>	COLLINS MGMNT.- 455	455 CRESCENT STREET	RCRA NonGen / NLR	Higher	334, 0.063, NW
<a href="#">C19</a>	KILEY RUSSELL	455 CRESCENT STREET	RCRA NonGen / NLR	Higher	334, 0.063, NW
<a href="#">C20</a>	COLLINS MANAGEMENT C	455 CRESCENT STREET	RCRA NonGen / NLR	Higher	334, 0.063, NW
<a href="#">C21</a>	CHRISSEY BARLOW	455 CRESCENT STREET	RCRA NonGen / NLR	Higher	334, 0.063, NW
<a href="#">C22</a>	YIHEIS GEDLE	455 CRESENT STREET #	RCRA NonGen / NLR	Higher	334, 0.063, NW
<a href="#">C23</a>	COLLINS MANAGEMENT	455 CRESCENT STREET	RCRA NonGen / NLR	Higher	334, 0.063, NW
<a href="#">C24</a>	COLLINS MANAGEMENT	455 CRESCENT STREET	RCRA NonGen / NLR	Higher	334, 0.063, NW
<a href="#">C25</a>	PETER PROWS/KAREN NE	483 CRESCENT STREET	RCRA NonGen / NLR	Higher	337, 0.064, NNW
<a href="#">B26</a>	ESQUIRE CLEANERS COM	3223 GRAND AVE	EDR Hist Cleaner	Lower	368, 0.070, ESE
<a href="#">B27</a>	ESQUIRE CLEANERS COM	3235 GRAND AVE	EDR Hist Cleaner	Lower	368, 0.070, ESE
<a href="#">B28</a>	LANDOWITZ JOS	3249 GRAND AVE	EDR Hist Cleaner	Lower	370, 0.070, ESE
<a href="#">D29</a>	491 CRESCENT, LP	491 CRESCENT STREET	RCRA NonGen / NLR	Higher	421, 0.080, North
<a href="#">30</a>	ARVAND SEBETIN	369 MACARTHUR BLVD	RCRA NonGen / NLR	Higher	453, 0.086, WSW
<a href="#">E31</a>	PG & E	3234 GRAND	HIST CORTESE	Lower	467, 0.088, SE
<a href="#">E32</a>	CARSONS MARTINIZING	3250 GRAND AVE	RCRA-SQG, DRYCLEANERS	Lower	483, 0.091, ESE
<a href="#">E33</a>	BOB & GIGI INC DBA O	3250 GRAND AVE	RCRA NonGen / NLR	Lower	483, 0.091, ESE
<a href="#">E34</a>	Y S ONE-HOUR MARTINI	3250 GRAND AVE	EDR Hist Cleaner	Lower	483, 0.091, ESE
<a href="#">E35</a>	ONE HOUR MARTINIZING	3250 GRAND AVE	DRYCLEANERS, HWTS, HAZNET	Lower	483, 0.091, ESE
<a href="#">F36</a>	UNION OIL SS 3443	3347 GRAND AVE	HIST UST	Lower	501, 0.095, ENE
<a href="#">G37</a>	VERITAS	345 MACARTHUR BLVD #	RCRA NonGen / NLR	Higher	505, 0.096, West
<a href="#">G38</a>	VPI GROWTH VENTURE 1	345 MACARTHUR BLVD.,	RCRA NonGen / NLR	Higher	505, 0.096, West
<a href="#">G39</a>	345 MACARTHUR, G1, L	345 MACARTHUR BOULEV	RCRA NonGen / NLR	Higher	505, 0.096, West

MAPPED SITES SUMMARY

Target Property Address:  
401 SANTA CLARA AVENUE  
OAKLAND, CA 94610

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
<a href="#">G40</a>	345 MACARTHUR G1, LP	345 MACARTHUR BLVD.	RCRA NonGen / NLR	Higher	505, 0.096, West
<a href="#">G41</a>	345 MACARTHUR G1, LP	345 MACARTHUR BLVD.	RCRA NonGen / NLR	Higher	505, 0.096, West
<a href="#">G42</a>	345 MACARTHUR, G1, L	345 MACARTHUR BLVD	RCRA NonGen / NLR	Higher	505, 0.096, West
<a href="#">F43</a>	BRITE CLEANERS INC	3349 GRAND AVE	EDR Hist Cleaner	Lower	509, 0.096, ENE
<a href="#">F44</a>	GLENVIEW LAUNDRY	3351 GRAND AVE	EDR Hist Cleaner	Lower	516, 0.098, ENE
<a href="#">F45</a>	SIMPSON D R	3322 GRAND AVE	EDR Hist Cleaner	Lower	532, 0.101, East
<a href="#">H46</a>	FYNE BUILDING	774 GRAND	HIST CORTESE	Lower	543, 0.103, SSE
<a href="#">H47</a>	FYNE BUILDING	774 GRAND AVE W	UST FINDER RELEASE	Lower	543, 0.103, SSE
<a href="#">H48</a>	FYNE BUILDING	774 GRAND AVE W	LUST, Cortese, CERS	Lower	543, 0.103, SSE
<a href="#">I49</a>	HAVA LIBERMAN	433 ELWOOD AVENUE	RCRA NonGen / NLR	Higher	575, 0.109, NE
<a href="#">I50</a>	HAVA LIBERMAN	433 ELWOOD AVENUE	RCRA NonGen / NLR	Higher	575, 0.109, NE
<a href="#">D51</a>	HOLLAND BROOKS BUILD	472 JEAN ST #6	RCRA NonGen / NLR	Higher	577, 0.109, NNW
<a href="#">D52</a>	472 JEAN A2, LP	472 JEAN STREET #4	RCRA NonGen / NLR	Higher	577, 0.109, NNW
<a href="#">H53</a>	LIBERTY CLEANERS	755 GRAND AVE	EDR Hist Cleaner	Lower	588, 0.111, SSE
<a href="#">F54</a>	PRIDE CLEANERS	3401 GRAND AVE	RCRA-SQG, FINDS, ECHO, DRYCLEANERS, EMI, HWTS,...	Lower	641, 0.121, ENE
<a href="#">F55</a>	PRIDE CLEANERS	3401 GRAND AVE	EDR Hist Cleaner	Lower	641, 0.121, ENE
<a href="#">F56</a>	PRIDE CLEANERS	3401 GRAND AVENUE	RCRA NonGen / NLR	Lower	641, 0.121, ENE
<a href="#">F57</a>	WEINTROB ABR	3405 GRAND AVE	EDR Hist Cleaner	Lower	655, 0.124, ENE
<a href="#">J58</a>	RAJ TEDDY	520 VAN BUREN AVENUE	RCRA NonGen / NLR	Higher	685, 0.130, SW
<a href="#">I59</a>	FAITH DARLING	509 VALLE VISTA AVEN	RCRA NonGen / NLR	Higher	711, 0.135, NE
<a href="#">J60</a>	UNOCAL	411 MACARTHUR BLVD W	LUST, Alameda County CS, HIST CORTESE	Lower	727, 0.138, SSW
<a href="#">J61</a>	TIM HAGGERTY	525 VAN BUREN AVE	RCRA NonGen / NLR	Higher	728, 0.138, SSW
<a href="#">F62</a>	GRAND MOBIL	3374 GRAND AVE	UST	Lower	745, 0.141, ENE
<a href="#">F63</a>	GRAND MOBIL	3374 GRAND AVE	UST FINDER	Lower	745, 0.141, ENE
<a href="#">F64</a>	GRAND MOBIL	3374 GRAND AVE	UST	Lower	745, 0.141, ENE
<a href="#">F65</a>	UNION OIL SS #3443	3374 GRAND AVE	CERS HAZ WASTE, SWEEPS UST, HIST UST, CERS TANKS,	Lower	745, 0.141, ENE
<a href="#">F66</a>	TOSCO CORPORATION #3	3374 GRAND AVE	UST	Lower	745, 0.141, ENE
<a href="#">F67</a>	UNION OIL SS# 3443	3374 GRAND AVE	HIST UST	Lower	745, 0.141, ENE
<a href="#">F68</a>	UNION OIL SS #3443	3374 GRAND AVE	HIST UST	Lower	745, 0.141, ENE
<a href="#">F69</a>	GRAND MANDANA GAS ST	3374 GRAND AVE	RCRA NonGen / NLR	Lower	745, 0.141, ENE
<a href="#">I70</a>	COLBY KATZ	515 VALLE VISTA AVEN	RCRA NonGen / NLR	Higher	758, 0.144, NE
<a href="#">J71</a>	TONY CELAYA	394 EUCLID AVENUE	RCRA NonGen / NLR	Higher	778, 0.147, SW
<a href="#">J72</a>	RUTH CASSER	436 LAGUNITAS AVENUE	RCRA NonGen / NLR	Lower	788, 0.149, SSW
<a href="#">H73</a>	SHELL	UNK GRAND AVE & LAKE	Alameda County CS	Lower	801, 0.152, SSE
<a href="#">K74</a>	JILL BROADHURST	485 WICKSON AVENUE #	RCRA NonGen / NLR	Lower	839, 0.159, ESE
<a href="#">L75</a>	CUSHMAN AND WAKEFIEL	496 LAKE PARK AVENUE	RCRA NonGen / NLR	Lower	841, 0.159, SSE
<a href="#">M76</a>	SANFORD MA	353 EUCLID AVENUE #1	RCRA NonGen / NLR	Higher	842, 0.159, West
<a href="#">77</a>	KIRSTEN HOWE	481 JEAN STREET	RCRA NonGen / NLR	Higher	853, 0.162, NNW
<a href="#">N78</a>	TAYMUREE FOREIGN AUT	3509 GRAND	UST FINDER RELEASE	Lower	864, 0.164, NE

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<a href="#">N79</a>	TAYMUREE FOREIGN AUT	3509 GRAND	LUST, Alameda County CS, Cortese, HIST CORTESE,...	Lower	864, 0.164, NE
<a href="#">N80</a>	YOUNG'S AUTOMOTIVE	3509 GRAND AVE	RCRA NonGen / NLR	Lower	864, 0.164, NE
<a href="#">N81</a>	TAYMUREE FOREIGN AUT	3509 GRAND AVE	LUST, SWEEPS UST, HWTS	Lower	864, 0.164, NE
<a href="#">N82</a>	YOUNG'S AUTOMOTIVE	3509 GRAND AVE	RCRA-SQG, FINDS, ECHO, Notify 65	Lower	864, 0.164, NE
<a href="#">83</a>	J AND R ASSOCIATES	281 MACARTHUR BLVD	RCRA NonGen / NLR	Higher	871, 0.165, NW
<a href="#">M84</a>	ARNOLD BLUSTEIN	397 PALM AVENUE	RCRA NonGen / NLR	Higher	898, 0.170, West
<a href="#">O85</a>	MYND PROPERTY MANAGE	449 LAGUNITAS AVE	RCRA NonGen / NLR	Lower	904, 0.171, SSW
<a href="#">86</a>	BERGER ENTERPRISES	743 WARFIELD AVENUE	RCRA NonGen / NLR	Higher	907, 0.172, East
<a href="#">K87</a>	SUZI GOLDMACHER	737 WARFIELD AVENUE	RCRA NonGen / NLR	Higher	910, 0.172, ESE
<a href="#">L88</a>	500 LAKE PARK APARTM	500 LAKE PARK AVENUE	CPS-SLIC	Lower	921, 0.174, SE
<a href="#">L89</a>	MAXGEN ENERGY SERVIC	500 LAKE PARK AVE	RCRA NonGen / NLR	Lower	921, 0.174, SE
<a href="#">M90</a>	MAXWELL & KATE ERNST	388 PALM AVE.	RCRA NonGen / NLR	Higher	944, 0.179, West
<a href="#">O91</a>	HAN, AGNES	626 GRAND AVENUE	RCRA NonGen / NLR	Lower	954, 0.181, South
<a href="#">O92</a>	HAN, AGNES	626 GRAND AVENUE	RCRA NonGen / NLR	Lower	954, 0.181, South
<a href="#">K93</a>	MAUREEN LAWLOR	507 WICKSON AVENUE #	RCRA NonGen / NLR	Higher	1008, 0.191, ESE
<a href="#">K94</a>	JAMES ROSS	507 WICKSON AVENUE #	RCRA NonGen / NLR	Higher	1008, 0.191, ESE
<a href="#">K95</a>	CATHARINE SCHULTZ &	507 WICKSON AVENUE #	RCRA NonGen / NLR	Higher	1008, 0.191, ESE
<a href="#">P96</a>	LINDA HOLLAND	408 EUCLID AVE	RCRA NonGen / NLR	Lower	1016, 0.192, SSW
<a href="#">Q97</a>	DAVID JOHNSON	558 VALLE VISTA AVEN	RCRA NonGen / NLR	Lower	1048, 0.198, NE
<a href="#">O98</a>	RYAN YU	427 LAGUNITAS AVE, #	RCRA NonGen / NLR	Lower	1055, 0.200, SSW
<a href="#">R99</a>	PRIVATE RESIDENCE	PRIVATE RESIDENCE	LUST	Higher	1070, 0.203, WNW
<a href="#">R100</a>	PRIVATE RESIDENCE	PRIVATE RESIDENCE	LUST	Higher	1070, 0.203, WNW
<a href="#">R101</a>	RESIDENCE	299 EUCLID AVE	LUST, Alameda County CS, SWEEPS UST, HIST CORTESE	Higher	1072, 0.203, WNW
<a href="#">O102</a>	YOUNG'S ONE HOUR DRY	600 GRAND AVE	CHMIRS, DRYCLEANERS	Lower	1078, 0.204, South
<a href="#">O103</a>	YOUNG'S ONE HOUR MAR	600 GRAND AVE #100	RCRA-SQG, FINDS, ECHO	Lower	1078, 0.204, South
<a href="#">S104</a>	MONTEREY BAY COLORS	810 WALKER AVE APT 1	RCRA NonGen / NLR	Higher	1087, 0.206, ENE
<a href="#">R105</a>	DANIEL PIVNICK	293 EUCLID AVENUE #5	RCRA NonGen / NLR	Higher	1099, 0.208, WNW
<a href="#">R106</a>	DANIEL PIVNICK	293 EUCLID AVENUE #6	RCRA NonGen / NLR	Higher	1099, 0.208, WNW
<a href="#">T107</a>	BELLEVUE APARTMENTS	369 BELLEVUE AVE	RCRA NonGen / NLR	Higher	1114, 0.211, WSW
<a href="#">T108</a>	SHANNON MCCABE	359 BELLEVUE AVENUE	RCRA NonGen / NLR	Higher	1122, 0.213, WSW
<a href="#">Q109</a>	STEPHANE DELEGER	564 VALLE VISTA AVEN	RCRA NonGen / NLR	Lower	1127, 0.213, NE
<a href="#">P110</a>	MANKUEN (JENNIE) CHA	411 EUCLID AVENUE #9	RCRA NonGen / NLR	Lower	1127, 0.213, SW
<a href="#">P111</a>	BLUE SAPPHIRE HOMES	411 EUCLID AVENUE #1	RCRA NonGen / NLR	Lower	1127, 0.213, SW
<a href="#">P112</a>	MANKUEN (JENNIE) CHA	411 EUCLID AVENUE #1	RCRA NonGen / NLR	Lower	1127, 0.213, SW
<a href="#">P113</a>	BLUE SAPPHIRE HOMES	411 EUCLID AVENUE #1	RCRA NonGen / NLR	Lower	1127, 0.213, SW
<a href="#">P114</a>	BLUE SAPPHIRE HOMES	411 EUCLID AVENUE #2	RCRA NonGen / NLR	Lower	1127, 0.213, SW
<a href="#">P115</a>	MANKUEN (JENNIE) CHA	411 EUCLID AVENUE #8	RCRA NonGen / NLR	Lower	1127, 0.213, SW
<a href="#">P116</a>	BLUE SAPPHIRE HOMES	411 EUCLID AVENUE #6	RCRA NonGen / NLR	Lower	1127, 0.213, SW
<a href="#">P117</a>	BLUE SAPPHIRE HOMES	411 EUCLID AVENUE #3	RCRA NonGen / NLR	Lower	1127, 0.213, SW

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T118	TRUST MATTERS	353 BELLEVUE AVE	RCRA NonGen / NLR	Higher	1128, 0.214, West
U119	KYLE PARKER	377 PALM AVE #107	RCRA NonGen / NLR	Higher	1149, 0.218, West
U120	COLLINS MANAGEMENT	377 PALM AVENUE	RCRA NonGen / NLR	Higher	1149, 0.218, West
U121	COLLINS MANAGEMENT P	377 PALM AVENUE	RCRA NonGen / NLR	Higher	1149, 0.218, West
V122	CHRIS CORNFORD	325 ALTA VISTA AVE.	RCRA NonGen / NLR	Higher	1153, 0.218, North
V123	CHRIS CORNFORD	325 ALTA VISTA AVENU	RCRA NonGen / NLR	Higher	1153, 0.218, North
R124	MERIDIAN MANAGEMENT	365 WARWICK AVE #305	RCRA NonGen / NLR	Higher	1156, 0.219, WNW
R125	UNIVERSITY PRESIDENT	365 WARWICK AVE.	RCRA NonGen / NLR	Higher	1156, 0.219, WNW
S126	SCOTT BAILEY	824 VERMONT ST.	RCRA NonGen / NLR	Higher	1185, 0.224, ENE
W127	JACK DOUGLAS	724 RAND AVENUE	RCRA NonGen / NLR	Lower	1185, 0.224, ESE
W128	JACK DOUGLAS	722 RAND AVENUE	RCRA NonGen / NLR	Lower	1196, 0.227, ESE
W129	JENNIFER WU	722 RAND AVE	RCRA NonGen / NLR	Lower	1196, 0.227, ESE
W130	WU PROPERTY	722 RAND AVENUE	LUST, Cortese	Lower	1196, 0.227, ESE
W131	JENNIFER WU	722 RAND AVENUE	RCRA NonGen / NLR	Lower	1196, 0.227, ESE
R132	TOM CHEW	396 JAYNE AVENUE	RCRA NonGen / NLR	Higher	1212, 0.230, WNW
X133	BILL MCLETCHIE	410 BELLEVUE AVENUE	RCRA NonGen / NLR	Lower	1232, 0.233, SW
V134	OMAR SHAH	301 ALTA VISTA AVENU	RCRA NonGen / NLR	Higher	1234, 0.234, North
135	KAISER INDUSTRIES CO		MINES MRDS	Lower	1241, 0.235, South
Y136	TOM PARATORE	484 CHETWOOD ST	RCRA NonGen / NLR	Higher	1242, 0.235, NNW
Z137	KLAUS WIRSING	525 GLENVIEW AVE. #1	RCRA NonGen / NLR	Higher	1251, 0.237, ESE
AA138	LEXIA LITTLEJOHN	525 MANDANA BLVD #21	RCRA NonGen / NLR	Higher	1277, 0.242, East
AA139	INDEPENDENT PLANNING	525 MANDANA BLVD #30	RCRA NonGen / NLR	Higher	1277, 0.242, East
AA140	SHANNON CARSON	525 MANDANA BOULEVAR	RCRA NonGen / NLR	Higher	1277, 0.242, East
AB141	THIAT "JOE" LIANG (D	3201 LAKESHORE AVE	HIST UST	Lower	1280, 0.242, SE
AB142	THIAT "JOE" LIANG (D	3201 LAKESHORE AVE	SWEEPS UST, HIST UST, CA FID UST	Lower	1280, 0.242, SE
AC143	FRANKLIN CHAN	420 BURK STREET	RCRA NonGen / NLR	Lower	1285, 0.243, SSW
Z144	SAMMY GO	546 GLENVIEW AVE	RCRA NonGen / NLR	Higher	1303, 0.247, ESE
Y145	CINDY BUFFING	492 CHETWOOD ST	RCRA NonGen / NLR	Higher	1311, 0.248, NNW
X146	BLACK OAK PROPERTIES	405 BELLEVUE AVE.	RCRA NonGen / NLR	Lower	1313, 0.249, SW
X147	BLACK OAK PROPERTIES	405 BELLEVUE AVENUE	RCRA NonGen / NLR	Lower	1313, 0.249, SW
AB148	UNOCAL #5325	3220 LAKESHORE AVE.	UST FINDER RELEASE	Lower	1381, 0.262, SE
AB149	UNOCAL #5325	3220 LAKESHORE AVE.	LUST, Alameda County CS, SWEEPS UST, HIST UST, CA...	Lower	1381, 0.262, SE
AD150	CHEVRON #9-0121	3026 LAKESHORE AVENU	UST FINDER RELEASE	Lower	1412, 0.267, SSE
AD151	FORMER CHEVRON SERVI	3026 LAKESHORE AVENU	CPS-SLIC, HWTS, HAZNET, CERS	Lower	1412, 0.267, SSE
AD152	CHEVRON SERV STA #01	LAKESHORE & MCARTHUR	LUST, Alameda County CS, SWEEPS UST, HIST UST, CA...	Lower	1412, 0.267, SSE
AA153	YORK STREET APARTMEN	800 YORK	UST FINDER RELEASE	Higher	1464, 0.277, East
AA154	YORK STREET APARTMEN	800 YORK	LUST, Alameda County CS, Cortese, HIST CORTESE,...	Higher	1464, 0.277, East
AE155	BERG RESIDENCE	3329 LAKESHORE	EMI, HIST CORTESE	Lower	1522, 0.288, ESE
AC156	EXXON	500 GRAND AVE	LUST, CPS-SLIC, Alameda County CS, SWEEPS UST, CA...	Lower	1549, 0.293, SSW

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<a href="#">AC157</a>	SERVICE STATION	500 GRAND AVENUE	Notify 65	Lower	1549, 0.293, SSW
<a href="#">AC158</a>	CHEVRON #21-1173 / E	500 GRAND AVE	UST FINDER RELEASE	Lower	1549, 0.293, SSW
<a href="#">AC159</a>	500 GRAND REDEVELOPM	500 GRAND AVE	Alameda County CS	Lower	1549, 0.293, SSW
<a href="#">AE160</a>	SHERMAN CLEANERS (FO	3321/3329 LAKESHORE	CPS-SLIC, CERS	Lower	1549, 0.293, ESE
<a href="#">AF161</a>	WILMOT PROPERTY	433 BELLEVUE AVE	LUST, Cortese, HWTS	Lower	1578, 0.299, SW
<a href="#">AD162</a>	OAKLAND CITY OF	637 BEACON ST	LUST, Alameda County CS, Cortese, HIST CORTESE,...	Lower	1670, 0.316, SSE
<a href="#">AD163</a>	CITY OF OAKLAND	637 BEACON	UST FINDER RELEASE	Lower	1670, 0.316, SSE
<a href="#">AF164</a>	CHEVRON #9-0006 / GU	460 GRAND	LUST, CPS-SLIC, Alameda County CS, Cortese, HIST...	Lower	1753, 0.332, SW
<a href="#">AF165</a>	CHEVRON #9-0006 / GU	460 GRAND	UST FINDER RELEASE	Lower	1753, 0.332, SW
<a href="#">AG166</a>	POY-WING PROPERTY	240 MACARTHUR BLVD W	LUST, Cortese, HIST CORTESE, CERS	Higher	1836, 0.348, NNW
<a href="#">AG167</a>	FORMERLY DODSON LTD	240 MACARTHUR	UST FINDER RELEASE	Higher	1836, 0.348, NNW
<a href="#">AG168</a>	SHELL #13-5676	230 MACARTHUR	UST FINDER RELEASE	Higher	1840, 0.348, NNW
<a href="#">AG169</a>	SHELL	230 MACARTHUR BLVD W	LUST	Higher	1840, 0.348, NNW
<a href="#">AG170</a>	SHELL #13-5676	230 MACARTHUR	LUST, Cortese, HIST CORTESE, CERS	Higher	1840, 0.348, NNW
<a href="#">AH171</a>	378-382 GRAND AVE	378, 380, 382 GRAND	Alameda County CS	Lower	2032, 0.385, SW
<a href="#">AH172</a>	GRAND AVENUE LLC	378 GRAND AVENUE	UST FINDER RELEASE	Lower	2032, 0.385, SW
<a href="#">AH173</a>	378 GRAND AVE., LLC	378 GRAND AVE	LUST, Cortese, HWTS, HAZNET, CERS	Lower	2032, 0.385, SW
<a href="#">AI174</a>	EAST BAY AGENCY FOR	303 VAN BUREN AVENUE	LUST, Cortese, HWTS	Higher	2047, 0.388, WSW
<a href="#">AJ175</a>	LAKESIDE PARK	468 BELLEVUE AVE	LUST, Alameda County CS, Cortese, HIST CORTESE,...	Lower	2077, 0.393, SSW
<a href="#">AJ176</a>	LAKESIDE PARK	468 BELLEVUE AVE	UST FINDER RELEASE	Lower	2077, 0.393, SSW
<a href="#">AK177</a>	CITY OF OAKLAND FIRE	172 SANTA CLARA	UST FINDER RELEASE	Higher	2092, 0.396, NNW
<a href="#">AK178</a>	CITY OF OAKLAND ENVI	172 SANTA CLARA	LUST, Alameda County CS, Cortese, EMI, HIST...	Higher	2092, 0.396, NNW
<a href="#">AL179</a>	ULIBARRI PROPERTY	387 ORANGE ST	Alameda County CS	Higher	2150, 0.407, NW
<a href="#">AL180</a>	PRIVATE RESIDENCE	PRIVATE RESIDENCE	LUST	Higher	2168, 0.411, NW
<a href="#">AM181</a>	SHELL #13-5698 / DEV	350 GRAND	LUST, Alameda County CS, SWEEPS UST, Cortese, HIST...	Lower	2224, 0.421, SW
<a href="#">AM182</a>	SHELL #13-5698 / DEV	350 GRAND	UST FINDER RELEASE	Lower	2224, 0.421, SW
<a href="#">AH183</a>	QUICK STOP #46	363 GRAND	UST FINDER RELEASE	Lower	2226, 0.422, SW
<a href="#">AH184</a>	QUICK STOP #46	363 GRAND	LUST, Alameda County CS, SWEEPS UST, CA FID UST,...	Lower	2226, 0.422, SW
<a href="#">AI185</a>	SUSAN MENDELSON	431 LEE ST.	HWTS, HAZNET, Notify 65	Lower	2291, 0.434, WSW
<a href="#">AN186</a>	CHAMPLIN FAMILY TRUS	485 ELLITA	LUST, Alameda County CS, Cortese, HIST CORTESE,...	Lower	2441, 0.462, SW
<a href="#">AN187</a>	CHAMPLIN FAMILY TRUS	485 ELLITA	UST FINDER RELEASE	Lower	2441, 0.462, SW
<a href="#">AO188</a>	BP	100 MACARTHUR BLVD	LUST, Alameda County CS, SWEEPS UST, CA FID UST,...	Higher	2513, 0.476, NNW
<a href="#">AO189</a>	BP #11102	100 MACARTHUR	UST FINDER RELEASE	Higher	2513, 0.476, NNW
<a href="#">AP190</a>	SHELL OIL CO	29 WILDWOOD	RCRA-SQG, LUST, HIST CORTESE	Lower	2565, 0.486, NNE
<a href="#">AP191</a>	SHELL #13-5765	29 WILDWOOD	UST FINDER RELEASE	Lower	2565, 0.486, NNE
<a href="#">AP192</a>	PIEDMONT SHELL SERV.	29 WILDWOOD AVE	CPS-SLIC, HIST UST, CA FID UST, EMI, HWTS, HAZNET,...	Lower	2565, 0.486, NNE
<a href="#">AP193</a>	SHELL OIL CO	29 WILDWOOD	LUST, Alameda County CS, FINDS, ECHO, Cortese,...	Lower	2565, 0.486, NNE
<a href="#">AO194</a>	UNOCAL	96 MACARTHUR BLVD	LUST, Alameda County CS, SWEEPS UST, HIST UST, CA...	Higher	2618, 0.496, NNW
<a href="#">195</a>	ARCO	731 MACARTHUR	LUST, HIST CORTESE	Higher	2638, 0.500, SE

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<a href="#">196</a>	CROWLEY MARITIME COR	PAC. DRY DOCK YARDS	Notify 65	Lower	4078, 0.772, West
<a href="#">197</a>	EUROPEAN MOTORS	2915 BROADWAY	RCRA-LQG, LUST, Alameda County CS, SWEEPS UST,...	Lower	4194, 0.794, WNW
<a href="#">198</a>	THE ECHO MIXED USE H	3300 BROADWAY	ENVIROSTOR, VCP	Higher	4212, 0.798, NW
<a href="#">199</a>	BROADWAY VOLKSWAGON	2749 BROADWAY	Notify 65	Lower	4283, 0.811, WNW
<a href="#">200</a>	CONNELL OLDS	3093 BROADWAY	RCRA-SQG, LUST, Alameda County CS, SWEEPS UST,...	Higher	4457, 0.844, NW
<a href="#">201</a>	YUEN'S EXXON SERVICE	1901 PARK BOULEVARD	Notify 65	Lower	4597, 0.871, South
<a href="#">202</a>	NEGHERBON	2345, 2333 BROADWAY	ENVIROSTOR, VCP, DEED	Lower	4840, 0.917, West
<a href="#">203</a>	CARDIO PULMANARY BUI	365 HAWTHRONE STREET	Notify 65	Higher	4923, 0.932, NW
<a href="#">204</a>	4212-4220 PIEDMONT A	4212-4220 PIEDMONT A	ENVIROSTOR, Alameda County CS, VCP	Higher	5214, 0.988, North
<a href="#">205</a>	ZUEDELAC APARTMENTS	1600 3RD AVE	ENVIROSTOR, VCP, HWTS, HAZNET	Lower	5253, 0.995, SSW

## EXECUTIVE SUMMARY

### TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 9 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
GRAND LAKE GARDEN 401 SANTA CLARA AVE OAKLAND, CA 94610	FINDS Registry ID:: 110071431746 Registry ID:: 110070422407  ECHO Registry ID: 110070422407	N/A
GRAND LAKE GARDEN 401 SANTA CLARA AVE OAKLAND, CA 94610	HWTS HAZNET GEPaid: CAL000417627	N/A
GRAND LAKE GARDENS 401 SANTA CLARA AVE OAKLAND, CA 94610	HWTS HAZNET GEPaid: CAC002782085	N/A
GRAND LAKE GARDEN 401 SANTA CLARA AVE OAKLAND, CA 94610	RCRA NonGen / NLR EPA ID:: CAL000417627	CAL000417627
HUMANGOOD NORCAL 401 SANTA CLARA AVE. OAKLAND, CA 94610	RCRA NonGen / NLR EPA ID:: CAC003232567	CAC003232567
HUMANGOOD NORCAL 401 SANTA CLARA AVE. OAKLAND, CA 94610	ECHO Registry ID: 110071431746	N/A
HUMANGOOD NORCAL 401 SANTA CLARA AVE. OAKLAND, CA 94610	HWTS HAZNET GEPaid: CAC002629013	N/A
GRAND LAKE GARDENS 401 SANTA CLARA AVEN OAKLAND, CA 94610	RCRA NonGen / NLR EPA ID:: CAC003200833	CAC003200833

### SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

## EXECUTIVE SUMMARY

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

### **STANDARD ENVIRONMENTAL RECORDS**

#### ***Lists of Federal RCRA generators***

RCRA-SQG: A review of the RCRA-SQG list, as provided by EDR, and dated 12/04/2023 has revealed that there are 4 RCRA-SQG sites within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b><i>CARSONS MARTINIZING</i></b> EPA ID:: CAD981396104	<b><i>3250 GRAND AVE</i></b>	<b><i>ESE 0 - 1/8 (0.091 mi.)</i></b>	<b><i>E32</i></b>	<b><i>15</i></b>
<b><i>PRIDE CLEANERS</i></b> EPA ID:: CAD981669666	<b><i>3401 GRAND AVE</i></b>	<b><i>ENE 0 - 1/8 (0.121 mi.)</i></b>	<b><i>F54</i></b>	<b><i>19</i></b>
<b><i>YOUNG'S AUTOMOTIVE</i></b> EPA ID:: CAD982356974	<b><i>3509 GRAND AVE</i></b>	<b><i>NE 1/8 - 1/4 (0.164 mi.)</i></b>	<b><i>N82</i></b>	<b><i>26</i></b>
<b><i>YOUNG'S ONE HOUR MAR</i></b> EPA ID:: CAD981375330	<b><i>600 GRAND AVE #100</i></b>	<b><i>S 1/8 - 1/4 (0.204 mi.)</i></b>	<b><i>O103</i></b>	<b><i>30</i></b>

#### ***Lists of state- and tribal hazardous waste facilities***

ENVIROSTOR: A review of the ENVIROSTOR list, as provided by EDR, and dated 01/22/2024 has revealed that there are 4 ENVIROSTOR sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b><i>THE ECHO MIXED USE H</i></b> Facility Id: 60003563 Status: Active	<b><i>3300 BROADWAY</i></b>	<b><i>NW 1/2 - 1 (0.798 mi.)</i></b>	<b><i>198</i></b>	<b><i>57</i></b>
<b><i>4212-4220 PIEDMONT A</i></b> Facility Id: 60001212 Status: Refer: RWQCB	<b><i>4212-4220 PIEDMONT A</i></b>	<b><i>N 1/2 - 1 (0.988 mi.)</i></b>	<b><i>204</i></b>	<b><i>60</i></b>
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b><i>NEGHERBON</i></b> Facility Id: 60001834 Status: Certified / Operation & Maintenance	<b><i>2345, 2333 BROADWAY</i></b>	<b><i>W 1/2 - 1 (0.917 mi.)</i></b>	<b><i>202</i></b>	<b><i>59</i></b>
<b><i>ZUEDELAC APARTMENTS</i></b>	<b><i>1600 3RD AVE</i></b>	<b><i>SSW 1/2 - 1 (0.995 mi.)</i></b>	<b><i>205</i></b>	<b><i>60</i></b>

## EXECUTIVE SUMMARY

Facility Id: 01990014  
Status: Certified

### ***Lists of state and tribal leaking storage tanks***

LUST: A review of the LUST list, as provided by EDR, has revealed that there are 31 LUST sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
PRIVATE RESIDENCE Database: LUST, Date of Government Version: 12/04/2023 Status: Completed - Case Closed Global Id: T10000005350 Global Id: T0600114301 Global Id: T10000006106	PRIVATE RESIDENCE	WNW 1/8 - 1/4 (0.203 mi.)	R99	29
PRIVATE RESIDENCE Database: LUST, Date of Government Version: 12/04/2023 Status: Completed - Case Closed Global Id: T0600101769	PRIVATE RESIDENCE	WNW 1/8 - 1/4 (0.203 mi.)	R100	29
<b>RESIDENCE</b> Database: LUST REG 2, Date of Government Version: 09/30/2004 Facility Id: 01-1908 Facility Status: Case Closed date9: 5/6/1994	<b>299 EUCLID AVE</b>	<b>WNW 1/8 - 1/4 (0.203 mi.)</b>	<b>R101</b>	<b>30</b>
<b>YORK STREET APARTMEN</b> Database: LUST, Date of Government Version: 12/04/2023 Database: LUST REG 2, Date of Government Version: 09/30/2004 Status: Completed - Case Closed Facility Id: 01-1689 Facility Status: Case Closed Global Id: T0600101560 date9: 12/3/1993	<b>800 YORK</b>	<b>E 1/4 - 1/2 (0.277 mi.)</b>	<b>AA154</b>	<b>42</b>
<b>POY-WING PROPERTY</b> Database: LUST, Date of Government Version: 12/04/2023 Database: LUST REG 2, Date of Government Version: 09/30/2004 Status: Open - Verification Monitoring Facility Id: 01-2434 Facility Status: Leak being confirmed Global Id: T0600102243	<b>240 MACARTHUR BLVD W</b>	<b>NNW 1/4 - 1/2 (0.348 mi.)</b>	<b>AG166</b>	<b>46</b>
SHELL Database: LUST REG 2, Date of Government Version: 09/30/2004 Facility Id: 01-1345 Facility Status: Preliminary site assessment underway	230 MACARTHUR BLVD W	NNW 1/4 - 1/2 (0.348 mi.)	AG169	47
<b>SHELL #13-5676</b> Database: LUST, Date of Government Version: 12/04/2023 Status: Completed - Case Closed Global Id: T0600101240	<b>230 MACARTHUR</b>	<b>NNW 1/4 - 1/2 (0.348 mi.)</b>	<b>AG170</b>	<b>47</b>
<b>EAST BAY AGENCY FOR</b> Database: LUST, Date of Government Version: 12/04/2023	<b>303 VAN BUREN AVENUE</b>	<b>WSW 1/4 - 1/2 (0.388 mi.)</b>	<b>AI174</b>	<b>48</b>

## EXECUTIVE SUMMARY

Status: Completed - Case Closed  
Global Id: T10000013048

**CITY OF OAKLAND ENVI** **172 SANTA CLARA** **NNW 1/4 - 1/2 (0.396 mi.)** **AK178** **49**

Database: LUST, Date of Government Version: 12/04/2023  
Database: LUST REG 2, Date of Government Version: 09/30/2004  
Status: Completed - Case Closed  
Facility Id: 01-0625  
Facility Status: Case Closed  
Global Id: T0600100575  
date9: 9/30/1992

**PRIVATE RESIDENCE** **PRIVATE RESIDENCE** **NW 1/4 - 1/2 (0.411 mi.)** **AL180** **50**

Database: LUST, Date of Government Version: 12/04/2023  
Status: Completed - Case Closed  
Global Id: T06019730058  
Global Id: T0600100621

**BP** **100 MACARTHUR BLVD** **NNW 1/4 - 1/2 (0.476 mi.)** **AO188** **53**

Database: LUST, Date of Government Version: 12/04/2023  
Database: LUST REG 2, Date of Government Version: 09/30/2004  
Status: Completed - Case Closed  
Facility Id: 01-0985  
Facility Status: Preliminary site assessment underway  
Global Id: T0600100908

**UNOCAL** **96 MACARTHUR BLVD** **NNW 1/4 - 1/2 (0.496 mi.)** **AO194** **55**

Database: LUST REG 2, Date of Government Version: 09/30/2004  
Facility Id: 01-1618  
Facility Status: Preliminary site assessment underway

**ARCO** **731 MACARTHUR** **SE 1/4 - 1/2 (0.500 mi.)** **195** **56**

Database: LUST REG 2, Date of Government Version: 09/30/2004  
Facility Id: 01-0118  
Facility Status: Remedial action (cleanup) Underway

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>FYNE BUILDING</b> Database: LUST, Date of Government Version: 12/04/2023 Status: Completed - Case Closed Global Id: T0600100620	<b>774 GRAND AVE W</b>	<b>SSE 0 - 1/8 (0.103 mi.)</b>	<b>H48</b>	<b>18</b>
<b>UNOCAL</b> Database: LUST REG 2, Date of Government Version: 09/30/2004 Facility Id: 01-1597 Facility Status: Preliminary site assessment underway	<b>411 MACARTHUR BLVD W</b>	<b>SSW 1/8 - 1/4 (0.138 mi.)</b>	<b>J60</b>	<b>21</b>
<b>TAYMUREE FOREIGN AUT</b> Database: LUST, Date of Government Version: 12/04/2023 Status: Completed - Case Closed Global Id: T0600101339	<b>3509 GRAND</b>	<b>NE 1/8 - 1/4 (0.164 mi.)</b>	<b>N79</b>	<b>25</b>
<b>TAYMUREE FOREIGN AUT</b> Database: LUST REG 2, Date of Government Version: 09/30/2004 Facility Id: 01-1450 Facility Status: Case Closed date9: 8/29/1994	<b>3509 GRAND AVE</b>	<b>NE 1/8 - 1/4 (0.164 mi.)</b>	<b>N81</b>	<b>25</b>
<b>WU PROPERTY</b> Database: LUST, Date of Government Version: 12/04/2023	<b>722 RAND AVENUE</b>	<b>ESE 1/8 - 1/4 (0.227 mi.)</b>	<b>W130</b>	<b>36</b>

## EXECUTIVE SUMMARY

Status: Completed - Case Closed  
Global Id: T10000014217

<p><b>UNOCAL #5325</b> Database: LUST, Date of Government Version: 12/04/2023 Database: LUST REG 2, Date of Government Version: 09/30/2004 Status: Completed - Case Closed Facility Id: 01-1588 Facility Status: Preliminary site assessment underway Global Id: T0600101463</p>	<p><b>3220 LAKESHORE AVE.</b></p>	<p><b>SE 1/4 - 1/2 (0.262 mi.)</b></p>	<p><b>AB149</b></p>	<p><b>40</b></p>
<p><b>CHEVRON SERV STA #01</b> Database: LUST, Date of Government Version: 12/04/2023 Database: LUST REG 2, Date of Government Version: 09/30/2004 Status: Open - Site Assessment Facility Id: 01-0356 Facility Status: Preliminary site assessment underway Global Id: T0600100328</p>	<p><b>LAKESHORE &amp; MCARTHUR</b></p>	<p><b>SSE 1/4 - 1/2 (0.267 mi.)</b></p>	<p><b>AD152</b></p>	<p><b>41</b></p>
<p><b>EXXON</b> Database: LUST, Date of Government Version: 12/04/2023 Database: LUST REG 2, Date of Government Version: 09/30/2004 Status: Completed - Case Closed Facility Id: 01-1467 Facility Status: Pollution Characterization Global Id: T0600101355</p>	<p><b>500 GRAND AVE</b></p>	<p><b>SSW 1/4 - 1/2 (0.293 mi.)</b></p>	<p><b>AC156</b></p>	<p><b>43</b></p>
<p><b>WILMOT PROPERTY</b> Database: LUST, Date of Government Version: 12/04/2023 Status: Completed - Case Closed Global Id: T10000018664</p>	<p><b>433 BELLEVUE AVE</b></p>	<p><b>SW 1/4 - 1/2 (0.299 mi.)</b></p>	<p><b>AF161</b></p>	<p><b>44</b></p>
<p><b>OAKLAND CITY OF</b> Database: LUST, Date of Government Version: 12/04/2023 Database: LUST REG 2, Date of Government Version: 09/30/2004 Status: Completed - Case Closed Facility Id: 01-0866 Facility Status: Case Closed Global Id: T0600100800 date9: 12/17/1999</p>	<p><b>637 BEACON ST</b></p>	<p><b>SSE 1/4 - 1/2 (0.316 mi.)</b></p>	<p><b>AD162</b></p>	<p><b>45</b></p>
<p><b>CHEVRON #9-0006 / GU</b> Database: LUST, Date of Government Version: 12/04/2023 Database: LUST REG 2, Date of Government Version: 09/30/2004 Status: Completed - Case Closed Facility Id: 01-0611 Facility Status: Case Closed Global Id: T0600100563 date9: 11/13/1998</p>	<p><b>460 GRAND</b></p>	<p><b>SW 1/4 - 1/2 (0.332 mi.)</b></p>	<p><b>AF164</b></p>	<p><b>45</b></p>
<p><b>378 GRAND AVE., LLC</b> Database: LUST, Date of Government Version: 12/04/2023 Status: Completed - Case Closed Global Id: T10000009122</p>	<p><b>378 GRAND AVE</b></p>	<p><b>SW 1/4 - 1/2 (0.385 mi.)</b></p>	<p><b>AH173</b></p>	<p><b>48</b></p>
<p><b>LAKESIDE PARK</b> Database: LUST, Date of Government Version: 12/04/2023 Status: Completed - Case Closed Global Id: T0600100811</p>	<p><b>468 BELLEVUE AVE</b></p>	<p><b>SSW 1/4 - 1/2 (0.393 mi.)</b></p>	<p><b>AJ175</b></p>	<p><b>48</b></p>
<p><b>SHELL #13-5698 / DEV</b> Database: LUST, Date of Government Version: 12/04/2023 Database: LUST REG 2, Date of Government Version: 09/30/2004</p>	<p><b>350 GRAND</b></p>	<p><b>SW 1/4 - 1/2 (0.421 mi.)</b></p>	<p><b>AM181</b></p>	<p><b>50</b></p>

## EXECUTIVE SUMMARY

Status: Completed - Case Closed  
 Facility Id: 01-1360  
 Facility Status: Preliminary site assessment underway  
 Global Id: T0600101255

<p><b>QUICK STOP #46</b>          Database: LUST, Date of Government Version: 12/04/2023          Database: LUST REG 2, Date of Government Version: 09/30/2004          Status: Completed - Case Closed          Facility Id: 01-1218          Facility Status: Remedial action (cleanup) Underway          Global Id: T0600101120</p>	<p><b>363 GRAND</b></p>	<p><b>SW 1/4 - 1/2 (0.422 mi.)</b></p>	<p><b>AH184</b></p>	<p><b>51</b></p>
<p><b>CHAMPLIN FAMILY TRUS</b>          Database: LUST, Date of Government Version: 12/04/2023          Database: LUST REG 2, Date of Government Version: 09/30/2004          Status: Completed - Case Closed          Facility Id: 01-2462          Facility Status: Case Closed          Global Id: T0600102270          date9: 1/29/1999</p>	<p><b>485 ELLITA</b></p>	<p><b>SW 1/4 - 1/2 (0.462 mi.)</b></p>	<p><b>AN186</b></p>	<p><b>52</b></p>
<p><b>SHELL OIL CO</b>          Database: LUST REG 2, Date of Government Version: 09/30/2004          Facility Id: 01-1351          Facility Status: Pollution Characterization</p>	<p><b>29 WILDWOOD</b></p>	<p><b>NNE 1/4 - 1/2 (0.486 mi.)</b></p>	<p><b>AP190</b></p>	<p><b>54</b></p>
<p><b>SHELL OIL CO</b>          Database: LUST, Date of Government Version: 12/04/2023          Status: Completed - Case Closed          Global Id: T0600101246</p>	<p><b>29 WILDWOOD</b></p>	<p><b>NNE 1/4 - 1/2 (0.486 mi.)</b></p>	<p><b>AP193</b></p>	<p><b>55</b></p>

CPS-SLIC: A review of the CPS-SLIC list, as provided by EDR, has revealed that there are 6 CPS-SLIC sites within approximately 0.5 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<p>500 LAKE PARK APARTM            Database: CPS-SLIC, Date of Government Version: 12/04/2023            Facility Status: Open - Site Assessment            Global Id: T10000013846</p>	<p>500 LAKE PARK AVENUE</p>	<p>SE 1/8 - 1/4 (0.174 mi.)</p>	<p>L88</p>	<p>27</p>
<p><b>FORMER CHEVRON SERVI</b>            Database: CPS-SLIC, Date of Government Version: 12/04/2023            Facility Status: Open - Site Assessment            Global Id: T10000021260</p>	<p><b>3026 LAKESHORE AVENU</b></p>	<p><b>SSE 1/4 - 1/2 (0.267 mi.)</b></p>	<p><b>AD151</b></p>	<p><b>41</b></p>
<p><b>EXXON</b>            Database: CPS-SLIC, Date of Government Version: 12/04/2023            Facility Status: Completed - Case Closed            Global Id: T10000007707</p>	<p><b>500 GRAND AVE</b></p>	<p><b>SSW 1/4 - 1/2 (0.293 mi.)</b></p>	<p><b>AC156</b></p>	<p><b>43</b></p>
<p><b>SHERMAN CLEANERS (FO</b>            Database: SLIC REG 2, Date of Government Version: 09/30/2004            Database: CPS-SLIC, Date of Government Version: 12/04/2023            Facility Status: Completed - Case Closed            Facility Id: 01S0518</p>	<p><b>3321/3329 LAKESHORE</b></p>	<p><b>ESE 1/4 - 1/2 (0.293 mi.)</b></p>	<p><b>AE160</b></p>	<p><b>44</b></p>



## EXECUTIVE SUMMARY

Record Id: RO0003056 Status: Leak Confirmation Status: Pollution Characterization				
<b>TAYMUREE FOREIGN AUT</b> Record Id: RO0000810 Status: Case Closed	<b>3509 GRAND</b>	<b>NE 1/8 - 1/4 (0.164 mi.)</b>	<b>N79</b>	<b>25</b>
<b>UNOCAL #5325</b> Record Id: RO0000229 Status: Leak Confirmation Status: Pollution Characterization	<b>3220 LAKESHORE AVE.</b>	<b>SE 1/4 - 1/2 (0.262 mi.)</b>	<b>AB149</b>	<b>40</b>
<b>CHEVRON SERV STA #01</b> Record Id: RO0000284 Status: Pollution Characterization	<b>LAKESHORE &amp; MCARTHUR</b>	<b>SSE 1/4 - 1/2 (0.267 mi.)</b>	<b>AD152</b>	<b>41</b>
<b>EXXON</b> Record Id: RO0000391 Status: Leak Confirmation Status: Pollution Characterization Status: Case Closed	<b>500 GRAND AVE</b>	<b>SSW 1/4 - 1/2 (0.293 mi.)</b>	<b>AC156</b>	<b>43</b>
500 GRAND REDEVELOPM Record Id: RO0003175 Status: Pollution Characterization	500 GRAND AVE	SSW 1/4 - 1/2 (0.293 mi.)	AC159	44
<b>OAKLAND CITY OF</b> Record Id: RO0000777 Status: Case Closed	<b>637 BEACON ST</b>	<b>SSE 1/4 - 1/2 (0.316 mi.)</b>	<b>AD162</b>	<b>45</b>
<b>CHEVRON #9-0006 / GU</b> Record Id: RO0000839 Record Id: RO0002467 Record Id: RO0003222 Status: Leak Confirmation Status: Case Closed	<b>460 GRAND</b>	<b>SW 1/4 - 1/2 (0.332 mi.)</b>	<b>AF164</b>	<b>45</b>
378-382 GRAND AVE Record Id: RO0003218 Status: Leak Confirmation Status: Case Closed	378, 380, 382 GRAND	SW 1/4 - 1/2 (0.385 mi.)	AH171	47
<b>LAKESIDE PARK</b> Record Id: RO0003062 Status: Leak Confirmation	<b>468 BELLEVUE AVE</b>	<b>SSW 1/4 - 1/2 (0.393 mi.)</b>	<b>AJ175</b>	<b>48</b>
<b>SHELL #13-5698 / DEV</b> Record Id: RO0000428 Status: Leak Confirmation Status: Preliminary Site Assessment Workplan Submitted Status: Preliminary Site Assessment Underway Status: Pollution Characterization Status: Remedial Action Underway <i>*Additional key fields are available in the Map Findings section</i>	<b>350 GRAND</b>	<b>SW 1/4 - 1/2 (0.421 mi.)</b>	<b>AM181</b>	<b>50</b>
<b>QUICK STOP #46</b> Record Id: RO0000806 Status: Case Closed	<b>363 GRAND</b>	<b>SW 1/4 - 1/2 (0.422 mi.)</b>	<b>AH184</b>	<b>51</b>
<b>CHAMPLIN FAMILY TRUS</b> Record Id: RO0000816 Status: Case Closed	<b>485 ELLITA</b>	<b>SW 1/4 - 1/2 (0.462 mi.)</b>	<b>AN186</b>	<b>52</b>
<b>SHELL OIL CO</b>	<b>29 WILDWOOD</b>	<b>NNE 1/4 - 1/2 (0.486 mi.)</b>	<b>AP193</b>	<b>55</b>

## EXECUTIVE SUMMARY

Record Id: RO0000495  
Record Id: RO0003154  
Status: Leak Confirmation  
Status: Pollution Characterization  
Status: Case Closed

### ***Lists of state and tribal registered storage tanks***

UST: A review of the UST list, as provided by EDR, has revealed that there are 3 UST sites within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
GRAND MOBIL Database: UST, Date of Government Version: 12/04/2023 Facility Id: 10601803	3374 GRAND AVE	ENE 1/8 - 1/4 (0.141 mi.)	F62	21
GRAND MOBIL Database: ALAMEDA CO. UST, Date of Government Version: 12/26/2023 Facility Id: FA0321490 Facility Status: 01	3374 GRAND AVE	ENE 1/8 - 1/4 (0.141 mi.)	F64	22
TOSCO CORPORATION #3 Database: UST, Date of Government Version: 12/04/2023 Facility Id: 210	3374 GRAND AVE	ENE 1/8 - 1/4 (0.141 mi.)	F66	22

### **ADDITIONAL ENVIRONMENTAL RECORDS**

#### ***Local Lists of Hazardous waste / Contaminated Sites***

CERS HAZ WASTE: A review of the CERS HAZ WASTE list, as provided by EDR, and dated 01/16/2024 has revealed that there is 1 CERS HAZ WASTE site within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>UNION OIL SS #3443</b>	<b>3374 GRAND AVE</b>	<b>ENE 1/8 - 1/4 (0.141 mi.)</b>	<b>F65</b>	<b>22</b>

#### ***Local Lists of Registered Storage Tanks***

SWEEPS UST: A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 5 SWEEPS UST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>RESIDENCE</b>	<b>299 EUCLID AVE</b>	<b>WNW 1/8 - 1/4 (0.203 mi.)</b>	<b>R101</b>	<b>30</b>

## EXECUTIVE SUMMARY

Comp Number: 9245

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
COMMERCIAL PROPERTY Status: A Comp Number: 1397	3315 GRAND AVE	E 0 - 1/8 (0.049 mi.)	13	11
<b>UNION OIL SS #3443</b> Status: A Tank Status: A Comp Number: 31708	<b>3374 GRAND AVE</b>	<b>ENE 1/8 - 1/4 (0.141 mi.)</b>	<b>F65</b>	<b>22</b>
<b>TAYMUREE FOREIGN AUT</b> Comp Number: 4590	<b>3509 GRAND AVE</b>	<b>NE 1/8 - 1/4 (0.164 mi.)</b>	<b>N81</b>	<b>25</b>
<b>THIAT "JOE" LIANG (D)</b> Comp Number: 5900	<b>3201 LAKESHORE AVE</b>	<b>SE 1/8 - 1/4 (0.242 mi.)</b>	<b>AB142</b>	<b>38</b>

HIST UST: A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 6 HIST UST sites within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
UNION OIL SS 3443	3347 GRAND AVE	ENE 0 - 1/8 (0.095 mi.)	F36	16
<b>UNION OIL SS #3443</b>	<b>3374 GRAND AVE</b>	<b>ENE 1/8 - 1/4 (0.141 mi.)</b>	<b>F65</b>	<b>22</b>
UNION OIL SS# 3443 Facility Id: 00000060705	3374 GRAND AVE	ENE 1/8 - 1/4 (0.141 mi.)	F67	22
UNION OIL SS #3443 Facility Id: 00000031708	3374 GRAND AVE	ENE 1/8 - 1/4 (0.141 mi.)	F68	23
THIAT "JOE" LIANG (D) Facility Id: 00000005900	3201 LAKESHORE AVE	SE 1/8 - 1/4 (0.242 mi.)	AB141	38
<b>THIAT "JOE" LIANG (D)</b>	<b>3201 LAKESHORE AVE</b>	<b>SE 1/8 - 1/4 (0.242 mi.)</b>	<b>AB142</b>	<b>38</b>

CERS TANKS: A review of the CERS TANKS list, as provided by EDR, and dated 01/16/2024 has revealed that there is 1 CERS TANKS site within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>UNION OIL SS #3443</b>	<b>3374 GRAND AVE</b>	<b>ENE 1/8 - 1/4 (0.141 mi.)</b>	<b>F65</b>	<b>22</b>

CA FID UST: A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are 2 CA FID UST sites within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>UNION OIL SS #3443</b> Facility Id: 01002665 Status: A	<b>3374 GRAND AVE</b>	<b>ENE 1/8 - 1/4 (0.141 mi.)</b>	<b>F65</b>	<b>22</b>
<b>THIAT "JOE" LIANG (D)</b>	<b>3201 LAKESHORE AVE</b>	<b>SE 1/8 - 1/4 (0.242 mi.)</b>	<b>AB142</b>	<b>38</b>

## EXECUTIVE SUMMARY

Facility Id: 01002092  
Status: I

### **Other Ascertainable Records**

RCRA NonGen / NLR: A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 12/04/2023 has revealed that there are 93 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
TRENT DEHART EPA ID:: CAC003184117	370 SANTA CLARA AVEN	NW 0 - 1/8 (0.010 mi.)	A9	10
CHARLIE KALB EPA ID:: CAC003198698	370 SANTA CLARA AVEN	NW 0 - 1/8 (0.010 mi.)	A10	10
RICHARD MAHER EPA ID:: CAC003259948	455 CRESCENT STREET	NW 0 - 1/8 (0.063 mi.)	C17	12
COLLINS MGMNT. - 455 EPA ID:: CAC003176086	455 CRESCENT STREET	NW 0 - 1/8 (0.063 mi.)	C18	12
KILEY RUSSELL EPA ID:: CAC003019333	455 CRESCENT STREET	NW 0 - 1/8 (0.063 mi.)	C19	12
COLLINS MANAGEMENT C EPA ID:: CAC003091985	455 CRESCENT STREET	NW 0 - 1/8 (0.063 mi.)	C20	12
CHRISSEY BARLOW EPA ID:: CAC003040175	455 CRESCENT STREET	NW 0 - 1/8 (0.063 mi.)	C21	13
YIHEIS GEDLE EPA ID:: CAC003168362	455 CRESENT STREET #	NW 0 - 1/8 (0.063 mi.)	C22	13
COLLINS MANAGEMENT EPA ID:: CAC003113003	455 CRESCENT STREET	NW 0 - 1/8 (0.063 mi.)	C23	13
COLLINS MANAGEMENT EPA ID:: CAC003105247	455 CRESCENT STREET	NW 0 - 1/8 (0.063 mi.)	C24	13
PETER PROWS/KAREN NE EPA ID:: CAC003121638	483 CRESCENT STREET	NNW 0 - 1/8 (0.064 mi.)	C25	13
491 CRESCENT, LP EPA ID:: CAC003197776	491 CRESCENT STREET	N 0 - 1/8 (0.080 mi.)	D29	14
ARVAND SEBETIN EPA ID:: CAC003158347	369 MACARTHUR BLVD	WSW 0 - 1/8 (0.086 mi.)	30	14
VERITAS EPA ID:: CAC003222030	345 MACARTHUR BLVD #	W 0 - 1/8 (0.096 mi.)	G37	16
VPI GROWTH VENTURE 1 EPA ID:: CAC003207482	345 MACARTHUR BLVD.,	W 0 - 1/8 (0.096 mi.)	G38	16
345 MACARTHUR, G1, L EPA ID:: CAC003233950	345 MACARTHUR BOULEV	W 0 - 1/8 (0.096 mi.)	G39	16
345 MACARTHUR G1, LP EPA ID:: CAC003076209	345 MACARTHUR BLVD.	W 0 - 1/8 (0.096 mi.)	G40	16
345 MACARTHUR G1, LP	345 MACARTHUR BLVD.	W 0 - 1/8 (0.096 mi.)	G41	17

## EXECUTIVE SUMMARY

EPA ID:: CAC003076291				
345 MACARTHUR, G1, L EPA ID:: CAC003244049	345 MACARTHUR BLVD	W 0 - 1/8 (0.096 mi.)	G42	17
HAVA LIBERMAN EPA ID:: CAC003109633	433 ELWOOD AVENUE	NE 0 - 1/8 (0.109 mi.)	I49	18
HAVA LIBERMAN EPA ID:: CAC003103802	433 ELWOOD AVENUE	NE 0 - 1/8 (0.109 mi.)	I50	18
HOLLAND BROOKS BUILD EPA ID:: CAC003028577	472 JEAN ST #6	NNW 0 - 1/8 (0.109 mi.)	D51	19
472 JEAN A2, LP EPA ID:: CAC003112025	472 JEAN STREET #4	NNW 0 - 1/8 (0.109 mi.)	D52	19
RAJ TEDDY EPA ID:: CAC003009572	520 VAN BUREN AVENUE	SW 1/8 - 1/4 (0.130 mi.)	J58	20
FAITH DARLING EPA ID:: CAC003254507	509 VALLE VISTA AVEN	NE 1/8 - 1/4 (0.135 mi.)	I59	20
TIM HAGGERTY EPA ID:: CAC003031675	525 VAN BUREN AVE	SSW 1/8 - 1/4 (0.138 mi.)	J61	21
COLBY KATZ EPA ID:: CAC003177103	515 VALLE VISTA AVEN	NE 1/8 - 1/4 (0.144 mi.)	I70	23
TONY CELAYA EPA ID:: CAC003247020	394 EUCLID AVENUE	SW 1/8 - 1/4 (0.147 mi.)	J71	23
SANFORD MA EPA ID:: CAC003258128	353 EUCLID AVENUE #1	W 1/8 - 1/4 (0.159 mi.)	M76	24
KIRSTEN HOWE EPA ID:: CAC003227277	481 JEAN STREET	NNW 1/8 - 1/4 (0.162 mi.)	77	24
J AND R ASSOCIATES EPA ID:: CAC003036120	281 MACARTHUR BLVD	NW 1/8 - 1/4 (0.165 mi.)	83	26
ARNOLD BLUSTEIN EPA ID:: CAC003218583	397 PALM AVENUE	W 1/8 - 1/4 (0.170 mi.)	M84	26
BERGER ENTERPRISES EPA ID:: CAC003129224	743 WARFIELD AVENUE	E 1/8 - 1/4 (0.172 mi.)	86	27
SUZI GOLDMACHER EPA ID:: CAC003097821	737 WARFIELD AVENUE	ESE 1/8 - 1/4 (0.172 mi.)	K87	27
MAXWELL & KATE ERNST EPA ID:: CAC003075852	388 PALM AVE.	W 1/8 - 1/4 (0.179 mi.)	M90	27
MAUREEN LAWLOR EPA ID:: CAC003124944	507 WICKSON AVENUE #	ESE 1/8 - 1/4 (0.191 mi.)	K93	28
JAMES ROSS EPA ID:: CAC003140131	507 WICKSON AVENUE #	ESE 1/8 - 1/4 (0.191 mi.)	K94	28
CATHARINE SCHULTZ & EPA ID:: CAC003012216	507 WICKSON AVENUE #	ESE 1/8 - 1/4 (0.191 mi.)	K95	28
MONTEREY BAY COLORS EPA ID:: CAL000412784	810 WALKER AVE APT 1	ENE 1/8 - 1/4 (0.206 mi.)	S104	31
DANIEL PIVNICK EPA ID:: CAC003199306	293 EUCLID AVENUE #5	WNW 1/8 - 1/4 (0.208 mi.)	R105	31
DANIEL PIVNICK	293 EUCLID AVENUE #6	WNW 1/8 - 1/4 (0.208 mi.)	R106	31

## EXECUTIVE SUMMARY

EPA ID:: CAC003154794 BELLEVUE APARTMENTS EPA ID:: CAL000477142	369 BELLEVUE AVE	WSW 1/8 - 1/4 (0.211 mi.)	T107	31
SHANNON MCCABE EPA ID:: CAC003259970	359 BELLEVUE AVENUE	WSW 1/8 - 1/4 (0.213 mi.)	T108	31
TRUST MATTERS EPA ID:: CAC003033865	353 BELLEVUE AVE	W 1/8 - 1/4 (0.214 mi.)	T118	33
KYLE PARKER EPA ID:: CAC003040770	377 PALM AVE #107	W 1/8 - 1/4 (0.218 mi.)	U119	34
COLLINS MANAGEMENT EPA ID:: CAC003101219	377 PALM AVENUE	W 1/8 - 1/4 (0.218 mi.)	U120	34
COLLINS MANAGEMENT P EPA ID:: CAC003085758	377 PALM AVENUE	W 1/8 - 1/4 (0.218 mi.)	U121	34
CHRIS CORNFORD EPA ID:: CAC003146843	325 ALTA VISTA AVE.	N 1/8 - 1/4 (0.218 mi.)	V122	34
CHRIS CORNFORD EPA ID:: CAC003155870	325 ALTA VISTA AVENU	N 1/8 - 1/4 (0.218 mi.)	V123	34
MERIDIAN MANAGEMENT EPA ID:: CAC003041310	365 WARWICK AVE #305	WNW 1/8 - 1/4 (0.219 mi.)	R124	35
UNIVERSITY PRESIDENT EPA ID:: CAC003002089	365 WARWICK AVE.	WNW 1/8 - 1/4 (0.219 mi.)	R125	35
SCOTT BAILEY EPA ID:: CAC003171648	824 VERMONT ST.	ENE 1/8 - 1/4 (0.224 mi.)	S126	35
TOM CHEW EPA ID:: CAC003008778	396 JAYNE AVENUE	WNW 1/8 - 1/4 (0.230 mi.)	R132	36
OMAR SHAH EPA ID:: CAC003244893	301 ALTA VISTA AVENU	N 1/8 - 1/4 (0.234 mi.)	V134	37
TOM PARATORE EPA ID:: CAC003025952	484 CHETWOOD ST	NNW 1/8 - 1/4 (0.235 mi.)	Y136	37
KLAUS WIRSING EPA ID:: CAC003067851	525 GLENVIEW AVE. #1	ESE 1/8 - 1/4 (0.237 mi.)	Z137	37
LEXIA LITTLEJOHN EPA ID:: CAC002996471	525 MANDANA BLVD #21	E 1/8 - 1/4 (0.242 mi.)	AA138	37
INDEPENDENT PLANNING EPA ID:: CAC003219651	525 MANDANA BLVD #30	E 1/8 - 1/4 (0.242 mi.)	AA139	38
SHANNON CARSON EPA ID:: CAC003198743	525 MANDANA BOULEVAR	E 1/8 - 1/4 (0.242 mi.)	AA140	38
SAMMY GO EPA ID:: CAC003047280	546 GLENVIEW AVE	ESE 1/8 - 1/4 (0.247 mi.)	Z144	39
CINDY BUFFING EPA ID:: CAC003057807	492 CHETWOOD ST	NNW 1/8 - 1/4 (0.248 mi.)	Y145	39
<b>Lower Elevation</b>	<b>Address</b>	<b>Direction / Distance</b>	<b>Map ID</b>	<b>Page</b>
VAUGHN MANAGEMENT GR EPA ID:: CAC003048298	377 SANTA CLARA AVE	NE 0 - 1/8 (0.015 mi.)	A11	11
BOB & GIGI INC DBA O	3250 GRAND AVE	ESE 0 - 1/8 (0.091 mi.)	E33	15

## EXECUTIVE SUMMARY

EPA ID:: CAL000447506					
PRIDE CLEANERS EPA ID:: CAC003244764	3401 GRAND AVENUE	ENE 0 - 1/8 (0.121 mi.)	F56	20	
GRAND MANDANA GAS ST EPA ID:: CAL000330848	3374 GRAND AVE	ENE 1/8 - 1/4 (0.141 mi.)	F69	23	
RUTH CASSER EPA ID:: CAC003259409	436 LAGUNITAS AVENUE	SSW 1/8 - 1/4 (0.149 mi.)	J72	23	
JILL BROADHURST EPA ID:: CAC003112238	485 WICKSON AVENUE #	ESE 1/8 - 1/4 (0.159 mi.)	K74	24	
CUSHMAN AND WAKEFIEL EPA ID:: CAC003224109	496 LAKE PARK AVENUE	SSE 1/8 - 1/4 (0.159 mi.)	L75	24	
YOUNG'S AUTOMOTIVE EPA ID:: CAL000204795	3509 GRAND AVE	NE 1/8 - 1/4 (0.164 mi.)	N80	25	
MYND PROPERTY MANAGE EPA ID:: CAC003028601	449 LAGUNITAS AVE	SSW 1/8 - 1/4 (0.171 mi.)	O85	26	
MAXGEN ENERGY SERVIC EPA ID:: CAC003050630 EPA ID:: CAC003083113	500 LAKE PARK AVE	SE 1/8 - 1/4 (0.174 mi.)	L89	27	
HAN, AGNES EPA ID:: CAC003051126	626 GRAND AVENUE	S 1/8 - 1/4 (0.181 mi.)	O91	28	
HAN, AGNES EPA ID:: CAC003039498	626 GRAND AVENUE	S 1/8 - 1/4 (0.181 mi.)	O92	28	
LINDA HOLLAND EPA ID:: CAC003060190	408 EUCLID AVE	SSW 1/8 - 1/4 (0.192 mi.)	P96	29	
DAVID JOHNSON EPA ID:: CAC003140293	558 VALLE VISTA AVEN	NE 1/8 - 1/4 (0.198 mi.)	Q97	29	
RYAN YU EPA ID:: CAC003122380	427 LAGUNITAS AVE, #	SSW 1/8 - 1/4 (0.200 mi.)	O98	29	
STEPHANE DELEGER EPA ID:: CAC003110786	564 VALLE VISTA AVEN	NE 1/8 - 1/4 (0.213 mi.)	Q109	32	
MANKUEN (JENNIE) CHA EPA ID:: CAC003204692	411 EUCLID AVENUE #9	SW 1/8 - 1/4 (0.213 mi.)	P110	32	
BLUE SAPPHIRE HOMES EPA ID:: CAC003244104	411 EUCLID AVENUE #1	SW 1/8 - 1/4 (0.213 mi.)	P111	32	
MANKUEN (JENNIE) CHA EPA ID:: CAC003220312	411 EUCLID AVENUE #1	SW 1/8 - 1/4 (0.213 mi.)	P112	32	
BLUE SAPPHIRE HOMES EPA ID:: CAC003234612	411 EUCLID AVENUE #1	SW 1/8 - 1/4 (0.213 mi.)	P113	32	
BLUE SAPPHIRE HOMES EPA ID:: CAC003241428	411 EUCLID AVENUE #2	SW 1/8 - 1/4 (0.213 mi.)	P114	33	
MANKUEN (JENNIE) CHA EPA ID:: CAC003205596	411 EUCLID AVENUE #8	SW 1/8 - 1/4 (0.213 mi.)	P115	33	
BLUE SAPPHIRE HOMES EPA ID:: CAC003254496	411 EUCLID AVENUE #6	SW 1/8 - 1/4 (0.213 mi.)	P116	33	
BLUE SAPPHIRE HOMES EPA ID:: CAC003222138 EPA ID:: CAC003243449	411 EUCLID AVENUE #3	SW 1/8 - 1/4 (0.213 mi.)	P117	33	
JACK DOUGLAS	724 RAND AVENUE	ESE 1/8 - 1/4 (0.224 mi.)	W127	35	

## EXECUTIVE SUMMARY

EPA ID:: CAC003261919				
JACK DOUGLAS	722 RAND AVENUE	ESE 1/8 - 1/4 (0.227 mi.)	W128	35
EPA ID:: CAC003253585				
JENNIFER WU	722 RAND AVE	ESE 1/8 - 1/4 (0.227 mi.)	W129	36
EPA ID:: CAC003047725				
JENNIFER WU	722 RAND AVENUE	ESE 1/8 - 1/4 (0.227 mi.)	W131	36
EPA ID:: CAC003080665				
BILL MCLETCHIE	410 BELLEVUE AVENUE	SW 1/8 - 1/4 (0.233 mi.)	X133	36
EPA ID:: CAC002998262				
FRANKLIN CHAN	420 BURK STREET	SSW 1/8 - 1/4 (0.243 mi.)	AC143	38
EPA ID:: CAC003210550				
BLACK OAK PROPERTIES	405 BELLEVUE AVE.	SW 1/8 - 1/4 (0.249 mi.)	X146	39
EPA ID:: CAC003111527				
BLACK OAK PROPERTIES	405 BELLEVUE AVENUE	SW 1/8 - 1/4 (0.249 mi.)	X147	39
EPA ID:: CAC002981978				

MINES MRDS: A review of the MINES MRDS list, as provided by EDR, and dated 08/23/2022 has revealed that there is 1 MINES MRDS site within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
KAISER INDUSTRIES CO		S 1/8 - 1/4 (0.235 mi.)	135	37

Cortese: A review of the Cortese list, as provided by EDR, and dated 12/13/2023 has revealed that there are 21 Cortese sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>YORK STREET APARTMEN</b> Cleanup Status: COMPLETED - CASE CLOSED	<b>800 YORK</b>	<b>E 1/4 - 1/2 (0.277 mi.)</b>	<b>AA154</b>	<b>42</b>
<b>POY-WING PROPERTY</b> Cleanup Status: OPEN - VERIFICATION MONITORING	<b>240 MACARTHUR BLVD W</b>	<b>NNW 1/4 - 1/2 (0.348 mi.)</b>	<b>AG166</b>	<b>46</b>
<b>SHELL #13-5676</b> Cleanup Status: COMPLETED - CASE CLOSED	<b>230 MACARTHUR</b>	<b>NNW 1/4 - 1/2 (0.348 mi.)</b>	<b>AG170</b>	<b>47</b>
<b>EAST BAY AGENCY FOR</b> Cleanup Status: COMPLETED - CASE CLOSED	<b>303 VAN BUREN AVENUE</b>	<b>WSW 1/4 - 1/2 (0.388 mi.)</b>	<b>AI174</b>	<b>48</b>
<b>CITY OF OAKLAND ENVI</b> Cleanup Status: COMPLETED - CASE CLOSED	<b>172 SANTA CLARA</b>	<b>NNW 1/4 - 1/2 (0.396 mi.)</b>	<b>AK178</b>	<b>49</b>
<b>BP</b> Cleanup Status: COMPLETED - CASE CLOSED	<b>100 MACARTHUR BLVD</b>	<b>NNW 1/4 - 1/2 (0.476 mi.)</b>	<b>AO188</b>	<b>53</b>
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>FYNE BUILDING</b> Cleanup Status: COMPLETED - CASE CLOSED	<b>774 GRAND AVE W</b>	<b>SSE 0 - 1/8 (0.103 mi.)</b>	<b>H48</b>	<b>18</b>
<b>TAYMUREE FOREIGN AUT</b>	<b>3509 GRAND</b>	<b>NE 1/8 - 1/4 (0.164 mi.)</b>	<b>N79</b>	<b>25</b>

## EXECUTIVE SUMMARY

Cleanup Status: COMPLETED - CASE CLOSED				
<b>WU PROPERTY</b>	<b>722 RAND AVENUE</b>	<b>ESE 1/8 - 1/4 (0.227 mi.)</b>	<b>W130</b>	<b>36</b>
Cleanup Status: COMPLETED - CASE CLOSED				
<b>UNOCAL #5325</b>	<b>3220 LAKESHORE AVE.</b>	<b>SE 1/4 - 1/2 (0.262 mi.)</b>	<b>AB149</b>	<b>40</b>
Cleanup Status: COMPLETED - CASE CLOSED				
<b>CHEVRON SERV STA #01</b>	<b>LAKESHORE &amp; MCARTHUR</b>	<b>SSE 1/4 - 1/2 (0.267 mi.)</b>	<b>AD152</b>	<b>41</b>
Cleanup Status: OPEN - SITE ASSESSMENT				
<b>EXXON</b>	<b>500 GRAND AVE</b>	<b>SSW 1/4 - 1/2 (0.293 mi.)</b>	<b>AC156</b>	<b>43</b>
Cleanup Status: COMPLETED - CASE CLOSED				
<b>WILMOT PROPERTY</b>	<b>433 BELLEVUE AVE</b>	<b>SW 1/4 - 1/2 (0.299 mi.)</b>	<b>AF161</b>	<b>44</b>
Cleanup Status: COMPLETED - CASE CLOSED				
<b>OAKLAND CITY OF</b>	<b>637 BEACON ST</b>	<b>SSE 1/4 - 1/2 (0.316 mi.)</b>	<b>AD162</b>	<b>45</b>
Cleanup Status: COMPLETED - CASE CLOSED				
<b>CHEVRON #9-0006 / GU</b>	<b>460 GRAND</b>	<b>SW 1/4 - 1/2 (0.332 mi.)</b>	<b>AF164</b>	<b>45</b>
Cleanup Status: COMPLETED - CASE CLOSED				
<b>378 GRAND AVE., LLC</b>	<b>378 GRAND AVE</b>	<b>SW 1/4 - 1/2 (0.385 mi.)</b>	<b>AH173</b>	<b>48</b>
Cleanup Status: COMPLETED - CASE CLOSED				
<b>LAKESIDE PARK</b>	<b>468 BELLEVUE AVE</b>	<b>SSW 1/4 - 1/2 (0.393 mi.)</b>	<b>AJ175</b>	<b>48</b>
Cleanup Status: COMPLETED - CASE CLOSED				
<b>SHELL #13-5698 / DEV</b>	<b>350 GRAND</b>	<b>SW 1/4 - 1/2 (0.421 mi.)</b>	<b>AM181</b>	<b>50</b>
Cleanup Status: COMPLETED - CASE CLOSED				
<b>QUICK STOP #46</b>	<b>363 GRAND</b>	<b>SW 1/4 - 1/2 (0.422 mi.)</b>	<b>AH184</b>	<b>51</b>
Cleanup Status: COMPLETED - CASE CLOSED				
<b>CHAMPLIN FAMILY TRUS</b>	<b>485 ELLITA</b>	<b>SW 1/4 - 1/2 (0.462 mi.)</b>	<b>AN186</b>	<b>52</b>
Cleanup Status: COMPLETED - CASE CLOSED				
<b>SHELL OIL CO</b>	<b>29 WILDWOOD</b>	<b>NNE 1/4 - 1/2 (0.486 mi.)</b>	<b>AP193</b>	<b>55</b>
Cleanup Status: COMPLETED - CASE CLOSED				

DRYCLEANERS: A review of the DRYCLEANERS list, as provided by EDR, has revealed that there are 4 DRYCLEANERS sites within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>CARSONS MARTINIZING</b>	<b>3250 GRAND AVE</b>	<b>ESE 0 - 1/8 (0.091 mi.)</b>	<b>E32</b>	<b>15</b>
Database: DRYCLEANERS, Date of Government Version: 04/02/2024 EPA Id: CAD981396104				
<b>ONE HOUR MARTINIZING</b>	<b>3250 GRAND AVE</b>	<b>ESE 0 - 1/8 (0.091 mi.)</b>	<b>E35</b>	<b>15</b>
Database: DRYCLEANERS, Date of Government Version: 04/02/2024 Database: DRYCLEAN BAY AREA DIST, Date of Government Version: 02/20/2019 EPA Id: CAL000447506				
<b>PRIDE CLEANERS</b>	<b>3401 GRAND AVE</b>	<b>ENE 0 - 1/8 (0.121 mi.)</b>	<b>F54</b>	<b>19</b>
Database: DRYCLEAN BAY AREA DIST, Date of Government Version: 02/20/2019				
<b>YOUNG'S ONE HOUR DRY</b>	<b>600 GRAND AVE</b>	<b>S 1/8 - 1/4 (0.204 mi.)</b>	<b>O102</b>	<b>30</b>
Database: DRYCLEANERS, Date of Government Version: 04/02/2024 Database: DRYCLEAN BAY AREA DIST, Date of Government Version: 02/20/2019 EPA Id: CAL000355559				

## EXECUTIVE SUMMARY

HIST CORTESE: A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 23 HIST CORTESE sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>RESIDENCE</b> Reg Id: 01-1908	<b>299 EUCLID AVE</b>	<b>WNW 1/8 - 1/4 (0.203 mi.)</b>	<b>R101</b>	<b>30</b>
<b>YORK STREET APARTMEN</b> Reg Id: 01-1689	<b>800 YORK</b>	<b>E 1/4 - 1/2 (0.277 mi.)</b>	<b>AA154</b>	<b>42</b>
<b>POY-WING PROPERTY</b> Reg Id: 01-2434	<b>240 MACARTHUR BLVD W</b>	<b>NNW 1/4 - 1/2 (0.348 mi.)</b>	<b>AG166</b>	<b>46</b>
<b>SHELL #13-5676</b> Reg Id: 01-1345	<b>230 MACARTHUR</b>	<b>NNW 1/4 - 1/2 (0.348 mi.)</b>	<b>AG170</b>	<b>47</b>
<b>CITY OF OAKLAND ENVI</b> Reg Id: 01-0625	<b>172 SANTA CLARA</b>	<b>NNW 1/4 - 1/2 (0.396 mi.)</b>	<b>AK178</b>	<b>49</b>
<b>BP</b> Reg Id: 01-0985	<b>100 MACARTHUR BLVD</b>	<b>NNW 1/4 - 1/2 (0.476 mi.)</b>	<b>AO188</b>	<b>53</b>
<b>UNOCAL</b> Reg Id: 01-1618	<b>96 MACARTHUR BLVD</b>	<b>NNW 1/4 - 1/2 (0.496 mi.)</b>	<b>AO194</b>	<b>55</b>
<b>ARCO</b> Reg Id: 01-0118	<b>731 MACARTHUR</b>	<b>SE 1/4 - 1/2 (0.500 mi.)</b>	<b>195</b>	<b>56</b>
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>PG &amp; E</b> Reg Id: 01-1562	<b>3234 GRAND</b>	<b>SE 0 - 1/8 (0.088 mi.)</b>	<b>E31</b>	<b>15</b>
<b>FYNE BUILDING</b> Reg Id: 01-0674	<b>774 GRAND</b>	<b>SSE 0 - 1/8 (0.103 mi.)</b>	<b>H46</b>	<b>18</b>
<b>UNOCAL</b> Reg Id: 01-1597	<b>411 MACARTHUR BLVD W</b>	<b>SSW 1/8 - 1/4 (0.138 mi.)</b>	<b>J60</b>	<b>21</b>
<b>TAYMUREE FOREIGN AUT</b> Reg Id: 01-1450	<b>3509 GRAND</b>	<b>NE 1/8 - 1/4 (0.164 mi.)</b>	<b>N79</b>	<b>25</b>
<b>UNOCAL #5325</b> Reg Id: 01-1588	<b>3220 LAKESHORE AVE.</b>	<b>SE 1/4 - 1/2 (0.262 mi.)</b>	<b>AB149</b>	<b>40</b>
<b>CHEVRON SERV STA #01</b> Reg Id: 01-0356	<b>LAKESHORE &amp; MCARTHUR</b>	<b>SSE 1/4 - 1/2 (0.267 mi.)</b>	<b>AD152</b>	<b>41</b>
<b>BERG RESIDENCE</b> Reg Id: 2768	<b>3329 LAKESHORE</b>	<b>ESE 1/4 - 1/2 (0.288 mi.)</b>	<b>AE155</b>	<b>42</b>
<b>EXXON</b> Reg Id: 01-1467	<b>500 GRAND AVE</b>	<b>SSW 1/4 - 1/2 (0.293 mi.)</b>	<b>AC156</b>	<b>43</b>
<b>OAKLAND CITY OF</b> Reg Id: 01-0866	<b>637 BEACON ST</b>	<b>SSE 1/4 - 1/2 (0.316 mi.)</b>	<b>AD162</b>	<b>45</b>
<b>CHEVRON #9-0006 / GU</b> Reg Id: 01-0611	<b>460 GRAND</b>	<b>SW 1/4 - 1/2 (0.332 mi.)</b>	<b>AF164</b>	<b>45</b>
<b>LAKESIDE PARK</b> Reg Id: 01-0878	<b>468 BELLEVUE AVE</b>	<b>SSW 1/4 - 1/2 (0.393 mi.)</b>	<b>AJ175</b>	<b>48</b>
<b>SHELL #13-5698 / DEV</b>	<b>350 GRAND</b>	<b>SW 1/4 - 1/2 (0.421 mi.)</b>	<b>AM181</b>	<b>50</b>

## EXECUTIVE SUMMARY

Reg Id: 01-1360				
<b>QUICK STOP #46</b>	<b>363 GRAND</b>	<b>SW 1/4 - 1/2 (0.422 mi.)</b>	<b>AH184</b>	<b>51</b>
Reg Id: 01-1218				
<b>CHAMPLIN FAMILY TRUS</b>	<b>485 ELLITA</b>	<b>SW 1/4 - 1/2 (0.462 mi.)</b>	<b>AN186</b>	<b>52</b>
Reg Id: 01-2462				
<b>SHELL OIL CO</b>	<b>29 WILDWOOD</b>	<b>NNE 1/4 - 1/2 (0.486 mi.)</b>	<b>AP190</b>	<b>54</b>
Reg Id: 01-1351				

Notify 65: A review of the Notify 65 list, as provided by EDR, and dated 12/06/2023 has revealed that there are 9 Notify 65 sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>CONNELL OLDS</b>	<b>3093 BROADWAY</b>	<b>NW 1/2 - 1 (0.844 mi.)</b>	<b>200</b>	<b>58</b>
CARDIO PULMANARY BUI	365 HAWTHORNE STREET	NW 1/2 - 1 (0.932 mi.)	203	59
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>YOUNG'S AUTOMOTIVE</b>	<b>3509 GRAND AVE</b>	<b>NE 1/8 - 1/4 (0.164 mi.)</b>	<b>N82</b>	<b>26</b>
SERVICE STATION	500 GRAND AVENUE	SSW 1/4 - 1/2 (0.293 mi.)	AC157	43
<b>SUSAN MENDELSON</b>	<b>431 LEE ST.</b>	<b>WSW 1/4 - 1/2 (0.434 mi.)</b>	<b>AI185</b>	<b>52</b>
CROWLEY MARITIME COR	PAC. DRY DOCK YARDS	W 1/2 - 1 (0.772 mi.)	196	56
<b>EUROPEAN MOTORS</b>	<b>2915 BROADWAY</b>	<b>WNW 1/2 - 1 (0.794 mi.)</b>	<b>197</b>	<b>56</b>
BROADWAY VOLKSWAGON	2749 BROADWAY	WNW 1/2 - 1 (0.811 mi.)	199	57
YUEN'S EXXON SERVICE	1901 PARK BOULEVARD	S 1/2 - 1 (0.871 mi.)	201	59

UST FINDER: A review of the UST FINDER list, as provided by EDR, and dated 06/08/2023 has revealed that there is 1 UST FINDER site within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
GRAND MOBIL	3374 GRAND AVE	ENE 1/8 - 1/4 (0.141 mi.)	F63	21

UST FINDER RELEASE: A review of the UST FINDER RELEASE list, as provided by EDR, and dated 06/08/2023 has revealed that there are 18 UST FINDER RELEASE sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
YORK STREET APARTMEN	800 YORK	E 1/4 - 1/2 (0.277 mi.)	AA153	42
FORMERLY DODSON LTD	240 MACARTHUR	NNW 1/4 - 1/2 (0.348 mi.)	AG167	46
SHELL #13-5676	230 MACARTHUR	NNW 1/4 - 1/2 (0.348 mi.)	AG168	47
CITY OF OAKLAND FIRE	172 SANTA CLARA	NNW 1/4 - 1/2 (0.396 mi.)	AK177	49
BP #11102	100 MACARTHUR	NNW 1/4 - 1/2 (0.476 mi.)	AO189	54
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
FYNE BUILDING	774 GRAND AVE W	SSE 0 - 1/8 (0.103 mi.)	H47	18
TAYMUREE FOREIGN AUT	3509 GRAND	NE 1/8 - 1/4 (0.164 mi.)	N78	25
UNOCAL #5325	3220 LAKESHORE AVE.	SE 1/4 - 1/2 (0.262 mi.)	AB148	39
CHEVRON #9-0121	3026 LAKESHORE AVENU	SSE 1/4 - 1/2 (0.267 mi.)	AD150	40

## EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CHEVRON #21-1173 / E	500 GRAND AVE	SSW 1/4 - 1/2 (0.293 mi.)	AC158	44
CITY OF OAKLAND	637 BEACON	SSE 1/4 - 1/2 (0.316 mi.)	AD163	45
CHEVRON #9-0006 / GU	460 GRAND	SW 1/4 - 1/2 (0.332 mi.)	AF165	46
GRAND AVENUE LLC	378 GRAND AVENUE	SW 1/4 - 1/2 (0.385 mi.)	AH172	48
LAKESIDE PARK	468 BELLEVUE AVE	SSW 1/4 - 1/2 (0.393 mi.)	AJ176	49
SHELL #13-5698 / DEV	350 GRAND	SW 1/4 - 1/2 (0.421 mi.)	AM182	51
QUICK STOP #46	363 GRAND	SW 1/4 - 1/2 (0.422 mi.)	AH183	51
CHAMPLIN FAMILY TRUS	485 ELLITA	SW 1/4 - 1/2 (0.462 mi.)	AN187	53
SHELL #13-5765	29 WILDWOOD	NNE 1/4 - 1/2 (0.486 mi.)	AP191	54

### EDR HIGH RISK HISTORICAL RECORDS

#### *EDR Exclusive Records*

EDR Hist Cleaner: A review of the EDR Hist Cleaner list, as provided by EDR, has revealed that there are 14 EDR Hist Cleaner sites within approximately 0.125 miles of the target property.

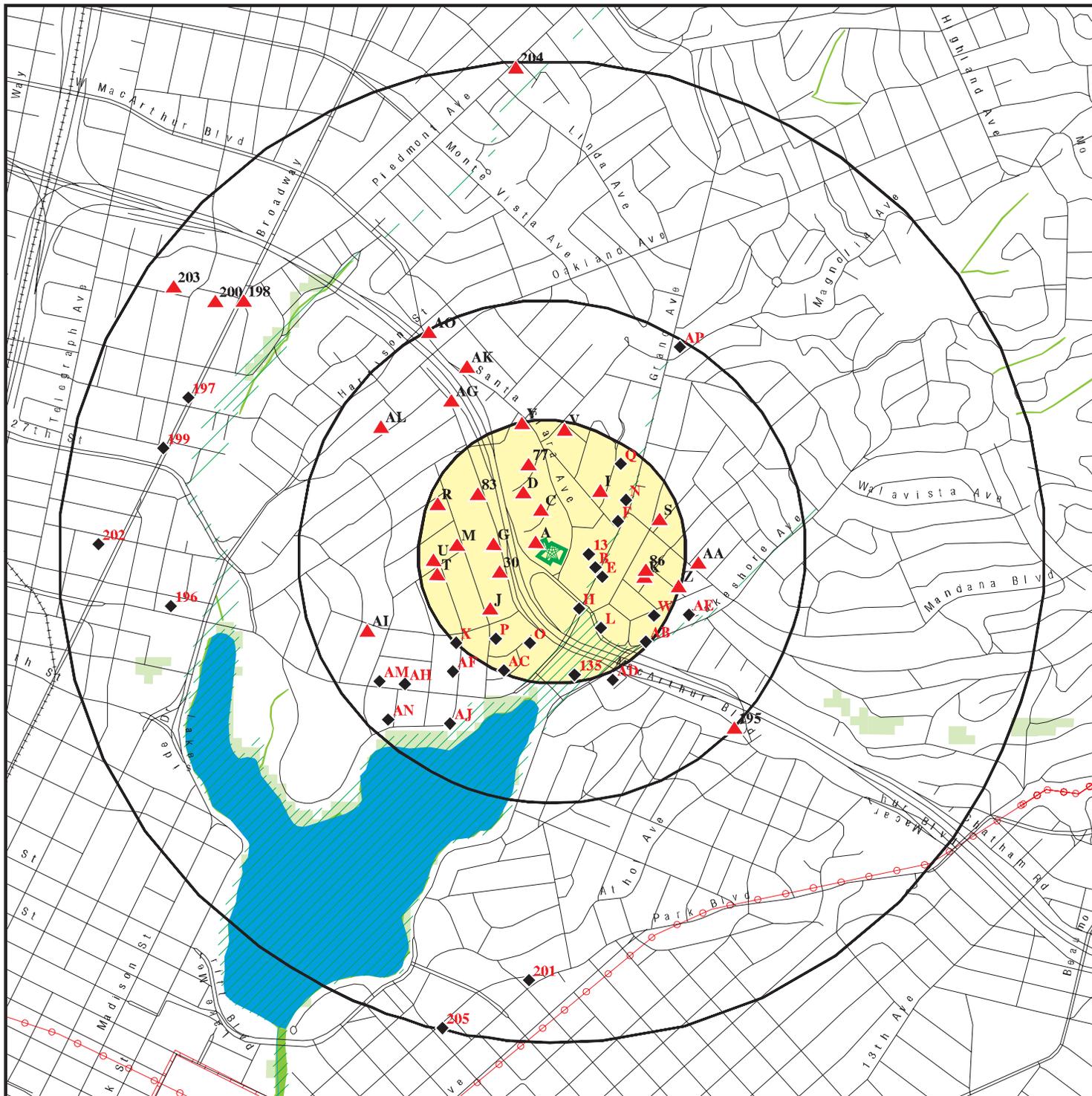
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CHONG WONG	414 SANTA CLARA AV	SE 0 - 1/8 (0.032 mi.)	B12	11
SHERMAN JULIUS	3217 GRAND AVE	SE 0 - 1/8 (0.050 mi.)	B14	11
ALBRIGHT G E	468 SANTA CLARA AV	SSE 0 - 1/8 (0.055 mi.)	B15	11
GLEN VIEW LAUNDRY	474 SANTA CLARA AV	SE 0 - 1/8 (0.061 mi.)	B16	12
ESQUIRE CLEANERS COM	3223 GRAND AVE	ESE 0 - 1/8 (0.070 mi.)	B26	14
ESQUIRE CLEANERS COM	3235 GRAND AVE	ESE 0 - 1/8 (0.070 mi.)	B27	14
LANDOWITZ JOS	3249 GRAND AVE	ESE 0 - 1/8 (0.070 mi.)	B28	14
Y S ONE-HOUR MARTINI	3250 GRAND AVE	ESE 0 - 1/8 (0.091 mi.)	E34	15
BRITE CLEANERS INC	3349 GRAND AVE	ENE 0 - 1/8 (0.096 mi.)	F43	17
GLENVIEW LAUNDRY	3351 GRAND AVE	ENE 0 - 1/8 (0.098 mi.)	F44	17
SIMPSON D R	3322 GRAND AVE	E 0 - 1/8 (0.101 mi.)	F45	17
LIBERTY CLEANERS	755 GRAND AVE	SSE 0 - 1/8 (0.111 mi.)	H53	19
PRIDE CLEANERS	3401 GRAND AVE	ENE 0 - 1/8 (0.121 mi.)	F55	20
WEINTROB ABR	3405 GRAND AVE	ENE 0 - 1/8 (0.124 mi.)	F57	20

Count: 8 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
OAKLAND	S127094028	BROOKLYN BASIN - PARCEL F	285 & 255 8TH AVENUE	94612	ENVIROSTOR, VCP, DEED
OAKLAND	S128265393	BROOKLYN BASIN - PARCEL H	277 BROOKLYN BASIN WAY	94606	ENVIROSTOR, VCP
OAKLAND	S127459716	BROOKLYN BASIN - PARCEL G	BROOKLYN BASIN WAY	94606	ENVIROSTOR, VCP
OAKLAND	S103576383	BLAZIC INDUSTRIAL BUILDING	1016 MACARTHUR BLVD W	94610	LUST
OAKLAND	S128885710	BROOKLYN BASIN - PARCEL C	OAK STREET TO 9TH AVENUE	94606	ENVIROSTOR, VCP
OAKLAND	S128004964	BROOKLYN BASIN - PARCEL E	OAK STREET TO 9TH AVENUE	94606	ENVIROSTOR, VCP
OAKLAND	S126982069	BROOKLYN BASIN - PARCEL A	OAK STREET TO 9TH AVENUE	94606	ENVIROSTOR, VCP
OAKLAND	S125820819	BROOKLYN BASIN - PARCEL D	OAK STREET TO 9TH AVENUE	94606	ENVIROSTOR, VCP

# OVERVIEW MAP - 7660283.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

Power transmission lines

Pipelines

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

Areas of Concern



This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 401 Santa Clara Ave  
 ADDRESS: 401 Santa Clara Avenue  
 Oakland CA 94610  
 LAT/LONG: 37.812997 / 122.249113

CLIENT: Ninyo & Moore  
 CONTACT: Luke Swickard  
 INQUIRY #: 7660283.2s  
 DATE: May 22, 2024 2:38 pm



## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<b>STANDARD ENVIRONMENTAL RECORDS</b>								
<b><i>Lists of Federal NPL (Superfund) sites</i></b>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
<b><i>Lists of Federal Delisted NPL sites</i></b>								
Delisted NPL	1.000		0	0	0	0	NR	0
<b><i>Lists of Federal sites subject to CERCLA removals and CERCLA orders</i></b>								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
<b><i>Lists of Federal CERCLA sites with NFRAP</i></b>								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
<b><i>Lists of Federal RCRA facilities undergoing Corrective Action</i></b>								
CORRACTS	1.000		0	0	0	0	NR	0
<b><i>Lists of Federal RCRA TSD facilities</i></b>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<b><i>Lists of Federal RCRA generators</i></b>								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		2	2	NR	NR	NR	4
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
<b><i>Federal institutional controls / engineering controls registries</i></b>								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
<b><i>Federal ERNS list</i></b>								
ERNS	TP		NR	NR	NR	NR	NR	0
<b><i>Lists of state- and tribal (Superfund) equivalent sites</i></b>								
RESPONSE	1.000		0	0	0	0	NR	0
<b><i>Lists of state- and tribal hazardous waste facilities</i></b>								
ENVIROSTOR	1.000		0	0	0	4	NR	4
<b><i>Lists of state and tribal landfills and solid waste disposal facilities</i></b>								
SWF/LF	0.500		0	0	0	NR	NR	0

## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<b><i>Lists of state and tribal leaking storage tanks</i></b>								
LUST	0.500		1	7	23	NR	NR	31
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	1	5	NR	NR	6
Alameda County CS	0.500		0	4	17	NR	NR	21
<b><i>Lists of state and tribal registered storage tanks</i></b>								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	3	NR	NR	NR	3
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
<b><i>Lists of state and tribal voluntary cleanup sites</i></b>								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
<b><i>Lists of state and tribal brownfield sites</i></b>								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
<b><u>ADDITIONAL ENVIRONMENTAL RECORDS</u></b>								
<b><i>Local Brownfield lists</i></b>								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
<b><i>Local Lists of Landfill / Solid Waste Disposal Sites</i></b>								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
<b><i>Local Lists of Hazardous waste / Contaminated Sites</i></b>								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CERS HAZ WASTE	0.250		0	1	NR	NR	NR	1
US CDL	TP		NR	NR	NR	NR	NR	0
<b><i>Local Lists of Registered Storage Tanks</i></b>								
SWEEPS UST	0.250		1	4	NR	NR	NR	5
HIST UST	0.250		1	5	NR	NR	NR	6
CERS TANKS	0.250		0	1	NR	NR	NR	1
CA FID UST	0.250		0	2	NR	NR	NR	2

## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<b>Local Land Records</b>								
LIENS	TP		NR	NR	NR	NR	NR	0
LIENS 2	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
<b>Records of Emergency Release Reports</b>								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP		NR	NR	NR	NR	NR	0
LDS	TP		NR	NR	NR	NR	NR	0
MCS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
<b>Other Ascertainable Records</b>								
RCRA NonGen / NLR	0.250	3	26	67	NR	NR	NR	96
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
MINES MRDS	0.250		0	1	NR	NR	NR	1
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP	1	NR	NR	NR	NR	NR	1
ECHO	TP	2	NR	NR	NR	NR	NR	2
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0

## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0
PFAS TSCA	0.250		0	0	NR	NR	NR	0
PFAS TRIS	0.250		0	0	NR	NR	NR	0
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0
PFAS NPDES	0.250		0	0	NR	NR	NR	0
PFAS ECHO	0.250		0	0	NR	NR	NR	0
PFAS ECHO FIRE TRAINING	0.250		0	0	NR	NR	NR	0
PFAS PART 139 AIRPORT	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM NRC	0.250		0	0	NR	NR	NR	0
BIOSOLIDS	TP		NR	NR	NR	NR	NR	0
PFAS	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
CHROME PLATING	0.500		0	0	0	NR	NR	0
Cortese	0.500		1	2	18	NR	NR	21
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		3	1	NR	NR	NR	4
EMI	TP		NR	NR	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
ICE	TP		NR	NR	NR	NR	NR	0
HIST CORTESE	0.500		2	3	18	NR	NR	23
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
HWTS	TP	3	NR	NR	NR	NR	NR	3
HAZNET	TP	3	NR	NR	NR	NR	NR	3
MINES	0.250		0	0	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
PEST LIC	TP		NR	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	1	2	6	NR	9
HAZMAT	0.250		0	0	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
UIC GEO	TP		NR	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	TP		NR	NR	NR	NR	NR	0
PROJECT	TP		NR	NR	NR	NR	NR	0
WDR	TP		NR	NR	NR	NR	NR	0
CIWQS	TP		NR	NR	NR	NR	NR	0
CERS	TP		NR	NR	NR	NR	NR	0
NON-CASE INFO	TP		NR	NR	NR	NR	NR	0
OTHER OIL GAS	TP		NR	NR	NR	NR	NR	0
PROD WATER PONDS	TP		NR	NR	NR	NR	NR	0
SAMPLING POINT	TP		NR	NR	NR	NR	NR	0

## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
WELL STIM PROJ	TP		NR	NR	NR	NR	NR	0
UST FINDER	0.250		0	1	NR	NR	NR	1
UST FINDER RELEASE	0.500		1	1	16	NR	NR	18
<b><u>EDR HIGH RISK HISTORICAL RECORDS</u></b>								
<b><i>EDR Exclusive Records</i></b>								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		14	NR	NR	NR	NR	14
<b><u>EDR RECOVERED GOVERNMENT ARCHIVES</u></b>								
<b><i>Exclusive Recovered Govt. Archives</i></b>								
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		12	52	107	99	10	0	280

**NOTES:**

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
A1 Target Property	GRAND LAKE GARDEN 401 SANTA CLARA AVE OAKLAND, CA 94610	FINDS ECHO	1024634020 N/A
Actual: 48 ft.	<a href="#">Click here for full text details</a> <b>FINDS</b> Registry ID: 110071431746 Registry ID: 110070422407  <b>ECHO</b> Registry ID 110070422407		
A2 Target Property	GRAND LAKE GARDEN 401 SANTA CLARA AVE OAKLAND, CA 94610	HWTS HAZNET	S123634482 N/A
Actual: 48 ft.	<a href="#">Click here for full text details</a> <b>HAZNET</b> GEPAID CAL000417627		
A3 Target Property	GRAND LAKE GARDENS 401 SANTA CLARA AVE OAKLAND, CA 94610	HWTS HAZNET	S118219254 N/A
Actual: 48 ft.	<a href="#">Click here for full text details</a> <b>HAZNET</b> GEPAID CAC002782085		
A4 Target Property	GRAND LAKE GARDEN 401 SANTA CLARA AVE OAKLAND, CA 94610	RCRA NonGen / NLR	1024855240 CAL000417627
Actual: 48 ft.	<a href="#">Click here for full text details</a> <b>RCRA NonGen / NLR</b> EPA Id CAL000417627		
A5 Target Property	HUMANGOOD NORCAL 401 SANTA CLARA AVE. OAKLAND, CA 94610	RCRA NonGen / NLR	1027690120 CAC003232567
Actual: 48 ft.	<a href="#">Click here for full text details</a> <b>RCRA NonGen / NLR</b> EPA Id CAC003232567		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
A6 Target Property	HUMANGOOD NORCAL 401 SANTA CLARA AVE. OAKLAND, CA 94610	ECHO	1027730712 N/A
Actual: 48 ft.	<a href="#">Click here for full text details</a> ECHO Registry ID 110071431746		
A7 Target Property	HUMANGOOD NORCAL 401 SANTA CLARA AVE. OAKLAND, CA 94610	HWTS HAZNET	S123583817 N/A
Actual: 48 ft.	<a href="#">Click here for full text details</a> HAZNET GEPAID CAC002629013		
A8 Target Property	GRAND LAKE GARDENS 401 SANTA CLARA AVENUE OAKLAND, CA 94610	RCRA NonGen / NLR	1027462284 CAC003200833
Actual: 48 ft.	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003200833		
A9 NW < 1/8 0.010 mi. 55 ft.	TRENT DEHART 370 SANTA CLARA AVENUE OAKLAND, CA 94610	RCRA NonGen / NLR	1027446546 CAC003184117
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003184117		
A10 NW < 1/8 0.010 mi. 55 ft.	CHARLIE KALB 370 SANTA CLARA AVENUE #3 OAKLAND, CA 94610	RCRA NonGen / NLR	1027460252 CAC003198698
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003198698		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
A11 NE < 1/8 0.015 mi. 78 ft.	VAUGHN MANAGEMENT GROUP 377 SANTA CLARA AVE OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	RCRA NonGen / NLR	1026042111 CAC003048298
Relative: Lower	RCRA NonGen / NLR EPA Id CAC003048298		
B12 SE < 1/8 0.032 mi. 170 ft.	CHONG WONG 414 SANTA CLARA AVE OAKLAND, CA  <a href="#">Click here for full text details</a>	EDR Hist Cleaner	1009142112 N/A
Relative: Lower			
13 East < 1/8 0.049 mi. 257 ft.	COMMERCIAL PROPERTY 3315 GRAND AVE OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	SWEEPS UST	S106924825 N/A
Relative: Lower	SWEEPS UST Status A Comp Number 1397		
B14 SE < 1/8 0.050 mi. 263 ft.	SHERMAN JULIUS 3217 GRAND AVE OAKLAND, CA  <a href="#">Click here for full text details</a>	EDR Hist Cleaner	1009140360 N/A
Relative: Lower			
B15 SSE < 1/8 0.055 mi. 289 ft.	ALBRIGHT G E 468 SANTA CLARA AVE OAKLAND, CA  <a href="#">Click here for full text details</a>	EDR Hist Cleaner	1009140430 N/A
Relative: Lower			

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
B16 SE < 1/8 0.061 mi. 322 ft. Relative: Lower	GLEN VIEW LAUNDRY 474 SANTA CLARA AVE OAKLAND, CA  <a href="#">Click here for full text details</a>	EDR Hist Cleaner	1009140455 N/A
C17 NW < 1/8 0.063 mi. 334 ft. Relative: Higher	RICHARD MAHER 455 CRESCENT STREET #102 OAKLAND, CA 94610  <a href="#">Click here for full text details</a>  RCRA NonGen / NLR EPA Id CAC003259948	RCRA NonGen / NLR	1028898293 CAC003259948
C18 NW < 1/8 0.063 mi. 334 ft. Relative: Higher	COLLINS MGMNT.- 455 CRESCENT 455 CRESCENT STREET UNIT 309 OAKLAND, CA 94610  <a href="#">Click here for full text details</a>  RCRA NonGen / NLR EPA Id CAC003176086	RCRA NonGen / NLR	1027211642 CAC003176086
C19 NW < 1/8 0.063 mi. 334 ft. Relative: Higher	KILEY RUSSELL 455 CRESCENT STREET APT 105 OAKLAND, CA 94610  <a href="#">Click here for full text details</a>  RCRA NonGen / NLR EPA Id CAC003019333	RCRA NonGen / NLR	1025839733 CAC003019333
C20 NW < 1/8 0.063 mi. 334 ft. Relative: Higher	COLLINS MANAGEMENT COMPANY 455 CRESCENT STREET #402 OAKLAND, CA 94610  <a href="#">Click here for full text details</a>  RCRA NonGen / NLR EPA Id CAC003091985	RCRA NonGen / NLR	1026485841 CAC003091985

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
C21 NW < 1/8 0.063 mi. 334 ft.	<p>CHRISSEY BARLOW 455 CRESCENT STREET #313 OAKLAND, CA 94610</p> <p><a href="#">Click here for full text details</a></p>	RCRA NonGen / NLR	1025859610 CAC003040175
Relative: Higher	RCRA NonGen / NLR EPA Id CAC003040175		
C22 NW < 1/8 0.063 mi. 334 ft.	<p>YIHEIS GEDLE 455 CRESENT STREET #306 OAKLAND, CA 94610</p> <p><a href="#">Click here for full text details</a></p>	RCRA NonGen / NLR	1027204350 CAC003168362
Relative: Higher	RCRA NonGen / NLR EPA Id CAC003168362		
C23 NW < 1/8 0.063 mi. 334 ft.	<p>COLLINS MANAGEMENT 455 CRESCENT STREET #318 OAKLAND, CA 94610</p> <p><a href="#">Click here for full text details</a></p>	RCRA NonGen / NLR	1026801080 CAC003113003
Relative: Higher	RCRA NonGen / NLR EPA Id CAC003113003		
C24 NW < 1/8 0.063 mi. 334 ft.	<p>COLLINS MANAGEMENT 455 CRESCENT STREET OAKLAND, CA 94610</p> <p><a href="#">Click here for full text details</a></p>	RCRA NonGen / NLR	1026716755 CAC003105247
Relative: Higher	RCRA NonGen / NLR EPA Id CAC003105247		
C25 NNW < 1/8 0.064 mi. 337 ft.	<p>PETER PROWS/KAREN NELSON-MUNSON 483 CRESCENT STREET OAKLAND, CA 94610</p> <p><a href="#">Click here for full text details</a></p>	RCRA NonGen / NLR	1026809273 CAC003121638
Relative: Higher	RCRA NonGen / NLR EPA Id CAC003121638		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
B26 ESE < 1/8 0.070 mi. 368 ft.	ESQUIRE CLEANERS COMPANY 3223 GRAND AVE OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	EDR Hist Cleaner	1009142842 N/A
Relative: Lower	<hr/>		
B27 ESE < 1/8 0.070 mi. 368 ft.	ESQUIRE CLEANERS COMPANY 3235 GRAND AVE OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	EDR Hist Cleaner	1019982903 N/A
Relative: Lower	<hr/>		
B28 ESE < 1/8 0.070 mi. 370 ft.	LANDOWITZ JOS 3249 GRAND AVE OAKLAND, CA  <a href="#">Click here for full text details</a>	EDR Hist Cleaner	1009141426 N/A
Relative: Lower	<hr/>		
D29 North < 1/8 0.080 mi. 421 ft.	491 CRESCENT, LP 491 CRESCENT STREET #303 OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	RCRA NonGen / NLR	1027459397 CAC003197776
Relative: Higher	RCRA NonGen / NLR EPA Id CAC003197776	<hr/>	
30 WSW < 1/8 0.086 mi. 453 ft.	ARVAND SEBETIN 369 MACARTHUR BLVD OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	RCRA NonGen / NLR	1027086042 CAC003158347
Relative: Higher	RCRA NonGen / NLR EPA Id CAC003158347	<hr/>	

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
E31 SE < 1/8 0.088 mi. 467 ft.	PG & E 3234 GRAND OAKLAND, CA 94601  <a href="#">Click here for full text details</a>	HIST CORTESE	S102435156 N/A
Relative: Lower	HIST CORTESE Reg Id 01-1562		
E32 ESE < 1/8 0.091 mi. 483 ft.	CARSONS MARTINIZING 3250 GRAND AVE OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	RCRA-SQG DRYCLEANERS	1000385419 CAD981396104
Relative: Lower	RCRA-SQG EPA Id CAD981396104  DRYCLEANERS EPA Id CAD981396104		
E33 ESE < 1/8 0.091 mi. 483 ft.	BOB & GIGI INC DBA ONE HOUR MARTINIZING 3250 GRAND AVE OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	RCRA NonGen / NLR	1025874375 CAL000447506
Relative: Lower	RCRA NonGen / NLR EPA Id CAL000447506		
E34 ESE < 1/8 0.091 mi. 483 ft.	Y S ONE-HOUR MARTINIZING 3250 GRAND AVE OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	EDR Hist Cleaner	1009142668 N/A
Relative: Lower			
E35 ESE < 1/8 0.091 mi. 483 ft.	ONE HOUR MARTINIZING 3250 GRAND AVE OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	DRYCLEANERS HWTS HAZNET	S113004814 N/A
Relative: Lower	DRYCLEANERS EPA Id CAL000447506  HAZNET GEPaid CAD981396104		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
F36 ENE < 1/8 0.095 mi. 501 ft.  Relative: Lower	UNION OIL SS 3443 3347 GRAND AVE OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	HIST UST	S118416483 N/A
G37 West < 1/8 0.096 mi. 505 ft.  Relative: Higher	VERITAS 345 MACARTHUR BLVD #UNIT 302 OAKLAND, CA 94610  <a href="#">Click here for full text details</a>  RCRA NonGen / NLR EPA Id CAC003222030	RCRA NonGen / NLR	1027680324 CAC003222030
G38 West < 1/8 0.096 mi. 505 ft.  Relative: Higher	VPI GROWTH VENTURE 1, LP 345 MACARTHUR BLVD., #208 OAKLAND, CA 94610  <a href="#">Click here for full text details</a>  RCRA NonGen / NLR EPA Id CAC003207482	RCRA NonGen / NLR	1027515614 CAC003207482
G39 West < 1/8 0.096 mi. 505 ft.  Relative: Higher	345 MACARTHUR, G1, LP 345 MACARTHUR BOULEVARD OAKLAND, CA 94610  <a href="#">Click here for full text details</a>  RCRA NonGen / NLR EPA Id CAC003233950	RCRA NonGen / NLR	1027691415 CAC003233950
G40 West < 1/8 0.096 mi. 505 ft.  Relative: Higher	345 MACARTHUR G1, LP 345 MACARTHUR BLVD. #112 OAKLAND, CA 94610  <a href="#">Click here for full text details</a>  RCRA NonGen / NLR EPA Id CAC003076209	RCRA NonGen / NLR	1026470664 CAC003076209

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
G41 West < 1/8 0.096 mi. 505 ft.	345 MACARTHUR G1, LP 345 MACARTHUR BLVD. #109 OAKLAND, CA 94610	RCRA NonGen / NLR	1026470740 CAC003076291
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003076291		
G42 West < 1/8 0.096 mi. 505 ft.	345 MACARTHUR, G1, LP 345 MACARTHUR BLVD OAKLAND, CA 94610	RCRA NonGen / NLR	1028883492 CAC003244049
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003244049		
F43 ENE < 1/8 0.096 mi. 509 ft.	BRITE CLEANERS INC 3349 GRAND AVE OAKLAND, CA 94610	EDR Hist Cleaner	1009139895 N/A
Relative: Lower	<a href="#">Click here for full text details</a>		
F44 ENE < 1/8 0.098 mi. 516 ft.	GLENVIEW LAUNDRY 3351 GRAND AVE OAKLAND, CA	EDR Hist Cleaner	1009140964 N/A
Relative: Lower	<a href="#">Click here for full text details</a>		
F45 East < 1/8 0.101 mi. 532 ft.	SIMPSON D R 3322 GRAND AVE OAKLAND, CA	EDR Hist Cleaner	1009143105 N/A
Relative: Lower	<a href="#">Click here for full text details</a>		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
H46 SSE < 1/8 0.103 mi. 543 ft.	FYNE BUILDING 774 GRAND OAKLAND, CA 94612  <a href="#">Click here for full text details</a>	HIST CORTESE	S101293699 N/A
Relative: Lower	HIST CORTESE Reg Id 01-0674		
H47 SSE < 1/8 0.103 mi. 543 ft.	FYNE BUILDING 774 GRAND AVE W OAKLAND, CA 94612  <a href="#">Click here for full text details</a>	UST FINDER RELEASE	1028967872 N/A
Relative: Lower			
H48 SSE < 1/8 0.103 mi. 543 ft.	FYNE BUILDING 774 GRAND AVE W OAKLAND, CA 94612  <a href="#">Click here for full text details</a>	LUST Cortese CERS	S109283938 N/A
Relative: Lower	LUST Status Completed - Case Closed Global Id T0600100620  Cortese Cleanup Status COMPLETED - CASE CLOSED		
I49 NE < 1/8 0.109 mi. 575 ft.	HAVA LIBERMAN 433 ELWOOD AVENUE OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	RCRA NonGen / NLR	1026720898 CAC003109633
Relative: Higher	RCRA NonGen / NLR EPA Id CAC003109633		
I50 NE < 1/8 0.109 mi. 575 ft.	HAVA LIBERMAN 433 ELWOOD AVENUE OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	RCRA NonGen / NLR	1026715385 CAC003103802
Relative: Higher	RCRA NonGen / NLR EPA Id CAC003103802		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
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<b>D51</b> <b>NNW</b> < 1/8 0.109 mi. 577 ft.  Relative: Higher	<b>HOLLAND BROOKS BUILDERS</b> 472 JEAN ST #6 OAKLAND, CA 94610  <a href="#">Click here for full text details</a>  RCRA NonGen / NLR EPA Id CAC003028577	RCRA NonGen / NLR  1025848526 CAC003028577	
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<b>D52</b> <b>NNW</b> < 1/8 0.109 mi. 577 ft.  Relative: Higher	<b>472 JEAN A2, LP</b> 472 JEAN STREET #4 OAKLAND, CA 94610  <a href="#">Click here for full text details</a>  RCRA NonGen / NLR EPA Id CAC003112025	RCRA NonGen / NLR  1026800153 CAC003112025	
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<b>H53</b> <b>SSE</b> < 1/8 0.111 mi. 588 ft.  Relative: Lower	<b>LIBERTY CLEANERS</b> 755 GRAND AVE OAKLAND, CA  <a href="#">Click here for full text details</a>	EDR Hist Cleaner  1009143083 N/A	
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<b>F54</b> <b>ENE</b> < 1/8 0.121 mi. 641 ft.  Relative: Lower	<b>PRIDE CLEANERS</b> 3401 GRAND AVE OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	RCRA-SQG FINDS ECHO DRYCLEANERS EMI HWTS HAZNET CERS	1000185498 CAD981669666
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RCRA-SQG  
EPA Id CAD981669666

**FINDS**  
Registry ID: 110001184744

**ECHO**  
Registry ID 110001184744

**EMI**  
Facility Id 4364

**HAZNET**  
GEPaid CAD981669666

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
F55 ENE < 1/8 0.121 mi. 641 ft.  Relative: Lower	PRIDE CLEANERS 3401 GRAND AVE OAKLAND, CA  <a href="#">Click here for full text details</a>	EDR Hist Cleaner	1009140513 N/A
F56 ENE < 1/8 0.121 mi. 641 ft.  Relative: Lower	PRIDE CLEANERS 3401 GRAND AVENUE OAKLAND, CA 94610  <a href="#">Click here for full text details</a>  RCRA NonGen / NLR EPA Id CAC003244764	RCRA NonGen / NLR	1028884140 CAC003244764
F57 ENE < 1/8 0.124 mi. 655 ft.  Relative: Lower	WEINTROB ABR 3405 GRAND AVE OAKLAND, CA  <a href="#">Click here for full text details</a>	EDR Hist Cleaner	1009141028 N/A
J58 SW 1/8-1/4 0.130 mi. 685 ft.  Relative: Higher	RAJ TEDDY 520 VAN BUREN AVENUE #429 OAKLAND, CA 94610  <a href="#">Click here for full text details</a>  RCRA NonGen / NLR EPA Id CAC003009572	RCRA NonGen / NLR	1025830018 CAC003009572
I59 NE 1/8-1/4 0.135 mi. 711 ft.  Relative: Higher	FAITH DARLING 509 VALLE VISTA AVENUE OAKLAND, CA 94610  <a href="#">Click here for full text details</a>  RCRA NonGen / NLR EPA Id CAC003254507	RCRA NonGen / NLR	1028893237 CAC003254507

MAP FINDINGS

Map ID			EDR ID Number
Direction			EPA ID Number
Distance			
Elevation	Site	Database(s)	

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<b>J60</b> <b>SSW</b> 1/8-1/4 0.138 mi. 727 ft.	<b>UNOCAL</b> 411 MACARTHUR BLVD W OAKLAND, CA 94609	<b>LUST</b> Alameda County CS HIST CORTESE	<b>S104660359</b> N/A
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Relative: [Click here for full text details](#)

Lower

**LUST**  
 Facility Status Preliminary site assessment underway  
 Facility Id 01-1597

**Alameda County CS**  
 Record Id RO0003192  
 Status Pollution Characterization

**HIST CORTESE**  
 Reg Id 01-1597

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<b>J61</b> <b>SSW</b> 1/8-1/4 0.138 mi. 728 ft.	<b>TIM HAGGERTY</b> 525 VAN BUREN AVE OAKLAND, CA 94610	<b>RCRA NonGen / NLR</b>	<b>1025851556</b> <b>CAC003031675</b>
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Relative: [Click here for full text details](#)

Higher

**RCRA NonGen / NLR**  
 EPA Id CAC003031675

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<b>F62</b> <b>ENE</b> 1/8-1/4 0.141 mi. 745 ft.	<b>GRAND MOBIL</b> 3374 GRAND AVE OAKLAND, CA 94610	<b>UST</b>	<b>U004343895</b> N/A
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Relative: [Click here for full text details](#)

Lower

**UST**  
 Facility Id 10601803

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<b>F63</b> <b>ENE</b> 1/8-1/4 0.141 mi. 745 ft.	<b>GRAND MOBIL</b> 3374 GRAND AVE OAKLAND, CA 94610	<b>UST FINDER</b>	<b>1028192510</b> N/A
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Relative: [Click here for full text details](#)

Lower

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
F64 ENE 1/8-1/4 0.141 mi. 745 ft.	GRAND MOBIL 3374 GRAND AVE OAKLAND, CA	UST	U003949145 N/A
Relative: Lower	<a href="#">Click here for full text details</a> UST Facility Status Active Facility Id FA0321490		
F65 ENE 1/8-1/4 0.141 mi. 745 ft.	UNION OIL SS #3443 3374 GRAND AVE OAKLAND, CA 94610	CERS HAZ WASTE SWEEPS UST HIST UST CERS TANKS CA FID UST CERS	S101624471 N/A
Relative: Lower	<a href="#">Click here for full text details</a> SWEEPS UST Status A Tank Status A Comp Number 31708  CA FID UST Facility Id 01002665 Status A		
F66 ENE 1/8-1/4 0.141 mi. 745 ft.	TOSCO CORPORATION #30499 3374 GRAND AVE OAKLAND, CA 94610	UST	U004345070 N/A
Relative: Lower	<a href="#">Click here for full text details</a> UST Facility Id 210		
F67 ENE 1/8-1/4 0.141 mi. 745 ft.	UNION OIL SS# 3443 3374 GRAND AVE OAKLAND, CA 94610	HIST UST	U001599365 N/A
Relative: Lower	<a href="#">Click here for full text details</a> HIST UST Facility Id 00000060705		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
F68 ENE 1/8-1/4 0.141 mi. 745 ft.	UNION OIL SS #3443 3374 GRAND AVE OAKLAND, CA 94610	HIST UST	U001599362 N/A
Relative: Lower	<a href="#">Click here for full text details</a> HIST UST Facility Id 00000031708		
F69 ENE 1/8-1/4 0.141 mi. 745 ft.	GRAND MANDANA GAS STATION INC 3374 GRAND AVE OAKLAND, CA 94610	RCRA NonGen / NLR	1024819774 CAL000330848
Relative: Lower	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAL000330848		
I70 NE 1/8-1/4 0.144 mi. 758 ft.	COLBY KATZ 515 VALLE VISTA AVENUE OAKLAND, CA 94610	RCRA NonGen / NLR	1027212598 CAC003177103
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003177103		
J71 SW 1/8-1/4 0.147 mi. 778 ft.	TONY CELAYA 394 EUCLID AVENUE OAKLAND, CA 94610	RCRA NonGen / NLR	1028886261 CAC003247020
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003247020		
J72 SSW 1/8-1/4 0.149 mi. 788 ft.	RUTH CASSER 436 LAGUNITAS AVENUE OAKLAND, CA 94610	RCRA NonGen / NLR	1028897797 CAC003259409
Relative: Lower	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003259409		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
H73 SSE 1/8-1/4 0.152 mi. 801 ft.	<b>SHELL</b> UNK GRAND AVE & LAKESHORE DR OAKLAND, CA 94610	Alameda County CS	S110376293 N/A
Relative: Lower	<a href="#">Click here for full text details</a> <b>Alameda County CS</b> Record Id RO0003056 Status Leak Confirmation Status Pollution Characterization		
K74 ESE 1/8-1/4 0.159 mi. 839 ft.	<b>JILL BROADHURST</b> 485 WICKSON AVENUE #1 OAKLAND, CA 94610	RCRA NonGen / NLR	1026800356 CAC003112238
Relative: Lower	<a href="#">Click here for full text details</a> <b>RCRA NonGen / NLR</b> EPA Id CAC003112238		
L75 SSE 1/8-1/4 0.159 mi. 841 ft.	<b>CUSHMAN AND WAKEFIELD U.S., INC. C/O BANK OF AMERI</b> 496 LAKE PARK AVENUE OAKLAND, CA 94610	RCRA NonGen / NLR	1027682266 CAC003224109
Relative: Lower	<a href="#">Click here for full text details</a> <b>RCRA NonGen / NLR</b> EPA Id CAC003224109		
M76 West 1/8-1/4 0.159 mi. 842 ft.	<b>SANFORD MA</b> 353 EUCLID AVENUE #109 OAKLAND, CA 94610	RCRA NonGen / NLR	1028896606 CAC003258128
Relative: Higher	<a href="#">Click here for full text details</a> <b>RCRA NonGen / NLR</b> EPA Id CAC003258128		
77 NNW 1/8-1/4 0.162 mi. 853 ft.	<b>KIRSTEN HOWE</b> 481 JEAN STREET OAKLAND, CA 94610	RCRA NonGen / NLR	1027685206 CAC003227277
Relative: Higher	<a href="#">Click here for full text details</a> <b>RCRA NonGen / NLR</b> EPA Id CAC003227277		

MAP FINDINGS

Map ID			EDR ID Number
Direction			EPA ID Number
Distance			
Elevation	Site	Database(s)	

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<b>N78</b> <b>NE</b> 1/8-1/4 0.164 mi. 864 ft.  Relative: Lower	<b>TAYMUREE FOREIGN AUTO CENTER</b> <b>3509 GRAND</b> <b>OAKLAND, CA 94610</b>  <a href="#">Click here for full text details</a>	<b>UST FINDER RELEASE</b>	<b>1029114929</b> <b>N/A</b>
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<b>N79</b> <b>NE</b> 1/8-1/4 0.164 mi. 864 ft.  Relative: Lower	<b>TAYMUREE FOREIGN AUTO CENTER</b> <b>3509 GRAND</b> <b>OAKLAND, CA 94610</b>  <a href="#">Click here for full text details</a>	<b>LUST</b> <b>Alameda County CS</b> <b>Cortese</b> <b>HIST CORTESE</b> <b>CERS</b>	<b>U003111753</b> <b>N/A</b>
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**LUST**  
Status Completed - Case Closed  
Global Id T0600101339

**Alameda County CS**  
Record Id RO0000810  
Status Case Closed

**Cortese**  
Cleanup Status COMPLETED - CASE CLOSED

**HIST CORTESE**  
Reg Id 01-1450

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<b>N80</b> <b>NE</b> 1/8-1/4 0.164 mi. 864 ft.  Relative: Lower	<b>YOUNG'S AUTOMOTIVE</b> <b>3509 GRAND AVE</b> <b>OAKLAND, CA 94612</b>  <a href="#">Click here for full text details</a>	<b>RCRA NonGen / NLR</b>	<b>1026721253</b> <b>CAL000204795</b>
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**RCRA NonGen / NLR**  
EPA Id CAL000204795

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<b>N81</b> <b>NE</b> 1/8-1/4 0.164 mi. 864 ft.  Relative: Lower	<b>TAYMUREE FOREIGN AUTO CENTER</b> <b>3509 GRAND AVE</b> <b>OAKLAND, CA 94610</b>  <a href="#">Click here for full text details</a>	<b>LUST</b> <b>SWEEPS UST</b> <b>HWTS</b>	<b>S105134899</b> <b>N/A</b>
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**LUST**  
Facility Status Case Closed  
Facility Id 01-1450  
date9 8/29/1994

**SWEEPS UST**

MAP FINDINGS

Map ID				EDR ID Number
Direction				EPA ID Number
Distance				
Elevation	Site	Database(s)		

**TAYMUREE FOREIGN AUTO CENTER (Continued)**

**S105134899**

Comp Number 4590

**N82  
NE  
1/8-1/4  
0.164 mi.  
864 ft.**

**YOUNG'S AUTOMOTIVE  
3509 GRAND AVE  
OAKLAND, CA 94612**

**RCRA-SQG 1000303654  
FINDS CAD982356974  
ECHO  
Notify 65**

[Click here for full text details](#)

**Relative:  
Lower**

**RCRA-SQG  
EPA Id CAD982356974**

**FINDS**

Registry ID: 110002800390  
Registry ID: 110070903578

**ECHO**

Registry ID 110002800390

**83  
NW  
1/8-1/4  
0.165 mi.  
871 ft.**

**J AND R ASSOCIATES  
281 MACARTHUR BLVD  
OAKLAND, CA 94610**

**RCRA NonGen / NLR 1025855835  
CAC003036120**

[Click here for full text details](#)

**Relative:  
Higher**

**RCRA NonGen / NLR  
EPA Id CAC003036120**

**M84  
West  
1/8-1/4  
0.170 mi.  
898 ft.**

**ARNOLD BLUSTEIN  
397 PALM AVENUE  
OAKLAND, CA 94610**

**RCRA NonGen / NLR 1027525982  
CAC003218583**

[Click here for full text details](#)

**Relative:  
Higher**

**RCRA NonGen / NLR  
EPA Id CAC003218583**

**O85  
SSW  
1/8-1/4  
0.171 mi.  
904 ft.**

**MYND PROPERTY MANAGEMENT  
449 LAGUNITAS AVE  
OAKLAND, CA 94610**

**RCRA NonGen / NLR 1025848549  
CAC003028601**

[Click here for full text details](#)

**Relative:  
Lower**

**RCRA NonGen / NLR  
EPA Id CAC003028601**

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
86 East 1/8-1/4 0.172 mi. 907 ft.	<b>BERGER ENTERPRISES</b> 743 WARFIELD AVENUE OAKLAND, CA 94610	RCRA NonGen / NLR	1026816502 CAC003129224
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003129224		
K87 ESE 1/8-1/4 0.172 mi. 910 ft.	<b>SUZI GOLDMACHER</b> 737 WARFIELD AVENUE OAKLAND, CA 94610	RCRA NonGen / NLR	1026709720 CAC003097821
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003097821		
L88 SE 1/8-1/4 0.174 mi. 921 ft.	<b>500 LAKE PARK APARTMENTS</b> 500 LAKE PARK AVENUE OAKLAND, CA 94610	CPS-SLIC	S125952670 N/A
Relative: Lower	<a href="#">Click here for full text details</a> CPS-SLIC Facility Status Open - Site Assessment Global Id T10000013846  Click here to access the California GeoTracker records for this facility		
L89 SE 1/8-1/4 0.174 mi. 921 ft.	<b>MAXGEN ENERGY SERVICES</b> 500 LAKE PARK AVE OAKLAND, CA 94610	RCRA NonGen / NLR	1026044316 CAC003083113
Relative: Lower	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003050630 EPA Id CAC003083113		
M90 West 1/8-1/4 0.179 mi. 944 ft.	<b>MAXWELL &amp; KATE ERNST</b> 388 PALM AVE. OAKLAND, CA 94610	RCRA NonGen / NLR	1026470330 CAC003075852
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003075852		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
O91 South 1/8-1/4 0.181 mi. 954 ft.	HAN, AGNES 626 GRAND AVENUE OAKLAND, CA 94610	RCRA NonGen / NLR	1026044788 CAC003051126
Relative: Lower	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003051126		
O92 South 1/8-1/4 0.181 mi. 954 ft.	HAN, AGNES 626 GRAND AVENUE OAKLAND, CA 94610	RCRA NonGen / NLR	1025858968 CAC003039498
Relative: Lower	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003039498		
K93 ESE 1/8-1/4 0.191 mi. 1008 ft.	MAUREEN LAWLOR 507 WICKSON AVENUE #105 OAKLAND, CA 94610	RCRA NonGen / NLR	1026812428 CAC003124944
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003124944		
K94 ESE 1/8-1/4 0.191 mi. 1008 ft.	JAMES ROSS 507 WICKSON AVENUE #304 OAKLAND, CA 94610	RCRA NonGen / NLR	1027068789 CAC003140131
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003140131		
K95 ESE 1/8-1/4 0.191 mi. 1008 ft.	CATHARINE SCHULTZ & RICHARD JARATT 507 WICKSON AVENUE #101 OAKLAND, CA 94610	RCRA NonGen / NLR	1025832647 CAC003012216
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003012216		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
P96 SSW 1/8-1/4 0.192 mi. 1016 ft.	LINDA HOLLAND 408 EUCLID AVE OAKLAND, CA 94610	RCRA NonGen / NLR	1026053291 CAC003060190
Relative: Lower	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003060190		
Q97 NE 1/8-1/4 0.198 mi. 1048 ft.	DAVID JOHNSON 558 VALLE VISTA AVENUE OAKLAND, CA 94610	RCRA NonGen / NLR	1027068939 CAC003140293
Relative: Lower	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003140293		
O98 SSW 1/8-1/4 0.200 mi. 1055 ft.	RYAN YU 427 LAGUNITAS AVE, #103 OAKLAND, CA 94610	RCRA NonGen / NLR	1026809980 CAC003122380
Relative: Lower	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003122380		
R99 WNW 1/8-1/4 0.203 mi. 1070 ft.	PRIVATE RESIDENCE PRIVATE RESIDENCE OAKLAND, CA 94618	LUST	S110653939 N/A
Relative: Higher	<a href="#">Click here for full text details</a> LUST Status Completed - Case Closed Global Id T10000005350 Global Id T0600114301 Global Id T10000006106		
R100 WNW 1/8-1/4 0.203 mi. 1070 ft.	PRIVATE RESIDENCE PRIVATE RESIDENCE OAKLAND, CA 94610	LUST	S110653931 N/A
Relative: Higher	<a href="#">Click here for full text details</a> LUST Status Completed - Case Closed Global Id T0600101769		

MAP FINDINGS

Map ID			EDR ID Number
Direction			EPA ID Number
Distance			
Elevation	Site	Database(s)	

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<b>R101</b> <b>WNW</b> <b>1/8-1/4</b> <b>0.203 mi.</b> <b>1072 ft.</b>	<b>RESIDENCE</b> <b>299 EUCLID AVE</b> <b>OAKLAND, CA 94610</b>	<b>LUST</b> <b>Alameda County CS</b> <b>SWEEPS UST</b> <b>HIST CORTESE</b>	<b>S100855042</b> <b>N/A</b>
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[Click here for full text details](#)

**Relative:**  
**Higher**

**LUST**  
 Facility Status Case Closed  
 Facility Id 01-1908  
 date9 5/6/1994

**Alameda County CS**  
 Record Id RO0000688  
 Status Case Closed

**SWEEPS UST**  
 Comp Number 9245

**HIST CORTESE**  
 Reg Id 01-1908

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<b>O102</b> <b>South</b> <b>1/8-1/4</b> <b>0.204 mi.</b> <b>1078 ft.</b>	<b>YOUNG'S ONE HOUR DRY CLEANERS</b> <b>600 GRAND AVE</b> <b>OAKLAND, CA 94610</b>	<b>CHMIRS</b> <b>DRYCLEANERS</b>	<b>S111075477</b> <b>N/A</b>
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[Click here for full text details](#)

**Relative:**  
**Lower**

**CHMIRS**  
 OES Incident Number 1-0948

**DRYCLEANERS**  
 EPA Id CAL000355559

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<b>O103</b> <b>South</b> <b>1/8-1/4</b> <b>0.204 mi.</b> <b>1078 ft.</b>	<b>YOUNG'S ONE HOUR MARTINIZING</b> <b>600 GRAND AVE #100</b> <b>OAKLAND, CA 94610</b>	<b>RCRA-SQG</b> <b>FINDS</b> <b>ECHO</b>	<b>1000441028</b> <b>CAD981375330</b>
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[Click here for full text details](#)

**Relative:**  
**Lower**

**RCRA-SQG**  
 EPA Id CAD981375330

**FINDS**  
 Registry ID: 110002685513

**ECHO**  
 Registry ID 110002685513

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
S104 ENE 1/8-1/4 0.206 mi. 1087 ft.	MONTEREY BAY COLORS DBA COLORS ON PARADE 810 WALKER AVE APT 1 OAKLAND, CA 94610	RCRA NonGen / NLR	1024853220 CAL000412784
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAL000412784		
R105 WNW 1/8-1/4 0.208 mi. 1099 ft.	DANIEL PIVNICK 293 EUCLID AVENUE #5 OAKLAND, CA 94610	RCRA NonGen / NLR	1027460832 CAC003199306
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003199306		
R106 WNW 1/8-1/4 0.208 mi. 1099 ft.	DANIEL PIVNICK 293 EUCLID AVENUE #6 OAKLAND, CA 94610	RCRA NonGen / NLR	1027082670 CAC003154794
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003154794		
T107 WSW 1/8-1/4 0.211 mi. 1114 ft.	BELLEVUE APARTMENTS 369 BELLEVUE AVE OAKLAND, CA 94610	RCRA NonGen / NLR	1027700576 CAL000477142
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAL000477142		
T108 WSW 1/8-1/4 0.213 mi. 1122 ft.	SHANNON MCCABE 359 BELLEVUE AVENUE OAKLAND, CA 94610	RCRA NonGen / NLR	1028898314 CAC003259970
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003259970		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
Q109 NE 1/8-1/4 0.213 mi. 1127 ft.	STEPHANE DELEGER 564 VALLE VISTA AVENUE OAKLAND, CA 94610	RCRA NonGen / NLR	1026798979 CAC003110786
Relative: Lower	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003110786		
P110 SW 1/8-1/4 0.213 mi. 1127 ft.	MANKUEN (JENNIE) CHAN 411 EUCLID AVENUE #9 OAKLAND, CA 94610	RCRA NonGen / NLR	1027465914 CAC003204692
Relative: Lower	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003204692		
P111 SW 1/8-1/4 0.213 mi. 1127 ft.	BLUE SAPPHIRE HOMES 411 EUCLID AVENUE #11 OAKLAND, CA 94610	RCRA NonGen / NLR	1028883541 CAC003244104
Relative: Lower	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003244104		
P112 SW 1/8-1/4 0.213 mi. 1127 ft.	MANKUEN (JENNIE) CHAN 411 EUCLID AVENUE #12 OAKLAND, CA 94610	RCRA NonGen / NLR	1027527632 CAC003220312
Relative: Lower	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003220312		
P113 SW 1/8-1/4 0.213 mi. 1127 ft.	BLUE SAPPHIRE HOMES 411 EUCLID AVENUE #10 OAKLAND, CA 94610	RCRA NonGen / NLR	1027692033 CAC003234612
Relative: Lower	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003234612		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
P114 SW 1/8-1/4 0.213 mi. 1127 ft.	BLUE SAPPHIRE HOMES 411 EUCLID AVENUE #2 OAKLAND, CA 94610	RCRA NonGen / NLR	1027698436 CAC003241428
Relative: Lower	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003241428		
P115 SW 1/8-1/4 0.213 mi. 1127 ft.	MANKUEN (JENNIE) CHAN 411 EUCLID AVENUE #8 OAKLAND, CA 94610	RCRA NonGen / NLR	1027513862 CAC003205596
Relative: Lower	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003205596		
P116 SW 1/8-1/4 0.213 mi. 1127 ft.	BLUE SAPPHIRE HOMES 411 EUCLID AVENUE #6 OAKLAND, CA 94610	RCRA NonGen / NLR	1028893227 CAC003254496
Relative: Lower	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003254496		
P117 SW 1/8-1/4 0.213 mi. 1127 ft.	BLUE SAPPHIRE HOMES 411 EUCLID AVENUE #3 OAKLAND, CA 94610	RCRA NonGen / NLR	1027680424 CAC003243449
Relative: Lower	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003222138 EPA Id CAC003243449		
T118 West 1/8-1/4 0.214 mi. 1128 ft.	TRUST MATTERS 353 BELLEVUE AVE OAKLAND, CA 94610	RCRA NonGen / NLR	1025853648 CAC003033865
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003033865		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
U119 West 1/8-1/4 0.218 mi. 1149 ft.	<b>KYLE PARKER</b> 377 PALM AVE #107 OAKLAND, CA 94610	RCRA NonGen / NLR	1025860134 CAC003040770
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003040770		
U120 West 1/8-1/4 0.218 mi. 1149 ft.	<b>COLLINS MANAGEMENT</b> 377 PALM AVENUE OAKLAND, CA 94610	RCRA NonGen / NLR	1026712947 CAC003101219
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003101219		
U121 West 1/8-1/4 0.218 mi. 1149 ft.	<b>COLLINS MANAGEMENT PALM MANOR</b> 377 PALM AVENUE OAKLAND, CA 94610	RCRA NonGen / NLR	1026479828 CAC003085758
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003085758		
V122 North 1/8-1/4 0.218 mi. 1153 ft.	<b>CHRIS CORNFORD</b> 325 ALTA VISTA AVE. OAKLAND, CA 94610	RCRA NonGen / NLR	1027075122 CAC003146843
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003146843		
V123 North 1/8-1/4 0.218 mi. 1153 ft.	<b>CHRIS CORNFORD</b> 325 ALTA VISTA AVENUE OAKLAND, CA 94610	RCRA NonGen / NLR	1027083694 CAC003155870
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003155870		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
R124 WNW 1/8-1/4 0.219 mi. 1156 ft.	<b>MERIDIAN MANAGEMENT GROUP</b> 365 WARWICK AVE #305 OAKLAND, CA 94610	RCRA NonGen / NLR	1025860648 CAC003041310
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003041310		
R125 WNW 1/8-1/4 0.219 mi. 1156 ft.	<b>UNIVERSITY PRESIDENT ASSOCIATES, LP</b> 365 WARWICK AVE. OAKLAND, CA 94610	RCRA NonGen / NLR	1024782112 CAC003002089
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003002089		
S126 ENE 1/8-1/4 0.224 mi. 1185 ft.	<b>SCOTT BAILEY</b> 824 VERMONT ST. OAKLAND, CA 94610	RCRA NonGen / NLR	1027207458 CAC003171648
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003171648		
W127 ESE 1/8-1/4 0.224 mi. 1185 ft.	<b>JACK DOUGLAS</b> 724 RAND AVENUE OAKLAND, CA 94610	RCRA NonGen / NLR	1028900156 CAC003261919
Relative: Lower	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003261919		
W128 ESE 1/8-1/4 0.227 mi. 1196 ft.	<b>JACK DOUGLAS</b> 722 RAND AVENUE OAKLAND, CA 94610	RCRA NonGen / NLR	1028892376 CAC003253585
Relative: Lower	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003253585		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
W129 ESE 1/8-1/4 0.227 mi. 1196 ft.	JENNIFER WU 722 RAND AVE OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	RCRA NonGen / NLR	1026041588 CAC003047725
Relative: Lower	RCRA NonGen / NLR EPA Id CAC003047725		
W130 ESE 1/8-1/4 0.227 mi. 1196 ft.	WU PROPERTY 722 RAND AVENUE OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	LUST Cortese	S125952835 N/A
Relative: Lower	LUST Status Completed - Case Closed Global Id T10000014217  Cortese Cleanup Status COMPLETED - CASE CLOSED		
W131 ESE 1/8-1/4 0.227 mi. 1196 ft.	JENNIFER WU 722 RAND AVENUE OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	RCRA NonGen / NLR	1026474938 CAC003080665
Relative: Lower	RCRA NonGen / NLR EPA Id CAC003080665		
R132 WNW 1/8-1/4 0.230 mi. 1212 ft.	TOM CHEW 396 JAYNE AVENUE OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	RCRA NonGen / NLR	1025829224 CAC003008778
Relative: Higher	RCRA NonGen / NLR EPA Id CAC003008778		
X133 SW 1/8-1/4 0.233 mi. 1232 ft.	BILL MCLETCHIE 410 BELLEVUE AVENUE UNIT 210 OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	RCRA NonGen / NLR	1024778317 CAC002998262
Relative: Lower	RCRA NonGen / NLR EPA Id CAC002998262		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
V134 North 1/8-1/4 0.234 mi. 1234 ft.	OMAR SHAH 301 ALTA VISTA AVENUE OAKLAND, CA 94610	RCRA NonGen / NLR	1028884263 CAC003244893
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003244893		
135 South 1/8-1/4 0.235 mi. 1241 ft.	KAISER INDUSTRIES CORP ALAMEDA (County), CA	MINES MRDS	1025644059 N/A
Relative: Lower	<a href="#">Click here for full text details</a>		
Y136 NNW 1/8-1/4 0.235 mi. 1242 ft.	TOM PARATORE 484 CHETWOOD ST OAKLAND, CA 94610	RCRA NonGen / NLR	1025846195 CAC003025952
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003025952		
Z137 ESE 1/8-1/4 0.237 mi. 1251 ft.	KLAUS WIRSING 525 GLENVIEW AVE. #1 OAKLAND, CA 94610	RCRA NonGen / NLR	1026167806 CAC003067851
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003067851		
AA138 East 1/8-1/4 0.242 mi. 1277 ft.	LEXIA LITTLEJOHN 525 MANDANA BLVD #212 OAKLAND, CA 94610	RCRA NonGen / NLR	1024776536 CAC002996471
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC002996471		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
AA139 East 1/8-1/4 0.242 mi. 1277 ft.	INDEPENDENT PLANNING 525 MANDANA BLVD #309 OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	RCRA NonGen / NLR	1027527002 CAC003219651
Relative: Higher	RCRA NonGen / NLR EPA Id CAC003219651		
AA140 East 1/8-1/4 0.242 mi. 1277 ft.	SHANNON CARSON 525 MANDANA BOULEVARD OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	RCRA NonGen / NLR	1027460295 CAC003198743
Relative: Higher	RCRA NonGen / NLR EPA Id CAC003198743		
AB141 SE 1/8-1/4 0.242 mi. 1280 ft.	THIAT "JOE" LIANG (DBA JOE'S S 3201 LAKESHORE AVE OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	HIST UST	U001599361 N/A
Relative: Lower	HIST UST Facility Id 00000005900		
AB142 SE 1/8-1/4 0.242 mi. 1280 ft.	THIAT "JOE" LIANG (DBA JOE'S S 3201 LAKESHORE AVE OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	SWEEPS UST HIST UST CA FID UST	S101624470 N/A
Relative: Lower	SWEEPS UST Comp Number 5900  CA FID UST Facility Id 01002092 Status I		
AC143 SSW 1/8-1/4 0.243 mi. 1285 ft.	FRANKLIN CHAN 420 BURK STREET OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	RCRA NonGen / NLR	1027518494 CAC003210550
Relative: Lower	RCRA NonGen / NLR EPA Id CAC003210550		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
Z144 ESE 1/8-1/4 0.247 mi. 1303 ft.	<b>SAMMY GO</b> 546 GLENVIEW AVE OAKLAND, CA 94610	RCRA NonGen / NLR	1026041155 CAC003047280
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003047280		
Y145 NNW 1/8-1/4 0.248 mi. 1311 ft.	<b>CINDY BUFFING</b> 492 CHETWOOD ST OAKLAND, CA 94610	RCRA NonGen / NLR	1026050946 CAC003057807
Relative: Higher	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003057807		
X146 SW 1/8-1/4 0.249 mi. 1313 ft.	<b>BLACK OAK PROPERTIES</b> 405 BELLEVUE AVE. OAKLAND, CA 94610	RCRA NonGen / NLR	1026799682 CAC003111527
Relative: Lower	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC003111527		
X147 SW 1/8-1/4 0.249 mi. 1313 ft.	<b>BLACK OAK PROPERTIES</b> 405 BELLEVUE AVENUE OAKLAND, CA 94610	RCRA NonGen / NLR	1024762116 CAC002981978
Relative: Lower	<a href="#">Click here for full text details</a> RCRA NonGen / NLR EPA Id CAC002981978		
AB148 SE 1/4-1/2 0.262 mi. 1381 ft.	<b>UNOCAL #5325</b> 3220 LAKESHORE AVE. OAKLAND, CA 94610	UST FINDER RELEASE	1029123955 N/A
Relative: Lower	<a href="#">Click here for full text details</a>		

MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Site

Database(s)

EDR ID Number  
 EPA ID Number

**AB149**  
**SE**  
 1/4-1/2  
 0.262 mi.  
 1381 ft.

**UNOCAL #5325**  
**3220 LAKESHORE AVE.**  
**OAKLAND, CA 94610**

[Click here for full text details](#)

Relative:  
 Lower

**LUST**  
**Alameda County CS**  
**SWEEPS UST**  
**HIST UST**  
**CA FID UST**  
**Cortese**  
**HIST CORTESE**  
**CERS**

**S101580183**  
**N/A**

**LUST**

Facility Status Preliminary site assessment underway  
 Status Completed - Case Closed  
 Facility Id 01-1588  
 Global Id T0600101463

**Alameda County CS**

Record Id RO0000229  
 Status Leak Confirmation  
 Status Pollution Characterization

**SWEEPS UST**

Status A  
 Tank Status A  
 Comp Number 8151

**CA FID UST**

Facility Id 01001695  
 Status A

**Cortese**

Cleanup Status COMPLETED - CASE CLOSED

**HIST CORTESE**

Reg Id 01-1588

**AD150**  
**SSE**  
 1/4-1/2  
 0.267 mi.  
 1412 ft.

**CHEVRON #9-0121**  
**3026 LAKESHORE AVENUE**  
**OAKLAND, CA 94610**

[Click here for full text details](#)

Relative:  
 Lower

**UST FINDER RELEASE**

**1028933201**  
**N/A**

MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Site

Database(s)

EDR ID Number  
EPA ID Number

**AD151**  
**SSE**  
**1/4-1/2**  
**0.267 mi.**  
**1412 ft.**

**FORMER CHEVRON SERVICE STATION NO. 90121 (NON-LUST)**  
**3026 LAKESHORE AVENUE**  
**OAKLAND, CA 94610**

**CPS-SLIC**  
**HWTS**  
**HAZNET**  
**CERS**

**S113176551**  
**N/A**

[Click here for full text details](#)

**Relative:**  
**Lower**

**CPS-SLIC**  
Facility Status Open - Site Assessment  
Global Id T10000021260

[Click here to access the California GeoTracker records for this facility](#)

**HAZNET**  
GEPaid CAR000116764

**AD152**  
**SSE**  
**1/4-1/2**  
**0.267 mi.**  
**1412 ft.**

**CHEVRON SERV STA #0121**  
**LAKESHORE & MCARTHUR**  
**OAKLAND, CA 94610**

**LUST**  
**Alameda County CS**  
**SWEEPS UST**  
**HIST UST**  
**CA FID UST**  
**RCRA NonGen / NLR**  
**Cortese**  
**HIST CORTESE**  
**CERS**

**1000434502**  
**CAT080031339**

[Click here for full text details](#)

**Relative:**  
**Lower**

**LUST**  
Facility Status Preliminary site assessment underway  
Status Open - Site Assessment  
Facility Id 01-0356  
Global Id T0600100328

**Alameda County CS**  
Record Id RO0000284  
Status Pollution Characterization

**SWEEPS UST**  
Status A  
Tank Status A  
Comp Number 61724

**HIST UST**  
Facility Id 00000054295

**CA FID UST**  
Facility Id 01000486  
Status A

**RCRA NonGen / NLR**  
EPA Id CAT080031339

**Cortese**

MAP FINDINGS

Map ID Direction Distance Elevation		Database(s)	EDR ID Number EPA ID Number
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**CHEVRON SERV STA #0121 (Continued)** **1000434502**  
 Cleanup Status OPEN - SITE ASSESSMENT

**HIST CORTESE**  
 Reg Id 01-0356

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<b>AA153</b> East 1/4-1/2 0.277 mi. 1464 ft.  Relative: Higher	<b>YORK STREET APARTMENTS</b> <b>800 YORK</b> <b>OAKLAND, CA 94610</b>  <a href="#">Click here for full text details</a>	<b>UST FINDER RELEASE</b>	<b>1029133579</b> N/A
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<b>AA154</b> East 1/4-1/2 0.277 mi. 1464 ft.  Relative: Higher	<b>YORK STREET APARTMENTS</b> <b>800 YORK</b> <b>OAKLAND, CA 94610</b>  <a href="#">Click here for full text details</a>  <b>LUST</b> Facility Status Case Closed Status Completed - Case Closed Facility Id 01-1689 Global Id T0600101560 date9 12/3/1993  <b>Alameda County CS</b> Record Id RO0000586 Status Case Closed  <b>Cortese</b> Cleanup Status COMPLETED - CASE CLOSED	<b>LUST</b> <b>Alameda County CS</b> <b>Cortese</b> <b>HIST CORTESE</b> <b>CERS</b>	<b>S102441441</b> N/A
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**HIST CORTESE**  
 Reg Id 01-1689

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<b>AE155</b> ESE 1/4-1/2 0.288 mi. 1522 ft.  Relative: Lower	<b>BERG RESIDENCE</b> <b>3329 LAKESHORE</b> <b>OAKLAND, CA 94610</b>  <a href="#">Click here for full text details</a>  <b>EMI</b> Facility Id 2768  <b>HIST CORTESE</b> Reg Id 2768	<b>EMI</b> <b>HIST CORTESE</b>	<b>S103953739</b> N/A
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MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Site

Database(s)

EDR ID Number  
EPA ID Number

**AC156**  
**SSW**  
**1/4-1/2**  
**0.293 mi.**  
**1549 ft.**

**EXXON**  
**500 GRAND AVE**  
**OAKLAND, CA 94610**

[Click here for full text details](#)

Relative:  
Lower

**LUST**  
**CPS-SLIC**  
**Alameda County CS**  
**SWEEPS UST**  
**CA FID UST**  
**Cortese**  
**HIST CORTESE**  
**CERS**

**S101580164**  
**N/A**

**LUST**

Facility Status Pollution Characterization  
Status Completed - Case Closed  
Facility Id 01-1467  
Global Id T0600101355

**CPS-SLIC**

Facility Status Completed - Case Closed  
Global Id T10000007707

[Click here to access the California GeoTracker records for this facility](#)

**Alameda County CS**

Record Id RO0000391  
Status Leak Confirmation  
Status Pollution Characterization  
Status Case Closed

**SWEEPS UST**

Status A  
Tank Status A  
Comp Number 2545

**CA FID UST**

Facility Id 01001585  
Status A

**Cortese**

Cleanup Status COMPLETED - CASE CLOSED

**HIST CORTESE**

Reg Id 01-1467

**AC157**  
**SSW**  
**1/4-1/2**  
**0.293 mi.**  
**1549 ft.**

**SERVICE STATION**  
**500 GRAND AVENUE**  
**OAKLAND, CA 92626**

[Click here for full text details](#)

Relative:  
Lower

**Notify 65**

**S100178954**  
**N/A**

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
AC158 SSW 1/4-1/2 0.293 mi. 1549 ft.	CHEVRON #21-1173 / EXXON #7-0237 500 GRAND AVE OAKLAND, CA 94610	UST FINDER RELEASE	1028933133 N/A
Relative: Lower	<a href="#">Click here for full text details</a>		
AC159 SSW 1/4-1/2 0.293 mi. 1549 ft.	500 GRAND REDEVELOPMENT 500 GRAND AVE OAKLAND, CA 94611	Alameda County CS	S117978973 N/A
Relative: Lower	<a href="#">Click here for full text details</a>		
	Alameda County CS Record Id RO0003175 Status Pollution Characterization		
AE160 ESE 1/4-1/2 0.293 mi. 1549 ft.	SHERMAN CLEANERS (FORMER) 3321/3329 LAKESHORE AVENUE OAKLAND, CA	CPS-SLIC CERS	S106234885 N/A
Relative: Lower	<a href="#">Click here for full text details</a>		
	CPS-SLIC Facility Status Completed - Case Closed Facility Id 01S0518 Global Id SL18331751		
	<a href="#">Click here to access the California GeoTracker records for this facility</a>		
AF161 SW 1/4-1/2 0.299 mi. 1578 ft.	WILMOT PROPERTY 433 BELLEVUE AVE OAKLAND, CA 94610	LUST Cortese HWTS	S128365588 N/A
Relative: Lower	<a href="#">Click here for full text details</a>		
	LUST Status Completed - Case Closed Global Id T10000018664		
	Cortese Cleanup Status COMPLETED - CASE CLOSED		

MAP FINDINGS

Map ID			EDR ID Number
Direction			EPA ID Number
Distance			
Elevation	Site	Database(s)	

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<b>AD162</b> <b>SSE</b> 1/4-1/2 0.316 mi. 1670 ft.	<b>OAKLAND CITY OF</b> <b>637 BEACON ST</b> <b>OAKLAND, CA 94610</b>  <a href="#">Click here for full text details</a>	<b>LUST</b> <b>Alameda County CS</b> <b>Cortese</b> <b>HIST CORTESE</b> <b>CERS</b>	<b>S101293670</b> <b>N/A</b>
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Relative:  
Lower

**LUST**  
 Facility Status Case Closed  
 Status Completed - Case Closed  
 Facility Id 01-0866  
 Global Id T0600100800  
 date9 12/17/1999

**Alameda County CS**  
 Record Id RO0000777  
 Status Case Closed

**Cortese**  
 Cleanup Status COMPLETED - CASE CLOSED

**HIST CORTESE**  
 Reg Id 01-0866

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<b>AD163</b> <b>SSE</b> 1/4-1/2 0.316 mi. 1670 ft.	<b>CITY OF OAKLAND</b> <b>637 BEACON</b> <b>OAKLAND, CA 94610</b>  <a href="#">Click here for full text details</a>	<b>UST FINDER RELEASE</b>	<b>1028936998</b> <b>N/A</b>
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Relative:  
Lower

<b>AF164</b> <b>SW</b> 1/4-1/2 0.332 mi. 1753 ft.	<b>CHEVRON #9-0006 / GULF #0006</b> <b>460 GRAND</b> <b>OAKLAND, CA 94610</b>  <a href="#">Click here for full text details</a>	<b>LUST</b> <b>CPS-SLIC</b> <b>Alameda County CS</b> <b>Cortese</b> <b>HIST CORTESE</b> <b>CERS</b>	<b>S102431085</b> <b>N/A</b>
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Relative:  
Lower

**LUST**  
 Facility Status Case Closed  
 Status Completed - Case Closed  
 Facility Id 01-0611  
 Global Id T0600100563  
 date9 11/13/1998

**CPS-SLIC**  
 Facility Status Completed - Case Closed  
 Global Id T06019779893

Click here to access the California GeoTracker records for this facility

**Alameda County CS**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CHEVRON #9-0006 / GULF #0006 (Continued)**

**S102431085**

Record Id RO0000839  
Record Id RO0002467  
Record Id RO0003222  
Status Leak Confirmation  
Status Case Closed

**Cortese**

Cleanup Status COMPLETED - CASE CLOSED

**HIST CORTESE**

Reg Id 01-0611

AF165  
SW  
1/4-1/2  
0.332 mi.  
1753 ft.

**CHEVRON #9-0006 / GULF #0006**  
**460 GRAND**  
**OAKLAND, CA 94610**

**UST FINDER RELEASE**

**1028933180**  
**N/A**

[Click here for full text details](#)

Relative:  
Lower

AG166  
NNW  
1/4-1/2  
0.348 mi.  
1836 ft.

**POY-WING PROPERTY**  
**240 MACARTHUR BLVD W**  
**OAKLAND, CA 94611**

**LUST**  
**Cortese**  
**HIST CORTESE**  
**CERS**

**S103890680**  
**N/A**

[Click here for full text details](#)

Relative:  
Higher

**LUST**

Facility Status Leak being confirmed  
Status Open - Verification Monitoring  
Facility Id 01-2434  
Global Id T0600102243

**Cortese**

Cleanup Status OPEN - VERIFICATION MONITORING

**HIST CORTESE**

Reg Id 01-2434

AG167  
NNW  
1/4-1/2  
0.348 mi.  
1836 ft.

**FORMERLY DODSON LTD**  
**240 MACARTHUR**  
**OAKLAND, CA 94611**

**UST FINDER RELEASE**

**1028966432**  
**N/A**

[Click here for full text details](#)

Relative:  
Higher

MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Site

Database(s)

EDR ID Number  
 EPA ID Number

**AG168**      **SHELL #13-5676**      **UST FINDER RELEASE**      **1029104717**  
**NNW**      **230 MACARTHUR**      **N/A**  
**1/4-1/2**      **OAKLAND, CA 94611**  
**0.348 mi.**  
**1840 ft.**

[Click here for full text details](#)

Relative:  
 Higher

**AG169**      **SHELL**      **LUST**      **S106610962**  
**NNW**      **230 MACARTHUR BLVD W**      **N/A**  
**1/4-1/2**      **OAKLAND, CA 94611**  
**0.348 mi.**  
**1840 ft.**

[Click here for full text details](#)

Relative:  
 Higher

**LUST**  
 Facility Status Preliminary site assessment underway  
 Facility Id 01-1345

**AG170**      **SHELL #13-5676**      **LUST**      **S110060316**  
**NNW**      **230 MACARTHUR**      **Cortese**      **N/A**  
**1/4-1/2**      **OAKLAND, CA 94611**      **HIST CORTESE**  
**0.348 mi.**      **CERS**  
**1840 ft.**

[Click here for full text details](#)

Relative:  
 Higher

**LUST**  
 Status Completed - Case Closed  
 Global Id T0600101240

**Cortese**  
 Cleanup Status COMPLETED - CASE CLOSED

**HIST CORTESE**  
 Reg Id 01-1345

**AH171**      **378-382 GRAND AVE**      **Alameda County CS**      **S118872775**  
**SW**      **378, 380, 382 GRAND AVE**      **N/A**  
**1/4-1/2**      **OAKLAND, CA**  
**0.385 mi.**  
**2032 ft.**

[Click here for full text details](#)

Relative:  
 Lower

**Alameda County CS**  
 Record Id RO0003218  
 Status Leak Confirmation  
 Status Case Closed

MAP FINDINGS

Map ID			EDR ID Number
Direction			EPA ID Number
Distance			
Elevation	Site	Database(s)	

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<p>AH172 SW 1/4-1/2 0.385 mi. 2032 ft.</p> <p>Relative: Lower</p>	<p><b>GRAND AVENUE LLC</b> 378 GRAND AVENUE OAKLAND, CA 0</p> <p><a href="#">Click here for full text details</a></p>	<p><b>UST FINDER RELEASE</b></p>	<p>1028971546 N/A</p>
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<p>AH173 SW 1/4-1/2 0.385 mi. 2032 ft.</p> <p>Relative: Lower</p>	<p><b>378 GRAND AVE., LLC</b> 378 GRAND AVE OAKLAND, CA 94610</p> <p><a href="#">Click here for full text details</a></p> <p><b>LUST</b> Status Completed - Case Closed Global Id T10000009122</p> <p><b>Cortese</b> Cleanup Status COMPLETED - CASE CLOSED</p> <p><b>HAZNET</b> GEPaid CAC002840269</p>	<p><b>LUST</b> Cortese HWTS HAZNET CERS</p>	<p>S118821910 N/A</p>
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<p>AI174 WSW 1/4-1/2 0.388 mi. 2047 ft.</p> <p>Relative: Higher</p>	<p><b>EAST BAY AGENCY FOR CHILDREN</b> 303 VAN BUREN AVENUE OAKLAND, CA 94610</p> <p><a href="#">Click here for full text details</a></p> <p><b>LUST</b> Status Completed - Case Closed Global Id T10000013048</p> <p><b>Cortese</b> Cleanup Status COMPLETED - CASE CLOSED</p>	<p><b>LUST</b> Cortese HWTS</p>	<p>S124393535 N/A</p>
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<p>AJ175 SSW 1/4-1/2 0.393 mi. 2077 ft.</p> <p>Relative: Lower</p>	<p><b>LAKESIDE PARK</b> 468 BELLEVUE AVE OAKLAND, CA 94610</p> <p><a href="#">Click here for full text details</a></p> <p><b>LUST</b> Status Completed - Case Closed Global Id T0600100811</p> <p><b>Alameda County CS</b> Record Id RO0003062</p>	<p><b>LUST</b> Alameda County CS Cortese HIST CORTESE CERS</p>	<p>S100226707 N/A</p>
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Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**LAKESIDE PARK (Continued)**

**S100226707**

Status Leak Confirmation

**Cortese**

Cleanup Status COMPLETED - CASE CLOSED

**HIST CORTESE**

Reg Id 01-0878

AJ176  
SSW  
1/4-1/2  
0.393 mi.  
2077 ft.

LAKESIDE PARK  
468 BELLEVUE AVE  
OAKLAND, CA 94610

UST FINDER RELEASE 1029013911  
N/A

Relative:  
Lower

[Click here for full text details](#)

AK177  
NNW  
1/4-1/2  
0.396 mi.  
2092 ft.

CITY OF OAKLAND FIRE STATION #10  
172 SANTA CLARA  
OAKLAND, CA 94610

UST FINDER RELEASE 1028936979  
N/A

Relative:  
Higher

[Click here for full text details](#)

AK178  
NNW  
1/4-1/2  
0.396 mi.  
2092 ft.

CITY OF OAKLAND ENVIR SCVS DIV  
172 SANTA CLARA  
OAKLAND, CA 94610

LUST U003713805  
Alameda County CS  
Cortese  
EMI  
HIST CORTESE  
HWTS  
CERS

Relative:  
Higher

[Click here for full text details](#)

**LUST**

Facility Status Case Closed  
Status Completed - Case Closed  
Facility Id 01-0625  
Global Id T0600100575  
date9 9/30/1992

**Alameda County CS**

Record Id RO0001115  
Status Case Closed

**Cortese**

Cleanup Status COMPLETED - CASE CLOSED

**EMI**

MAP FINDINGS

Map ID				EDR ID Number
Direction				EPA ID Number
Distance				
Elevation	Site	Database(s)		

**CITY OF OAKLAND ENVIR SCVS DIV (Continued)**

**U003713805**

Facility Id 14295

**HIST CORTESE**

Reg Id 01-0625

**AL179**  
**NW**  
**1/4-1/2**  
**0.407 mi.**  
**2150 ft.**

**ULIBARRI PROPERTY**  
**387 ORANGE ST**  
**OAKLAND, CA 94610**

**Alameda County CS** **S107998234**  
**N/A**

[Click here for full text details](#)

Relative:  
Higher

**Alameda County CS**  
Record Id RO0002921  
Status Leak Confirmation  
Status Preliminary Site Assessment Underway  
Status Pollution Characterization  
Status Remediation Plan  
Status Remedial Action Underway  
Status Verificaiton Monitoring Underway  
Status Case Closed

**AL180**  
**NW**  
**1/4-1/2**  
**0.411 mi.**  
**2168 ft.**

**PRIVATE RESIDENCE**  
**PRIVATE RESIDENCE**  
**OAKLAND, CA 94610**

**LUST** **S110654089**  
**N/A**

[Click here for full text details](#)

Relative:  
Higher

**LUST**  
Status Completed - Case Closed  
Global Id T06019730058  
Global Id T0600100621

**AM181**  
**SW**  
**1/4-1/2**  
**0.421 mi.**  
**2224 ft.**

**SHELL #13-5698 / DEVI OIL COMPANY**  
**350 GRAND**  
**OAKLAND, CA 94610**

**LUST** **S102436885**  
**Alameda County CS** **N/A**  
**SWEEPS UST**  
**Cortese**  
**HIST CORTESE**  
**CERS**

[Click here for full text details](#)

Relative:  
Lower

**LUST**  
Facility Status Preliminary site assessment underway  
Status Completed - Case Closed  
Facility Id 01-1360  
Global Id T0600101255

**Alameda County CS**  
Record Id RO0000428  
Status Leak Confirmation  
Status Preliminary Site Assessment Workplan Submitted  
Status Preliminary Site Assessment Underway

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**SHELL #13-5698 / DEVI OIL COMPANY (Continued)**

**S102436885**

Status Pollution Characterization  
Status Remedial Action Underway  
Status Verificaiton Monitoring Underway  
Status Case Closed

**SWEEPS UST**

Status A  
Tank Status A  
Comp Number 56752

**Cortese**

Cleanup Status COMPLETED - CASE CLOSED

**HIST CORTESE**

Reg Id 01-1360

AM182  
SW  
1/4-1/2  
0.421 mi.  
2224 ft.  
Relative:  
Lower

**SHELL #13-5698 / DEVI OIL COMPANY  
350 GRAND  
OAKLAND, CA 94610**

**UST FINDER RELEASE 1029104729  
N/A**

[Click here for full text details](#)

AH183  
SW  
1/4-1/2  
0.422 mi.  
2226 ft.  
Relative:  
Lower

**QUICK STOP #46  
363 GRAND  
OAKLAND, CA 94610**

**UST FINDER RELEASE 1029094709  
N/A**

[Click here for full text details](#)

AH184  
SW  
1/4-1/2  
0.422 mi.  
2226 ft.  
Relative:  
Lower

**QUICK STOP #46  
363 GRAND  
OAKLAND, CA 94610**

**LUST S101624561  
Alameda County CS  
SWEEPS UST  
CA FID UST  
Cortese  
HIST CORTESE  
CERS  
N/A**

[Click here for full text details](#)

**LUST**

Facility Status Remedial action (cleanup) Underway  
Status Completed - Case Closed  
Facility Id 01-1218  
Global Id T0600101120

**Alameda County CS**

Record Id RO0000806

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**QUICK STOP #46 (Continued)**

**S101624561**

Status Case Closed

**SWEEPS UST**

Comp Number 6262

**CA FID UST**

Facility Id 01001335  
Status I

**Cortese**

Cleanup Status COMPLETED - CASE CLOSED

**HIST CORTESE**

Reg Id 01-1218

AI185  
WSW  
1/4-1/2  
0.434 mi.  
2291 ft.

**SUSAN MENDELSON**  
431 LEE ST.  
OAKLAND, CA 94610

**HWTS**  
**HAZNET**  
Notify 65

**S100179333**  
N/A

[Click here for full text details](#)

Relative:  
Lower

**HAZNET**  
GEPaid CAC003078456

AN186  
SW  
1/4-1/2  
0.462 mi.  
2441 ft.

**CHAMPLIN FAMILY TRUST**  
485 ELLITA  
OAKLAND, CA 94610

**LUST**  
**Alameda County CS**  
**Cortese**  
**HIST CORTESE**  
**CERS**

**S103723099**  
N/A

[Click here for full text details](#)

Relative:  
Lower

**LUST**  
Facility Status Case Closed  
Status Completed - Case Closed  
Facility Id 01-2462  
Global Id T0600102270  
date9 1/29/1999

**Alameda County CS**

Record Id RO0000816  
Status Case Closed

**Cortese**

Cleanup Status COMPLETED - CASE CLOSED

**HIST CORTESE**

Reg Id 01-2462

MAP FINDINGS

Map ID			
Direction			EDR ID Number
Distance			EPA ID Number
Elevation	Site	Database(s)	

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<b>AN187</b> SW 1/4-1/2 0.462 mi. 2441 ft.  Relative: Lower	<b>CHAMPLIN FAMILY TRUST</b> 485 ELLITA OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	<b>UST FINDER RELEASE</b>	<b>1028932509</b> N/A
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<b>AO188</b> NNW 1/4-1/2 0.476 mi. 2513 ft.  Relative: Higher	<b>BP</b> 100 MACARTHUR BLVD OAKLAND, CA 94610  <a href="#">Click here for full text details</a>	<b>LUST</b> Alameda County CS SWEEPS UST CA FID UST Cortese HIST CORTESE CERS	<b>S101580086</b> N/A
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**LUST**  
 Facility Status Preliminary site assessment underway  
 Status Completed - Case Closed  
 Facility Id 01-0985  
 Global Id T0600100908

**Alameda County CS**  
 Record Id RO0000456  
 Status Leak Confirmation  
 Status Pollution Characterization  
 Status Case Closed

**SWEEPS UST**  
 Status A  
 Tank Status A  
 Comp Number 39623

**CA FID UST**  
 Facility Id 01001106  
 Status A

**Cortese**  
 Cleanup Status COMPLETED - CASE CLOSED

**HIST CORTESE**  
 Reg Id 01-0985

MAP FINDINGS

Map ID Direction Distance Elevation		Database(s)	EDR ID Number EPA ID Number
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<b>AO189</b> <b>NNW</b> <b>1/4-1/2</b> <b>0.476 mi.</b> <b>2513 ft.</b>  <b>Relative:</b> <b>Higher</b>	<b>BP #11102</b> <b>100 MACARTHUR</b> <b>OAKLAND, CA 94610</b>  <a href="#">Click here for full text details</a>	<b>UST FINDER RELEASE</b>	<b>1028926571</b> <b>N/A</b>
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<b>AP190</b> <b>NNE</b> <b>1/4-1/2</b> <b>0.486 mi.</b> <b>2565 ft.</b>  <b>Relative:</b> <b>Lower</b>	<b>SHELL OIL CO</b> <b>29 WILDWOOD</b> <b>PIEDMONT, CA 94610</b>  <a href="#">Click here for full text details</a>  <b>RCRA-SQG</b> EPA Id CAD981402076  <b>LUST</b> Facility Status Pollution Characterization Facility Id 01-1351  <b>HIST CORTESE</b> Reg Id 01-1351	<b>RCRA-SQG</b> <b>LUST</b> <b>HIST CORTESE</b>	<b>1000288636</b> <b>CAD981402076</b>
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<b>AP191</b> <b>NNE</b> <b>1/4-1/2</b> <b>0.486 mi.</b> <b>2565 ft.</b>  <b>Relative:</b> <b>Lower</b>	<b>SHELL #13-5765</b> <b>29 WILDWOOD</b> <b>PIEDMONT, CA 94610</b>  <a href="#">Click here for full text details</a>	<b>UST FINDER RELEASE</b>	<b>1029104733</b> <b>N/A</b>
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<b>AP192</b> <b>NNE</b> <b>1/4-1/2</b> <b>0.486 mi.</b> <b>2565 ft.</b>  <b>Relative:</b> <b>Lower</b>	<b>PIEDMONT SHELL SERV.</b> <b>29 WILDWOOD AVE</b> <b>PIEDMONT, CA 94610</b>  <a href="#">Click here for full text details</a>  <b>CPS-SLIC</b> Facility Status Completed - Case Closed Global Id T10000007222  Click here to access the California GeoTracker records for this facility  <b>CA FID UST</b> Facility Id 01001463 Status A  <b>EMI</b>	<b>CPS-SLIC</b> <b>HIST UST</b> <b>CA FID UST</b> <b>EMI</b> <b>HWTS</b> <b>HAZNET</b> <b>CERS</b>	<b>S101624468</b> <b>N/A</b>
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MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Site

Database(s)

EDR ID Number  
EPA ID Number

**PIEDMONT SHELL SERV. (Continued)**

**S101624468**

Facility Id 112467

**HAZNET**

GEPaid CAL000320538

AP193  
NNE  
1/4-1/2  
0.486 mi.  
2565 ft.

**SHELL OIL CO**  
**29 WILDWOOD**  
**PIEDMONT, CA 94610**

**LUST**  
**Alameda County CS**  
**FINDS**  
**ECHO**  
**Cortese**  
**CERS**

**1008153030**  
**N/A**

Relative:  
Lower

[Click here for full text details](#)

**LUST**

Status Completed - Case Closed  
Global Id T0600101246

**Alameda County CS**

Record Id RO0000495  
Record Id RO0003154  
Status Leak Confirmation  
Status Pollution Characterization  
Status Case Closed

**FINDS**

Registry ID: 110018974573

**ECHO**

Registry ID 110018974573

**Cortese**

Cleanup Status COMPLETED - CASE CLOSED

AO194  
NNW  
1/4-1/2  
0.496 mi.  
2618 ft.

**UNOCAL**  
**96 MACARTHUR BLVD**  
**OAKLAND, CA 94610**

**LUST**  
**Alameda County CS**  
**SWEEPS UST**  
**HIST UST**  
**CA FID UST**  
**HIST CORTESE**

**1000167106**  
**N/A**

Relative:  
Higher

[Click here for full text details](#)

**LUST**

Facility Status Preliminary site assessment underway  
Facility Id 01-1618

**Alameda County CS**

Record Id RO0000455  
Status Leak Confirmation  
Status Preliminary Site Assessment Workplan Submitted  
Status Preliminary Site Assessment Underway

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNOCAL (Continued)**

1000167106

Status Pollution Characterization

**SWEEPS UST**

Status A  
Tank Status A  
Comp Number 60230

**HIST UST**

Facility Id 00000060230

**CA FID UST**

Facility Id 01001726  
Status A

**HIST CORTESE**

Reg Id 01-1618

195  
SE  
1/4-1/2  
0.500 mi.  
2638 ft.

**ARCO**  
731 MACARTHUR  
OAKLAND, CA 94609

LUST S104162485  
HIST CORTESE N/A

Relative:  
Higher

[Click here for full text details](#)

**LUST**

Facility Status Remedial action (cleanup) Underway  
Facility Id 01-0118

**HIST CORTESE**

Reg Id 01-0118

196  
West  
1/2-1  
0.772 mi.  
4078 ft.

**CROWLEY MARITIME CORP.**  
PAC. DRY DOCK YARDS 1&2  
OAKLAND, CA 92626

Notify 65 S100179670  
N/A

Relative:  
Lower

[Click here for full text details](#)

197  
WNW  
1/2-1  
0.794 mi.  
4194 ft.

**EUROPEAN MOTORS**  
2915 BROADWAY  
OAKLAND, CA 94611

RCRA-LQG 1000340156  
LUST CAD982486714  
Alameda County CS  
SWEEPS UST  
HIST UST  
CA FID UST  
Cortese  
Notify 65  
CERS

Relative:  
Lower

[Click here for full text details](#)

**RCRA-LQG**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**EUROPEAN MOTORS (Continued)**

1000340156

EPA Id CAD982486714

**LUST**

Status Completed - Case Closed  
Global Id T0600100528

**Alameda County CS**

Record Id RO0000702  
Status Case Closed

**SWEEPS UST**

Status A  
Comp Number 14124

**HIST UST**

Facility Id 00000014124

**CA FID UST**

Facility Id 01002006  
Status I

**Cortese**

Cleanup Status COMPLETED - CASE CLOSED

198  
NW  
1/2-1  
0.798 mi.  
4212 ft.

**THE ECHO MIXED USE HOUSING DEVELOPMENT**  
3300 BROADWAY  
OAKLAND, CA 94611

ENVIROSTOR S131461973  
VCP N/A

[Click here for full text details](#)

Relative:  
Higher

**ENVIROSTOR**

Facility Id 60003563  
Status Active

**VCP**

Facility Id 60003563  
Status Active

199  
WNW  
1/2-1  
0.811 mi.  
4283 ft.

**BROADWAY VOLKSWAGON**  
2749 BROADWAY  
OAKLAND, CA 92626

Notify 65 S100178913  
N/A

[Click here for full text details](#)

Relative:  
Lower

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

200  
NW  
1/2-1  
0.844 mi.  
4457 ft.

**CONNELL OLDS**  
3093 BROADWAY  
OAKLAND, CA 94611

[Click here for full text details](#)

Relative:  
Higher

**RCRA-SQG** 1000312755  
**LUST** CAD981973365  
Alameda County CS  
**SWEEPS UST**  
**HIST UST**  
**CA FID UST**  
**FINDS**  
**ECHO**  
**Cortese**  
**EMI**  
**HIST CORTESE**  
**HWTS**  
**HAZNET**  
**Notify 65**  
**CERS**

**RCRA-SQG**  
EPA Id CAD981973365

**LUST**  
Facility Status Preliminary site assessment underway  
Status Completed - Case Closed  
Facility Id 01-0447  
Global Id T0600100406

**Alameda County CS**  
Record Id RO0000199  
Status Leak Confirmation  
Status Preliminary Site Assessment Workplan Submitted  
Status Preliminary Site Assessment Underway  
Status Pollution Characterization

**SWEEPS UST**  
Comp Number 9788

**HIST UST**  
Facility Id 00000009788

**CA FID UST**  
Facility Id 01000582  
Status I

**FINDS**  
Registry ID: 110002761100  
Registry ID: 110071418455

**ECHO**  
Registry ID 110002761100

**Cortese**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CONNELL OLDS (Continued)**

1000312755

Cleanup Status COMPLETED - CASE CLOSED

**EMI**

Facility Id 16503  
Facility Id 11066  
Facility Id 12394

**HIST CORTESE**

Reg Id 01-0447

**HAZNET**

GEPaid CAD981973365

201  
South  
1/2-1  
0.871 mi.  
4597 ft.

**YUEN'S EXXON SERVICE**  
1901 PARK BOULEVARD  
OAKLAND, CA 92626

Notify 65 S100179440  
N/A

Relative:  
Lower

[Click here for full text details](#)

202  
West  
1/2-1  
0.917 mi.  
4840 ft.

**NEGHERBON**  
2345, 2333 BROADWAY & 421 24TH ST.  
OAKLAND, CA 94612

ENVIROSTOR S112241534  
VCP N/A  
DEED

Relative:  
Lower

[Click here for full text details](#)

**ENVIROSTOR**

Facility Id 60001834  
Status Certified / Operation & Maintenance

**VCP**

Facility Id 60001834  
Status Certified / Operation & Maintenance

**DEED**

Envirostor ID 60001834  
Status CERTIFIED / OPERATION & MAINTENANCE

203  
NW  
1/2-1  
0.932 mi.  
4923 ft.

**CARDIO PULMANARY BUILDING**  
365 HAWTHORNE STREET  
OAKLAND, CA 92626

Notify 65 S100179153  
N/A

Relative:  
Higher

[Click here for full text details](#)

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
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204 North 1/2-1 0.988 mi. 5214 ft.	4212-4220 PIEDMONT AVENUE 4212-4220 PIEDMONT AVENUE OAKLAND, CA 94601	ENVIROSTOR Alameda County CS VCP	S110121741 N/A
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[Click here for full text details](#)

Relative:  
Higher

**ENVIROSTOR**  
Facility Id 60001212  
Status Refer: RWQCB

**Alameda County CS**  
Record Id RO0003285

**VCP**  
Facility Id 60001212  
Status Refer: RWQCB

205 SSW 1/2-1 0.995 mi. 5253 ft.	ZUEDELAC APARTMENTS 1600 3RD AVE OAKLAND, CA 94606	ENVIROSTOR VCP HWTS HAZNET	S112921473 N/A
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[Click here for full text details](#)

Relative:  
Lower

**ENVIROSTOR**  
Facility Id 01990014  
Status Certified

**VCP**  
Facility Id 01990014  
Status Certified

**HAZNET**  
GEPaid CAC002550979

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CA	AQUEOUS FOAM	Former Fire Training Facility Assessments Listing	State Water Resources Control Board	11/30/2023	11/30/2023	02/23/2024
CA	AST	Aboveground Petroleum Storage Tank Facilities	California Environmental Protection Agency	07/06/2016	07/12/2016	09/19/2016
CA	BROWNFIELDS	Considered Brownfields Sites Listing	State Water Resources Control Board	12/13/2023	12/13/2023	03/07/2024
CA	CA BOND EXP. PLAN	Bond Expenditure Plan	Department of Health Services	01/01/1989	07/27/1994	08/02/1994
CA	CA FID UST	Facility Inventory Database	California Environmental Protection Agency	10/31/1994	09/05/1995	09/29/1995
CA	CDL	Clandestine Drug Labs	Department of Toxic Substances Control	12/31/2021	09/28/2023	12/18/2023
CA	CERS	CalEPA Regulated Site Portal Data	California Environmental Protection Agency	01/16/2024	01/16/2024	04/03/2024
CA	CERS HAZ WASTE	California Environmental Reporting System Hazardous Waste	CalEPA	01/16/2024	01/16/2024	04/03/2024
CA	CERS TANKS	California Environmental Reporting System (CERS) Tanks	California Environmental Protection Agency	01/16/2024	01/16/2024	04/03/2024
CA	CHMIRS	California Hazardous Material Incident Report System	Office of Emergency Services	12/31/2023	01/23/2024	04/09/2024
CA	CHROME PLATING	Chrome Plating Facilities Listing	State Water Resources Control Board	11/30/2023	11/30/2023	02/23/2024
CA	CIWQS	California Integrated Water Quality System	State Water Resources Control Board	02/26/2024	02/27/2024	05/14/2024
CA	CORTESE	"Cortese" Hazardous Waste & Substances Sites List	CAL EPA/Office of Emergency Information	12/13/2023	12/13/2023	03/07/2024
CA	CPS-SLIC	Statewide SLIC Cases (GEOTRACKER)	State Water Resources Control Board	12/04/2023	12/05/2023	02/27/2024
CA	CUPA LIVERMORE-PLEASANTON	CUPA Facility Listing	Livermore-Pleasanton Fire Department	02/14/2024	02/21/2024	05/08/2024
CA	DEED	Deed Restriction Listing	DTSC and SWRCB	02/26/2024	02/27/2024	05/14/2024
CA	DRYCLEAN AMADOR	Amador Air District Drycleaner Facility Listing	Amador Air Quality Management District	04/26/2023	04/27/2023	07/13/2023
CA	DRYCLEAN AVAQMD	Antelope Valley Air Quality Management District Drycleaner L	Antelope Valley Air Quality Management Distri	02/26/2024	02/27/2024	05/15/2024
CA	DRYCLEAN BAY AREA DIST	Bay Area Air Quality Management District Drycleaner Facility	Bay Area Air Quality Management District	02/20/2019	05/30/2019	05/01/2023
CA	DRYCLEAN BUTTE CO DIST	Butte County Air Quality Management District Drycleaner Facil	Butte County Air Quality Management District	04/25/2023	10/18/2023	01/16/2024
CA	DRYCLEAN CALAVERAS CO DIST	Calaveras County Environmental Management Agency Drycleaner	Calaveras County Environmental Management Age	06/17/2019	06/19/2019	05/01/2023
CA	DRYCLEAN EAST KERN DIST	Eastern Kern Air Pollution Control District District Dryclea	Eastern Kern Air Pollution Control District	01/12/2023	04/26/2023	07/14/2023
CA	DRYCLEAN FEATHER RIVER DIST	Feather River Air Quality Management District Drycleaner Fac	Feather River Air Quality Management District	03/08/2023	03/09/2023	06/05/2023
CA	DRYCLEAN GLENN CO DIST	Glenn County Air Pollution Control District Drycleaner Facil	Glenn County Air Pollution Control District	01/08/2024	01/10/2024	03/27/2024
CA	DRYCLEAN GRANT	Grant Recipients List	California Air Resources Board	12/31/2021	01/26/2024	04/16/2024
CA	DRYCLEAN IMPERIAL CO DIST	Imperial County Air Pollution Control District Drycleaner Fa	Imperial County Air Pollution Control Distric	04/25/2023	04/26/2023	07/14/2023
CA	DRYCLEAN LAKE CO DIST	Lake County Air Quality Management District Drycleaner Facil	Lake County Air Quality Management District	02/15/2024	02/16/2024	05/02/2024
CA	DRYCLEAN MENDO CO DIST	Mendocino County Air Quality Management District Drycleaner	Mendocino County Air Quality Management Distr	02/26/2024	02/28/2024	05/15/2024
CA	DRYCLEAN MOJAVE DESERT DIST	Mojave Desert Air Quality Management District Drycleaner Fac	Mojave Desert Air Quality Management District	04/15/2024	04/17/2024	04/24/2024
CA	DRYCLEAN MONTEREY BAY DIST	Monterey Bay Air Quality Management District Drycleaner Faci	Monterey Bay Air Quality Management District	01/03/2024	01/05/2024	03/20/2024
CA	DRYCLEAN NO COAST UNIFIED DIST	North Coast Unified Air Quality Management District Dryclean	North Coast Unified Air Quality Management Di	11/30/2016	04/19/2019	05/01/2023
CA	DRYCLEAN NO SIERRA DIST	Northern Sierra Air Quality Management District Drycleaner F	Northern Sierra Air Quality Management Distri	05/07/2019	05/07/2019	05/01/2023
CA	DRYCLEAN NO SONOMA CO DIST	Norther Sonoma County County Air Pollution Control District	Santa Barbara County Air Pollution Control Di	01/05/2024	01/10/2024	03/27/2024
CA	DRYCLEAN PLACER CO DIST	Placer County Air Quality Management District Drycleaner Fac	Placer County Air Quality Management District	05/15/2023	05/17/2023	08/14/2023
CA	DRYCLEAN SACRAMENTO METO DIST	Sacramento Metropolitan Air Quality Management District Drycl	Sacramento Metropolitan Air Quality Managemen	01/03/2024	01/10/2024	03/27/2024
CA	DRYCLEAN SAN DIEGO CO DIST	San Diego County Air Pollution Control District Drycleaner F	San Diego County Air Pollution Control Distri	03/19/2024	03/21/2024	04/12/2024
CA	DRYCLEAN SAN JOAQ VAL DIST	San Joaquin Valley Air Pollution Control District District D	San Joaquin Valley Air Pollution Control Dist	01/04/2024	01/04/2024	03/21/2024
CA	DRYCLEAN SAN LUIS OB CO DIST	San Luis Obispo County Air Pollution Control District Drycle	San Luis Obispo County Air Pollution Control	01/03/2024	01/04/2024	03/20/2024
CA	DRYCLEAN SANTA BARB CO DIST	Santa Barbara County Air Pollution Control District Dryclean	Santa Barbara County Air Pollution Control Di	02/19/2019	04/17/2019	05/01/2023
CA	DRYCLEAN SHASTA CO DIST	Shasta County Air Quality Management District District Drycl	Shasta County Air Quality Management District	04/26/2023	04/27/2023	07/14/2023
CA	DRYCLEAN SOUTH COAST	South Coast Air Quality Management District Drycleaner Listi	South Coast Air Quality Management District	02/20/2024	02/22/2024	05/08/2024
CA	DRYCLEAN TEHAMA CO DIST	Tehama County Air Pollution Control District Drycleaner Faci	Tehama County Air Pollution Control District	04/24/2019	04/24/2019	05/01/2023
CA	DRYCLEAN VENTURA CO DIST	Drycleaner Facility Listing	Ventura County Air Pollution Control District	01/04/2024	01/16/2024	02/08/2024
CA	DRYCLEAN YOLO-SOLANO DIST	Yolo-Solano Air Quality Management District Drycleaner Facil	Yolo-Solano Air Quality Management District	01/04/2024	01/05/2024	03/20/2024
CA	DRYCLEANERS	Cleaner Facilities	Department of Toxic Substance Control	04/02/2024	04/05/2024	04/15/2024
CA	EMI	Emissions Inventory Data	California Air Resources Board	12/31/2021	06/09/2023	08/30/2023
CA	ENF	Enforcement Action Listing	State Water Resoruces Control Board	01/16/2024	01/16/2024	04/03/2024

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CA	ENVIROSTOR	EnviroStor Database	Department of Toxic Substances Control	01/22/2024	01/23/2024	04/08/2024
CA	FIN ASSURANCE 1	Financial Assurance Information Listing	Department of Toxic Substances Control	01/11/2024	01/16/2024	04/03/2024
CA	FIN ASSURANCE 2	Financial Assurance Information Listing	California Integrated Waste Management Board	02/07/2024	02/28/2024	05/15/2024
CA	HAULERS	Registered Waste Tire Haulers Listing	Integrated Waste Management Board	04/04/2024	04/05/2024	04/15/2024
CA	HAZNET	Facility and Manifest Data	California Environmental Protection Agency	12/31/2023	01/03/2024	03/21/2024
CA	HIST CAL-SITES	Calsites Database	Department of Toxic Substance Control	08/08/2005	08/03/2006	08/24/2006
CA	HIST CORTESE	Hazardous Waste & Substance Site List	Department of Toxic Substances Control	04/01/2001	01/22/2009	04/08/2009
CA	HIST UST	Hazardous Substance Storage Container Database	State Water Resources Control Board	10/15/1990	01/25/1991	02/12/1991
CA	HWP	EnviroStor Permitted Facilities Listing	Department of Toxic Substances Control	02/07/2024	02/07/2024	02/07/2024
CA	HWT	Registered Hazardous Waste Transporter Database	Department of Toxic Substances Control	01/02/2024	01/03/2024	03/21/2024
CA	HWTS	Hazardous Waste Tracking System	Department of Toxic Substances Control	01/26/2024	01/30/2024	04/17/2024
CA	ICE	Inspection, Compliance and Enforcement	Department of Toxic Substances Control	02/07/2024	02/07/2024	02/07/2024
CA	LDS	Land Disposal Sites Listing (GEOTRACKER)	State Water Quality Control Board	12/04/2023	12/05/2023	02/27/2024
CA	LIENS	Environmental Liens Listing	Department of Toxic Substances Control	02/26/2024	02/27/2024	05/15/2024
CA	LUST	Leaking Underground Fuel Tank Report (GEOTRACKER)	State Water Resources Control Board	12/04/2023	12/05/2023	02/28/2024
CA	LUST REG 1	Active Toxic Site Investigation	California Regional Water Quality Control Boa	02/01/2001	02/28/2001	03/29/2001
CA	LUST REG 2	Fuel Leak List	California Regional Water Quality Control Boa	09/30/2004	10/20/2004	11/19/2004
CA	LUST REG 3	Leaking Underground Storage Tank Database	California Regional Water Quality Control Boa	05/19/2003	05/19/2003	06/02/2003
CA	LUST REG 4	Underground Storage Tank Leak List	California Regional Water Quality Control Boa	09/07/2004	09/07/2004	10/12/2004
CA	LUST REG 5	Leaking Underground Storage Tank Database	California Regional Water Quality Control Boa	07/01/2008	07/22/2008	07/31/2008
CA	LUST REG 6L	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	09/09/2003	09/10/2003	10/07/2003
CA	LUST REG 6V	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	06/07/2005	06/07/2005	06/29/2005
CA	LUST REG 7	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	02/26/2004	02/26/2004	03/24/2004
CA	LUST REG 8	Leaking Underground Storage Tanks	California Regional Water Quality Control Boa	02/14/2005	02/15/2005	03/28/2005
CA	LUST REG 9	Leaking Underground Storage Tank Report	California Regional Water Quality Control Boa	03/01/2001	04/23/2001	05/21/2001
CA	MCS	Military Cleanup Sites Listing (GEOTRACKER)	State Water Resources Control Board	12/04/2023	12/05/2023	02/28/2024
CA	MILITARY PRIV SITES	Military Privatized Sites (GEOTRACKER)	State Water Resources Control Board	12/04/2023	12/05/2023	02/28/2024
CA	MILITARY UST SITES	Military UST Sites (GEOTRACKER)	State Water Resources Control Board	12/04/2023	12/05/2023	02/28/2024
CA	MINES	Mines Site Location Listing	Department of Conservation	11/29/2023	11/29/2023	02/23/2024
CA	MWMP	Medical Waste Management Program Listing	Department of Public Health	01/23/2024	02/27/2024	05/16/2024
CA	NON-CASE INFO	Non-Case Information Sites (GEOTRACKER)	State Water Resources Control Board	12/04/2023	12/05/2023	02/28/2024
CA	NOTIFY 65	Proposition 65 Records	State Water Resources Control Board	12/06/2023	12/06/2023	02/29/2024
CA	NPDES	NPDES Permits Listing	State Water Resources Control Board	02/05/2024	02/06/2024	04/25/2024
CA	OTHER OIL GAS	Other Oil & Gas Projects Sites (GEOTRACKER)	State Water Resources Control Board	12/04/2023	12/05/2023	02/28/2024
CA	PEST LIC	Pesticide Regulation Licenses Listing	Department of Pesticide Regulation	02/26/2024	02/27/2024	05/17/2024
CA	PFAS	PFAS Contamination Site Location Listing	State Water Resources Control Board	11/30/2023	11/30/2023	02/26/2024
CA	PROC	Certified Processors Database	Department of Conservation	11/29/2023	11/29/2023	02/23/2024
CA	PROD WATER PONDS	Produced Water Ponds Sites (GEOTRACKER)	State Water Resources Control Board	12/04/2023	12/05/2023	02/28/2024
CA	PROJECT	Project Sites (GEOTRACKER)	State Water Resources Control Board	12/04/2023	12/05/2023	02/28/2024
CA	RESPONSE	State Response Sites	Department of Toxic Substances Control	01/22/2024	01/23/2024	04/08/2024
CA	RGA LF	Recovered Government Archive Solid Waste Facilities List	Department of Resources Recycling and Recover		07/01/2013	01/13/2014
CA	RGA LUST	Recovered Government Archive Leaking Underground Storage Tan	State Water Resources Control Board		07/01/2013	12/30/2013
CA	SAMPLING POINT	Sampling Point ? Public Sites (GEOTRACKER)	State Water Resources Control Board	12/04/2023	12/05/2023	02/28/2024
CA	SAN FRANCISCO AST	Aboveground Storage Tank Site Listing	San Francisco County Department of Public Hea	02/01/2024	02/01/2024	04/24/2024
CA	SAN JOSE HAZMAT	Hazardous Material Facilities	City of San Jose Fire Department	11/03/2020	11/05/2020	01/26/2021
CA	SANTA CRUZ CO SITE MITI	Site Mitigation Listing	Santa Cruz Environmental Health Services	12/03/2018	06/23/2023	07/13/2023
CA	SCH	School Property Evaluation Program	Department of Toxic Substances Control	01/22/2024	01/23/2024	04/08/2024

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CA	SLIC REG 1	Active Toxic Site Investigations	California Regional Water Quality Control Boa	04/03/2003	04/07/2003	04/25/2003
CA	SLIC REG 2	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board San Fran	09/30/2004	10/20/2004	11/19/2004
CA	SLIC REG 3	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Regional Water Quality Control Boa	05/18/2006	05/18/2006	06/15/2006
CA	SLIC REG 4	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Region Water Quality Control Board Los Angele	11/17/2004	11/18/2004	01/04/2005
CA	SLIC REG 5	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board Central	04/01/2005	04/05/2005	04/21/2005
CA	SLIC REG 6L	SLIC Sites	California Regional Water Quality Control Boa	09/07/2004	09/07/2004	10/12/2004
CA	SLIC REG 6V	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board, Victorv	05/24/2005	05/25/2005	06/16/2005
CA	SLIC REG 7	SLIC List	California Regional Quality Control Board, Co	11/24/2004	11/29/2004	01/04/2005
CA	SLIC REG 8	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Region Water Quality Control Board	04/03/2008	04/03/2008	04/14/2008
CA	SLIC REG 9	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Regional Water Quality Control Boa	09/10/2007	09/11/2007	09/28/2007
CA	SPILLS 90	SPILLS90 data from FirstSearch	FirstSearch	06/06/2012	01/03/2013	02/22/2013
CA	SWEEPS UST	SWEEPS UST Listing	State Water Resources Control Board	06/01/1994	07/07/2005	08/11/2005
CA	SWF/LF (SWIS)	Solid Waste Information System	Department of Resources Recycling and Recover	02/05/2024	02/06/2024	04/26/2024
CA	SWRCY	Recycler Database	Department of Conservation	11/29/2023	11/29/2023	02/23/2024
CA	TOXIC PITS	Toxic Pits Cleanup Act Sites	State Water Resources Control Board	07/01/1995	08/30/1995	09/26/1995
CA	UIC	UIC Listing	Deaprtment of Conservation	11/29/2023	11/29/2023	02/27/2024
CA	UIC GEO	Underground Injection Control Sites (GEOTRACKER)	State Water Resource Control Board	12/04/2023	12/05/2023	02/28/2024
CA	UST	Active UST Facilities	SWRCB	12/04/2023	12/05/2023	02/28/2024
CA	UST CLOSURE	Proposed Closure of Underground Storage Tank (UST) Cases	State Water Resources Control Board	11/28/2023	11/30/2023	02/27/2024
CA	VCP	Voluntary Cleanup Program Properties	Department of Toxic Substances Control	01/22/2024	01/23/2024	04/08/2024
CA	WASTEWATER PITS	Oil Wastewater Pits Listing	RWQCB, Central Valley Region	02/11/2021	07/01/2021	09/29/2021
CA	WDR	Waste Discharge Requirements Listing	State Water Resources Control Board	11/29/2023	11/29/2023	02/22/2024
CA	WDS	Waste Discharge System	State Water Resources Control Board	06/19/2007	06/20/2007	06/29/2007
CA	WELL STIM PROJ	Well Stimulation Project (GEOTRACKER)	State Water Resources Control Board	12/04/2023	12/05/2023	02/28/2024
CA	WIP	Well Investigation Program Case List	Los Angeles Water Quality Control Board	07/03/2009	07/21/2009	08/03/2009
CA	WMUDS/SWAT	Waste Management Unit Database	State Water Resources Control Board	04/01/2000	04/10/2000	05/10/2000
US	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	09/30/2017	05/08/2018	07/20/2018
US	ABANDONED MINES	Abandoned Mines	Department of Interior	11/28/2023	11/29/2023	12/11/2023
US	AQUEOUS FOAM NRC	Aqueous Foam Related Incidents Listing	Environmental Protection Agency	12/28/2023	12/28/2023	03/04/2024
US	BIOSOLIDS	ICIS-NPDES Biosolids Facility Data	Environmental Protection Agency	12/31/2023	01/03/2024	01/16/2024
US	BRS	Biennial Reporting System	EPA/NTIS	12/31/2021	03/09/2023	03/20/2023
US	COAL ASH DOE	Steam-Electric Plant Operation Data	Department of Energy	12/31/2022	11/27/2023	02/22/2024
US	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	01/12/2017	03/05/2019	11/11/2019
US	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	12/31/2023	01/11/2024	01/16/2024
US	CORRACTS	Corrective Action Report	EPA	12/04/2023	12/06/2023	12/12/2023
US	DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	EPA, Region 9	01/12/2009	05/07/2009	09/21/2009
US	DOCKET HWC	Hazardous Waste Compliance Docket Listing	Environmental Protection Agency	05/06/2021	05/21/2021	08/11/2021
US	DOD	Department of Defense Sites	USGS	06/07/2021	07/13/2021	03/09/2022
US	DOT OPS	Incident and Accident Data	Department of Transporation, Office of Pipeli	01/02/2020	01/28/2020	04/17/2020
US	Delisted NPL	National Priority List Deletions	EPA	02/29/2024	03/01/2024	03/27/2024
US	ECHO	Enforcement & Compliance History Information	Environmental Protection Agency	12/17/2023	12/28/2023	03/04/2024
US	EDR Hist Auto	EDR Exclusive Historical Auto Stations	EDR, Inc.			
US	EDR Hist Cleaner	EDR Exclusive Historical Cleaners	EDR, Inc.			
US	EDR MGP	EDR Proprietary Manufactured Gas Plants	EDR, Inc.			
US	EPA WATCH LIST	EPA Watch List	Environmental Protection Agency	08/30/2013	03/21/2014	06/17/2014
US	ERNS	Emergency Response Notification System	National Response Center, United States Coast	12/12/2023	12/13/2023	02/28/2024
US	FEDERAL FACILITY	Federal Facility Site Information listing	Environmental Protection Agency	12/20/2023	12/20/2023	01/24/2024

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	FEDLAND	Federal and Indian Lands	U.S. Geological Survey	04/02/2018	04/11/2018	11/06/2019
US	FEMA UST	Underground Storage Tank Listing	FEMA	11/16/2023	11/16/2023	02/13/2024
US	FINDS	Facility Index System/Facility Registry System	EPA	11/03/2023	11/08/2023	11/20/2023
US	FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA/Office of Prevention, Pesticides and Toxi	04/09/2009	04/16/2009	05/11/2009
US	FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA	04/09/2009	04/16/2009	05/11/2009
US	FUDS	Formerly Used Defense Sites	U.S. Army Corps of Engineers	01/30/2024	02/13/2024	04/04/2024
US	FUELS PROGRAM	EPA Fuels Program Registered Listing	EPA	02/12/2024	02/13/2024	04/04/2024
US	FUSRAP	Formerly Utilized Sites Remedial Action Program	Department of Energy	03/03/2023	03/03/2023	06/09/2023
US	HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HIST FTTS INSP	FIFRA/TSCA Tracking System Inspection & Enforcement Case Lis	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HMIRS	Hazardous Materials Information Reporting System	U.S. Department of Transportation	12/12/2023	12/13/2023	02/28/2024
US	ICIS	Integrated Compliance Information System	Environmental Protection Agency	11/18/2016	11/23/2016	02/10/2017
US	IHS OPEN DUMPS	Open Dumps on Indian Land	Department of Health & Human Serivces, Indian	04/01/2014	08/06/2014	01/29/2015
US	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	10/25/2023	01/17/2024	03/13/2024
US	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	10/25/2023	01/17/2024	03/13/2024
US	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	10/25/2023	01/17/2024	03/13/2024
US	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	10/04/2023	01/17/2024	03/13/2024
US	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	10/25/2023	01/17/2024	03/13/2024
US	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	10/25/2023	01/17/2024	03/13/2024
US	INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land	EPA Region 8	10/25/2023	01/17/2024	03/13/2024
US	INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land	Environmental Protection Agency	10/25/2023	01/17/2024	03/13/2024
US	INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	Environmental Protection Agency	12/31/1998	12/03/2007	01/24/2008
US	INDIAN RESERV	Indian Reservations	USGS	12/31/2014	07/14/2015	01/10/2017
US	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	10/24/2023	01/17/2024	03/13/2024
US	INDIAN UST R10	Underground Storage Tanks on Indian Land	EPA Region 10	10/24/2023	01/17/2024	03/13/2024
US	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	10/24/2023	01/17/2024	03/13/2024
US	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	10/17/2023	01/17/2024	03/13/2024
US	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	10/24/2023	01/17/2024	03/13/2024
US	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	10/24/2023	01/17/2024	03/13/2024
US	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	10/24/2023	01/17/2024	03/13/2024
US	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	10/24/2023	01/17/2024	03/13/2024
US	INDIAN VCP R1	Voluntary Cleanup Priority Listing	EPA, Region 1	07/27/2015	09/29/2015	02/18/2016
US	INDIAN VCP R7	Voluntary Cleanup Priority Lisiting	EPA, Region 7	03/20/2008	04/22/2008	05/19/2008
US	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	02/29/2024	03/01/2024	03/27/2024
US	LEAD SMELTER 2	Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
US	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	02/29/2024	03/01/2024	03/27/2024
US	LUCIS	Land Use Control Information System	Department of the Navy	02/14/2024	02/16/2024	04/04/2024
US	MINES MRDS	Mineral Resources Data System	USGS	08/23/2022	11/22/2022	02/28/2023
US	MINES VIOLATIONS	MSHA Violation Assessment Data	DOL, Mine Safety & Health Admi	01/02/2024	01/03/2024	01/04/2024
US	MLTS	Material Licensing Tracking System	Nuclear Regulatory Commission	01/02/2024	01/16/2024	03/13/2024
US	NPL	National Priority List	EPA	02/29/2024	03/01/2024	03/27/2024
US	NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/1994	03/30/1994
US	ODI	Open Dump Inventory	Environmental Protection Agency	06/30/1985	08/09/2004	09/17/2004
US	PADS	PCB Activity Database System	EPA	03/20/2023	04/04/2023	06/09/2023
US	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	09/13/2019	11/06/2019	02/10/2020
US	PCS	Permit Compliance System	EPA, Office of Water	12/16/2016	01/06/2017	03/10/2017
US	PCS ENF	Enforcement data	EPA	12/31/2014	02/05/2015	03/06/2015

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	PFAS ATSDR	PFAS Contamination Site Location Listing	Department of Health & Human Services	06/24/2020	03/17/2021	11/08/2022
US	PFAS ECHO	Facilities in Industries that May Be Handling PFAS Listing	Environmental Protection Agency	12/28/2023	12/28/2023	03/04/2024
US	PFAS ECHO FIRE TRAINING	Facilities in Industries that May Be Handling PFAS Listing	Environmental Protection Agency	12/28/2023	12/28/2023	03/04/2024
US	PFAS FEDERAL SITES	Federal Sites PFAS Information	Environmental Protection Agency	12/28/2023	12/28/2023	03/04/2024
US	PFAS NPDES	Clean Water Act Discharge Monitoring Information	Environmental Protection Agency	12/28/2023	12/28/2023	03/04/2024
US	PFAS NPL	Superfund Sites with PFAS Detections Information	Environmental Protection Agency	12/28/2023	12/28/2023	03/04/2024
US	PFAS PART 139 AIRPORT	All Certified Part 139 Airports PFAS Information Listing	Environmental Protection Agency	12/28/2023	12/28/2023	03/04/2024
US	PFAS RCRA MANIFEST	PFAS Transfers Identified In the RCRA Database Listing	Environmental Protection Agency	12/28/2023	12/28/2023	01/04/2024
US	PFAS TRIS	List of PFAS Added to the TRI	Environmental Protection Agency	12/28/2023	12/28/2023	01/04/2024
US	PFAS TSCA	PFAS Manufacture and Imports Information	Environmental Protection Agency	12/28/2023	12/28/2023	01/04/2024
US	PFAS WQP	Ambient Environmental Sampling for PFAS	Environmental Protection Agency	12/28/2023	12/28/2023	03/04/2024
US	PRP	Potentially Responsible Parties	EPA	09/19/2023	10/03/2023	10/19/2023
US	Proposed NPL	Proposed National Priority List Sites	EPA	02/29/2024	03/01/2024	03/27/2024
US	RAATS	RCRA Administrative Action Tracking System	EPA	04/17/1995	07/03/1995	08/07/1995
US	RADINFO	Radiation Information Database	Environmental Protection Agency	07/01/2019	07/01/2019	09/23/2019
US	RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated	Environmental Protection Agency	12/04/2023	12/06/2023	12/12/2023
US	RCRA-LQG	RCRA - Large Quantity Generators	Environmental Protection Agency	12/04/2023	12/06/2023	12/12/2023
US	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	12/04/2023	12/06/2023	12/12/2023
US	RCRA-TSDF	RCRA - Treatment, Storage and Disposal	Environmental Protection Agency	12/04/2023	12/06/2023	12/12/2023
US	RCRA-VSQG	RCRA - Very Small Quantity Generators (Formerly Conditionall	Environmental Protection Agency	12/04/2023	12/06/2023	12/12/2023
US	RMP	Risk Management Plans	Environmental Protection Agency	02/01/2024	02/08/2024	04/04/2024
US	ROD	Records Of Decision	EPA	02/29/2024	03/01/2024	03/27/2024
US	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	07/30/2021	02/03/2023	02/10/2023
US	SEMS	Superfund Enterprise Management System	EPA	01/29/2024	02/01/2024	02/22/2024
US	SEMS-ARCHIVE	Superfund Enterprise Management System Archive	EPA	01/29/2024	02/01/2024	02/22/2024
US	SSTS	Section 7 Tracking Systems	EPA	01/16/2024	01/17/2024	03/27/2024
US	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2022	11/13/2023	02/07/2024
US	TSCA	Toxic Substances Control Act	EPA	12/31/2020	06/14/2022	03/24/2023
US	UMTRA	Uranium Mill Tailings Sites	Department of Energy	08/30/2019	11/15/2019	01/28/2020
US	US AIRS (AFS)	Aerometric Information Retrieval System Facility Subsystem (	EPA	10/12/2016	10/26/2016	02/03/2017
US	US AIRS MINOR	Air Facility System Data	EPA	10/12/2016	10/26/2016	02/03/2017
US	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	03/11/2024	03/12/2024	05/10/2024
US	US CDL	Clandestine Drug Labs	Drug Enforcement Administration	12/31/2023	02/21/2024	04/04/2024
US	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	02/13/2024	02/21/2024	04/04/2024
US	US FIN ASSUR	Financial Assurance Information	Environmental Protection Agency	12/11/2023	12/13/2023	02/28/2024
US	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	12/31/2023	02/21/2024	04/04/2024
US	US INST CONTROLS	Institutional Controls Sites List	Environmental Protection Agency	02/13/2024	02/21/2024	04/04/2024
US	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	02/05/2024	02/21/2024	04/04/2024
US	US MINES 2	Ferrous and Nonferrous Metal Mines Database Listing	USGS	01/07/2022	02/24/2023	05/17/2023
US	US MINES 3	Active Mines & Mineral Plants Database Listing	USGS	04/14/2011	06/08/2011	09/13/2011
US	UST FINDER	UST Finder Database	Environmental Protection Agency	06/08/2023	10/04/2023	01/18/2024
US	UST FINDER RELEASE	UST Finder Releases Database	Environmental Protecton Agency	06/08/2023	10/31/2023	01/18/2024
US	UXO	Unexploded Ordnance Sites	Department of Defense	09/06/2023	09/13/2023	12/11/2023

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CT	CT MANIFEST	Hazardous Waste Manifest Data	Department of Energy & Environmental Protecti	02/05/2024	02/06/2024	04/25/2024
NJ	NJ MANIFEST	Manifest Information	Department of Environmental Protection	12/31/2018	04/10/2019	05/16/2019
NY	NY MANIFEST	Facility and Manifest Data	Department of Environmental Conservation	12/31/2019	11/30/2023	12/01/2023
PA	PA MANIFEST	Manifest Information	Department of Environmental Protection	06/30/2018	07/19/2019	09/10/2019
RI	RI MANIFEST	Manifest information	Department of Environmental Management	12/31/2020	11/30/2021	02/18/2022
WI	WI MANIFEST	Manifest Information	Department of Natural Resources	05/31/2018	06/19/2019	09/03/2019
US	AHA Hospitals	Sensitive Receptor: AHA Hospitals	American Hospital Association, Inc.			
US	Medical Centers	Sensitive Receptor: Medical Centers	Centers for Medicare & Medicaid Services			
US	Nursing Homes	Sensitive Receptor: Nursing Homes	National Institutes of Health			
US	Public Schools	Sensitive Receptor: Public Schools	National Center for Education Statistics			
US	Private Schools	Sensitive Receptor: Private Schools	National Center for Education Statistics			
CA	Daycare Centers	Sensitive Receptor: Licensed Facilities	Department of Social Services			
US	Flood Zones	100-year and 500-year flood zones	Emergency Management Agency (FEMA)			
US	NWI	National Wetlands Inventory	U.S. Fish and Wildlife Service			
CA	State Wetlands	Wetland Inventory	Department of Fish and Wildlife			
US	Topographic Map		U.S. Geological Survey			
US	Oil/Gas Pipelines		Endeavor Business Media			
US	Electric Power Transmission Line Data		Endeavor Business Media			

### STREET AND ADDRESS INFORMATION

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## GEOCHECK<sup>®</sup> - PHYSICAL SETTING SOURCE ADDENDUM

### TARGET PROPERTY ADDRESS

401 SANTA CLARA AVE  
401 SANTA CLARA AVENUE  
OAKLAND, CA 94610

### TARGET PROPERTY COORDINATES

Latitude (North):	37.812997 - 37° 48' 46.79"
Longitude (West):	122.249113 - 122° 14' 56.81"
Universal Transverse Mercator:	Zone 10
UTM X (Meters):	566095.1
UTM Y (Meters):	4185127.2
Elevation:	48 ft. above sea level

### USGS TOPOGRAPHIC MAP

Target Property Map:	50005377 OAKLAND EAST, CA
Version Date:	2021
West Map:	50005378 OAKLAND WEST, CA
Version Date:	2021

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

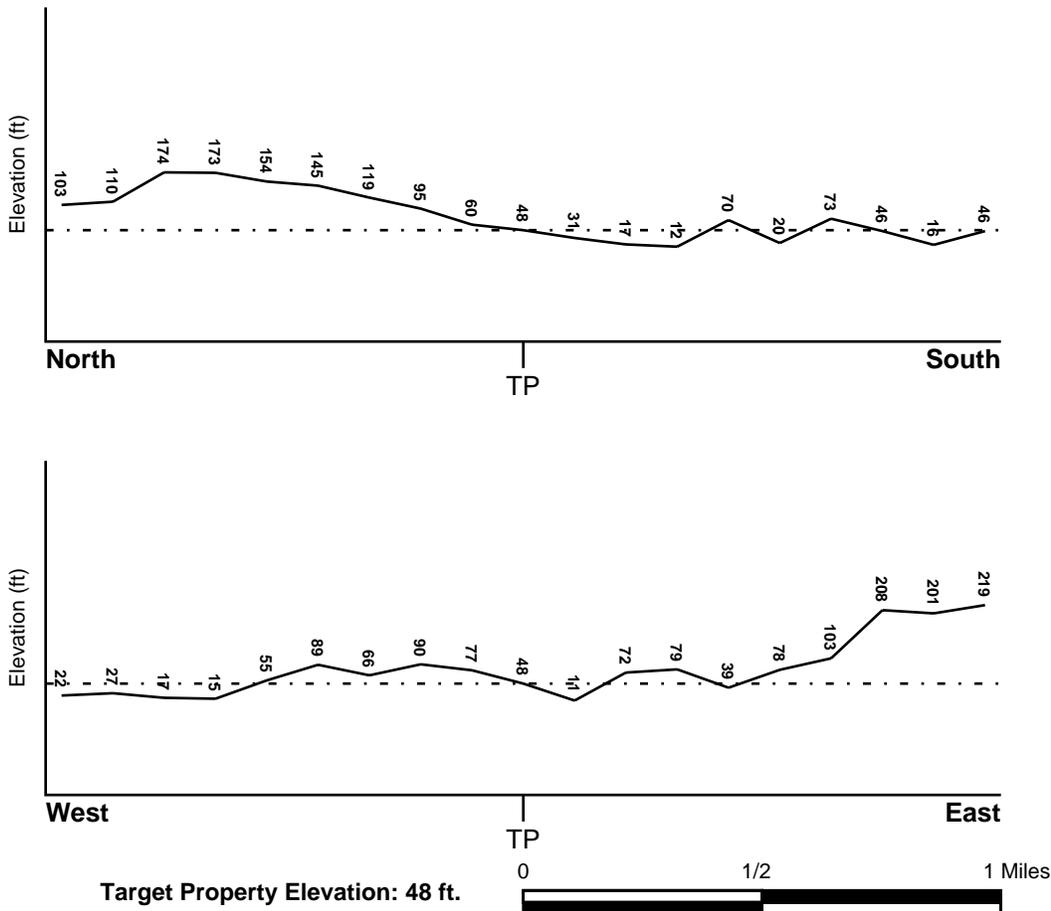
## TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

## TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General South

## SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

## **FEMA FLOOD ZONE**

<u>Flood Plain Panel at Target Property</u>	<u>FEMA Source Type</u>
06013C0405F	FEMA FIRM Flood data
<u>Additional Panels in search area:</u>	<u>FEMA Source Type</u>
06001C0059G	FEMA FIRM Flood data
06001C0067G	FEMA FIRM Flood data
06001C0086G	FEMA FIRM Flood data

## **NATIONAL WETLAND INVENTORY**

<u>NWI Quad at Target Property</u>	<u>NWI Electronic Data Coverage</u>
OAKLAND EAST	YES - refer to the Overview Map and Detail Map

## **HYDROGEOLOGIC INFORMATION**

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

### ***Site-Specific Hydrogeological Data\*:***

Search Radius:	1.25 miles
Status:	Not found

## **AQUIFLOW®**

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
A1	1/8 - 1/4 Mile SE	N
B16	1/4 - 1/2 Mile SSE	Varies
C19	1/4 - 1/2 Mile SSW	S
C20	1/4 - 1/2 Mile SW	NW
24	1/4 - 1/2 Mile NW	Varies
D26	1/4 - 1/2 Mile WSW	SW

\* ©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
H58	1/2 - 1 Mile West	N,W,Varies
H59	1/2 - 1 Mile West	N
60	1/2 - 1 Mile West	Varies
O100	1/2 - 1 Mile West	SW
N107	1/2 - 1 Mile WNW	Varies
O110	1/2 - 1 Mile West	NE
M112	1/2 - 1 Mile NNW	SW
N121	1/2 - 1 Mile WNW	S
P124	1/2 - 1 Mile SSW	E
P125	1/2 - 1 Mile SSW	E
Q128	1/2 - 1 Mile South	SW,W,Varies
Q129	1/2 - 1 Mile South	SW,W,Varies
Q130	1/2 - 1 Mile South	SW,W,Varies
R131	1/2 - 1 Mile West	SE
R132	1/2 - 1 Mile West	SW
R133	1/2 - 1 Mile West	E, W
134	1/2 - 1 Mile WSW	E
1G	1/2 - 1 Mile NNW	SW
2G	1/4 - 1/2 Mile NW	Varies
3G	1/2 - 1 Mile WNW	Varies
4G	1/2 - 1 Mile WNW	S
5G	1/2 - 1 Mile West	SW
6G	1/2 - 1 Mile West	NE
7G	1/2 - 1 Mile West	Varies
8G	1/2 - 1 Mile West	SE
9G	1/2 - 1 Mile West	SW
10G	1/2 - 1 Mile West	E, W
11G	1/2 - 1 Mile West	N,W,Varies
12G	1/2 - 1 Mile West	N
13G	1/8 - 1/4 Mile SE	N
14G	1/4 - 1/2 Mile WSW	SW
15G	1/4 - 1/2 Mile SW	NW
16G	1/4 - 1/2 Mile SSW	S
17G	1/4 - 1/2 Mile SSE	Varies
18G	1/2 - 1 Mile WSW	E
19G	1/2 - 1 Mile SSW	E
20G	1/2 - 1 Mile SSW	E
21G	1/2 - 1 Mile South	SW,W,Varies
22G	1/2 - 1 Mile South	SW,W,Varies
23G	1/2 - 1 Mile South	SW,W,Varies

For additional site information, refer to Physical Setting Source Map Findings.

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

### GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

#### **ROCK STRATIGRAPHIC UNIT**

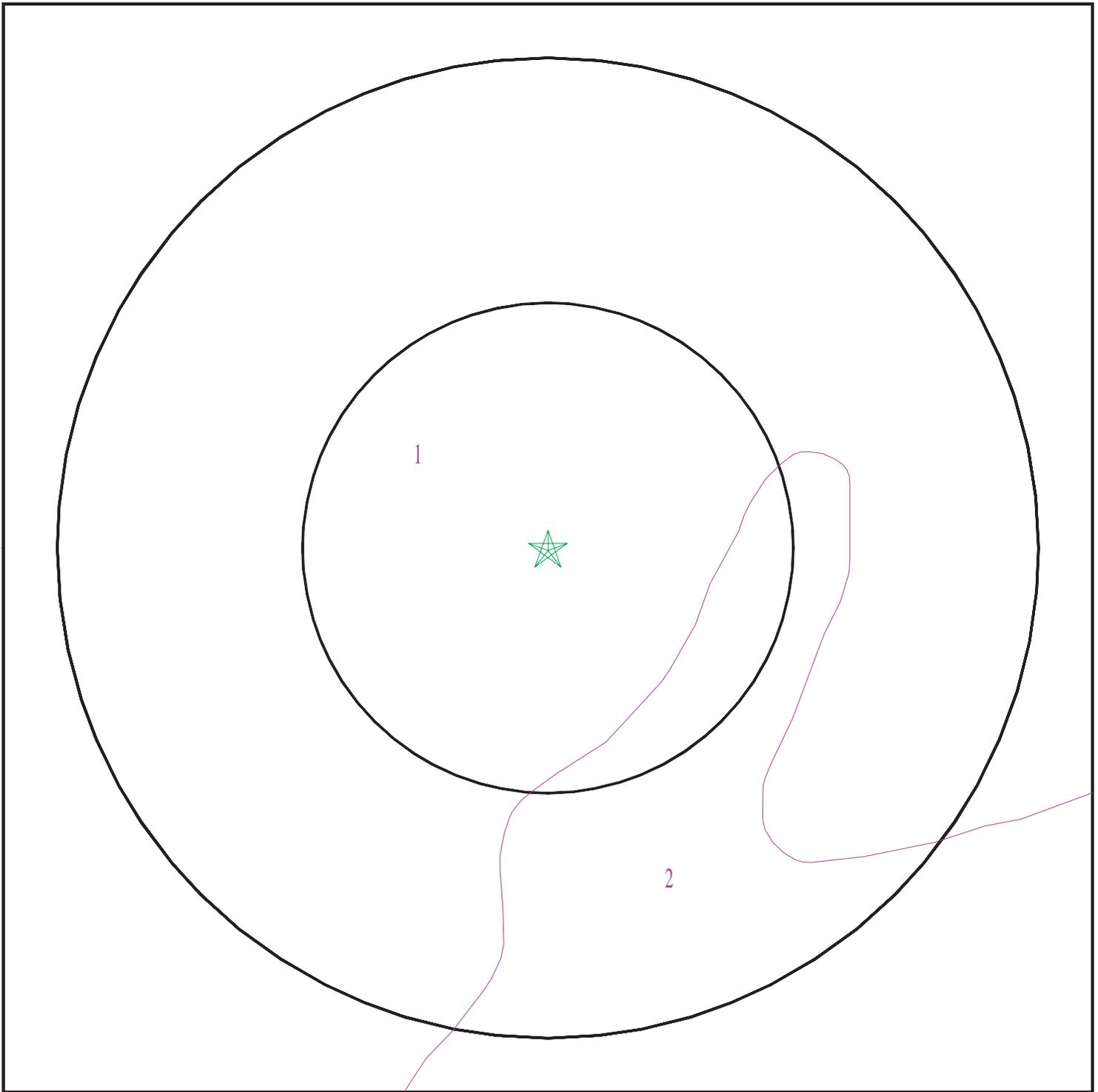
Era: Cenozoic  
System: Quaternary  
Series: Quaternary  
Code: Q (*decoded above as Era, System & Series*)

#### **GEOLOGIC AGE IDENTIFICATION**

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

# SSURGO SOIL MAP - 7660283.2s



- ★ Target Property
- ∩ SSURGO Soil
- ∩ Water



SITE NAME: 401 Santa Clara Ave  
ADDRESS: 401 Santa Clara Avenue  
Oakland CA 94610  
LAT/LONG: 37.812997 / 122.249113

CLIENT: Ninyo & Moore  
CONTACT: Luke Swickard  
INQUIRY #: 7660283.2s  
DATE: May 22, 2024 2:49 pm

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

### Soil Map ID: 1

Soil Component Name: Tierra

Soil Surface Texture: loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	11 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 1.4 Min: 0.42	Max: 8.4 Min: 5.6
2	11 inches	31 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 1.4 Min: 0.42	Max: 8.4 Min: 5.6
3	31 inches	59 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 1.4 Min: 0.42	Max: 8.4 Min: 5.6

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## Soil Map ID: 2

Soil Component Name: Urban land

Soil Surface Texture: loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class:  
Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

## LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

## WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

## FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No Wells Found		

## FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
B2	CAEDF0000050586	1/4 - 1/2 Mile SSE
A3	CAEDF0000081362	1/4 - 1/2 Mile SE
B4	CAEDF0000021299	1/4 - 1/2 Mile SSE
A5	CAEDF0000031876	1/4 - 1/2 Mile SE
A6	CAEDF0000102684	1/4 - 1/2 Mile SE
B7	CAEDF0000008624	1/4 - 1/2 Mile SSE
B8	CAEDF0000067249	1/4 - 1/2 Mile SSE
B9	CAEDF0000111832	1/4 - 1/2 Mile SSE
B10	CAEDF0000002008	1/4 - 1/2 Mile SSE
A11	CAEDF0000126904	1/4 - 1/2 Mile SE
B12	CAEDF0000032095	1/4 - 1/2 Mile SSE
A13	CAEDF0000088700	1/4 - 1/2 Mile SE
B14	CAEDF0000051851	1/4 - 1/2 Mile SSE
B15	CAEDF0000088672	1/4 - 1/2 Mile SSE
B17	CAEDF0000070819	1/4 - 1/2 Mile SSE
18	CAEDF0000122136	1/4 - 1/2 Mile SE
D21	CAEDF0000058286	1/4 - 1/2 Mile SW
D22	CAEDF0000137153	1/4 - 1/2 Mile SW
E23	CAEDF0000065574	1/4 - 1/2 Mile NNE
D25	CAEDF0000051186	1/4 - 1/2 Mile SW
D27	CAEDF0000033600	1/4 - 1/2 Mile SW
E28	CAEDF0000036821	1/4 - 1/2 Mile NNE
D29	CAEDF0000107581	1/4 - 1/2 Mile SW
E30	CAEDF0000080960	1/4 - 1/2 Mile NNE
F31	CAEDF0000004319	1/4 - 1/2 Mile NNW
E32	CAEDF0000125419	1/2 - 1 Mile NNE
F33	CAEDF0000066106	1/2 - 1 Mile NNW
E34	CAEDF0000143782	1/2 - 1 Mile NNE
F35	CAEDF0000071273	1/2 - 1 Mile NNW
F36	CAEDF0000031589	1/2 - 1 Mile NNW
F37	CAEDF0000099752	1/2 - 1 Mile NNW
F38	CAEDF0000090931	1/2 - 1 Mile NNW
F39	CAEDF0000004436	1/2 - 1 Mile NNW
F40	CAEDF0000086207	1/2 - 1 Mile NNW
F41	CAEDF0000051773	1/2 - 1 Mile NNW
42	CAEDF0000110351	1/2 - 1 Mile NNW
G43	CAEDF0000122892	1/2 - 1 Mile West
G44	CAEDF0000136846	1/2 - 1 Mile West
G45	CAEDF0000143617	1/2 - 1 Mile West
G46	CAEDF0000138403	1/2 - 1 Mile West
H47	CAEDF0000046342	1/2 - 1 Mile WSW
G48	CAEDF0000141594	1/2 - 1 Mile West
H49	CAEDF0000080876	1/2 - 1 Mile WSW
H50	CAEDF0000103712	1/2 - 1 Mile WSW
G51	CAEDF0000056285	1/2 - 1 Mile West
G52	CAEDF0000093340	1/2 - 1 Mile West
H53	CAEDF0000087897	1/2 - 1 Mile WSW
G54	CAEDF0000133385	1/2 - 1 Mile West
G55	CAEDF0000033437	1/2 - 1 Mile West
G56	CAEDF0000037198	1/2 - 1 Mile West
G57	CAEDF0000036118	1/2 - 1 Mile West
I61	CAEDF0000043225	1/2 - 1 Mile WNW

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## STATE DATABASE WELL INFORMATION

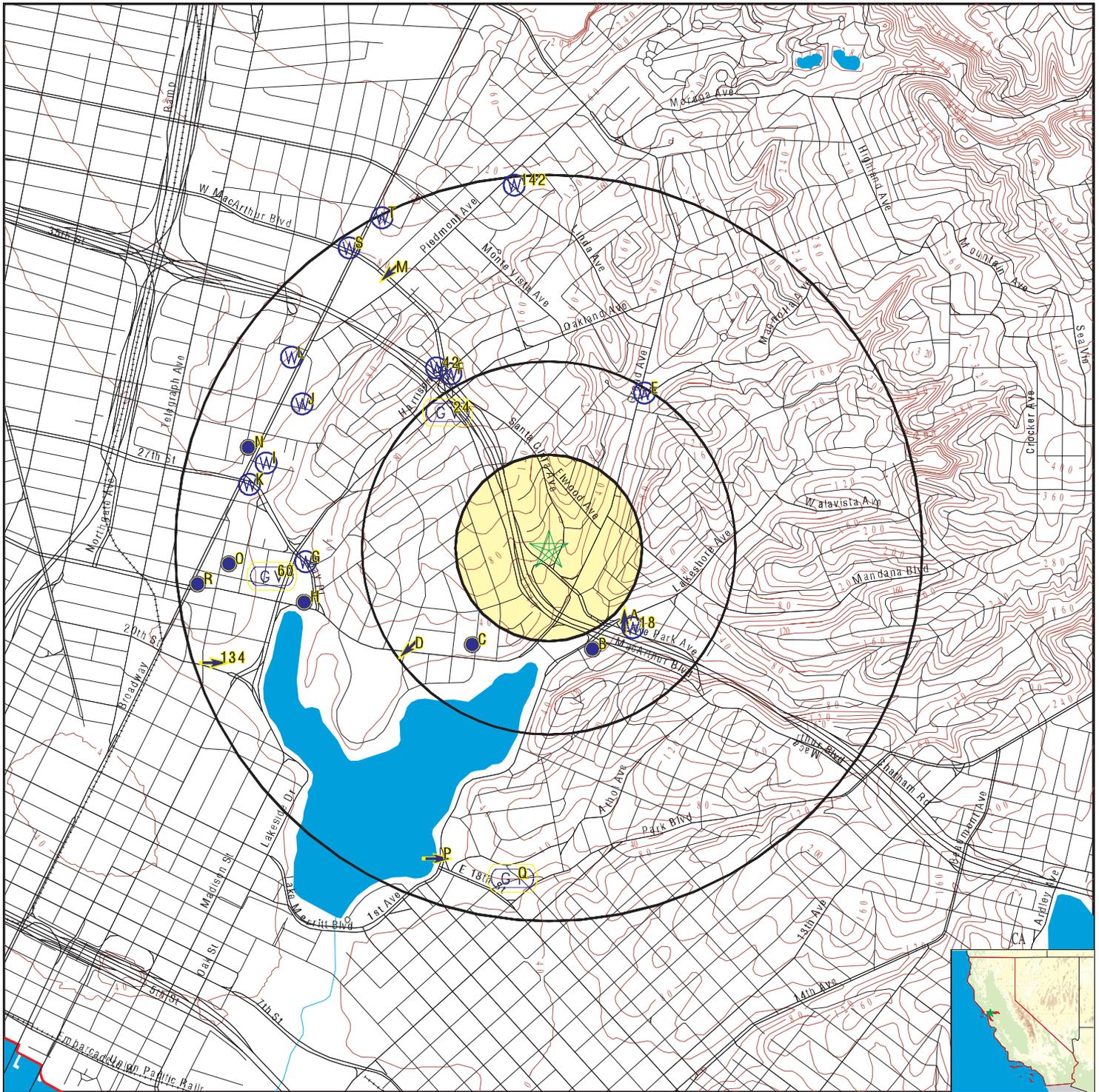
MAP ID	WELL ID	LOCATION FROM TP
J62	CAEDF0000143736	1/2 - 1 Mile WNW
J63	CAEDF0000111808	1/2 - 1 Mile WNW
I64	CAEDF0000116057	1/2 - 1 Mile WNW
J65	CAEDF0000094016	1/2 - 1 Mile WNW
I66	CAEDF0000034790	1/2 - 1 Mile WNW
J67	CAEDF0000071154	1/2 - 1 Mile WNW
J68	CAEDF0000080656	1/2 - 1 Mile WNW
K69	CAEDF0000054597	1/2 - 1 Mile WNW
I70	CAEDF0000007528	1/2 - 1 Mile WNW
I71	CAEDF0000100586	1/2 - 1 Mile WNW
I72	CAEDF0000007750	1/2 - 1 Mile WNW
I73	CAEDF0000045277	1/2 - 1 Mile WNW
I74	CAEDF0000057223	1/2 - 1 Mile WNW
K75	CAEDF0000109155	1/2 - 1 Mile West
I76	CAEDF0000106617	1/2 - 1 Mile WNW
K77	CAEDF0000139323	1/2 - 1 Mile West
I78	CAEDF0000102096	1/2 - 1 Mile WNW
L79	CAEDF0000018104	1/2 - 1 Mile NW
K80	CAEDF0000121328	1/2 - 1 Mile WNW
K81	CAEDF0000060650	1/2 - 1 Mile WNW
K82	CAEDF0000055742	1/2 - 1 Mile WNW
M83	CAEDF0000081121	1/2 - 1 Mile NNW
K84	CAEDF0000109167	1/2 - 1 Mile WNW
M85	CAEDF0000054037	1/2 - 1 Mile NNW
K86	CAEDF0000007258	1/2 - 1 Mile West
L87	CAEDF0000071778	1/2 - 1 Mile NW
L88	CAEDF0000057556	1/2 - 1 Mile NW
N89	CAEDF0000003584	1/2 - 1 Mile WNW
M90	CAEDF0000092614	1/2 - 1 Mile NNW
L91	CAEDF0000114192	1/2 - 1 Mile NW
L92	CAEDF0000122074	1/2 - 1 Mile NW
N93	CAEDF0000049019	1/2 - 1 Mile WNW
L94	CAEDF0000012548	1/2 - 1 Mile NW
N95	CAEDF0000004885	1/2 - 1 Mile WNW
M96	CAEDF0000120924	1/2 - 1 Mile NNW
M97	CAEDF0000054652	1/2 - 1 Mile NNW
M98	CAEDF0000015646	1/2 - 1 Mile NNW
K99	CAEDF0000039052	1/2 - 1 Mile WNW
L101	CAEDF0000001977	1/2 - 1 Mile NW
L102	CAEDF0000101705	1/2 - 1 Mile NW
L103	CAEDF0000109325	1/2 - 1 Mile NW
L104	CAEDF0000066024	1/2 - 1 Mile NW
M105	CAEDF0000125230	1/2 - 1 Mile NNW
M106	CAEDF0000059364	1/2 - 1 Mile NNW
M108	CAEDF0000042188	1/2 - 1 Mile NNW
L109	CAEDF0000048141	1/2 - 1 Mile NW
M111	CAEDF0000108943	1/2 - 1 Mile NNW
L113	CAEDF0000106262	1/2 - 1 Mile NW
M114	CAEDF0000082954	1/2 - 1 Mile NNW
L115	CAEDF0000129067	1/2 - 1 Mile NW
M116	CAEDF0000034332	1/2 - 1 Mile NNW
L117	CAEDF0000050615	1/2 - 1 Mile NW

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
L118	CAEDF0000136996	1/2 - 1 Mile NW
L119	CAEDF0000129473	1/2 - 1 Mile NW
L120	CAEDF0000056040	1/2 - 1 Mile NW
M122	CAEDF0000137936	1/2 - 1 Mile NNW
L123	CAEDF0000115771	1/2 - 1 Mile NW
L126	CAEDF0000016222	1/2 - 1 Mile NW
L127	CAEDF0000110792	1/2 - 1 Mile NW
S135	CAEDF0000143931	1/2 - 1 Mile NNW
S136	CAEDF0000088821	1/2 - 1 Mile NNW
S137	CAEDF0000013157	1/2 - 1 Mile NW
S138	CAEDF0000041806	1/2 - 1 Mile NNW
S139	CAEDF0000036170	1/2 - 1 Mile NNW
S140	CAEDF0000114025	1/2 - 1 Mile NW
S141	CAEDF0000078873	1/2 - 1 Mile NW
142	CAEDF0000067309	1/2 - 1 Mile North
S143	CAEDF0000066436	1/2 - 1 Mile NW
T144	CAEDF0000110866	1/2 - 1 Mile NNW
T145	CAEDF0000109161	1/2 - 1 Mile NNW
T146	CAEDF0000085488	1/2 - 1 Mile NNW

# PHYSICAL SETTING SOURCE MAP - 7660283.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons



- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells



SITE NAME: 401 Santa Clara Ave  
 ADDRESS: 401 Santa Clara Avenue  
 Oakland CA 94610  
 LAT/LONG: 37.812997 / 122.249113

CLIENT: Ninyo & Moore  
 CONTACT: Luke Swickard  
 INQUIRY #: 7660283.2s  
 DATE: May 22, 2024 2:48 pm

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database

EDR ID Number

A1  
SE [Click here for full text details](#)  
1/8 - 1/4 Mile  
Lower

AQUIFLOW 63828

B2  
SSE [Click here for full text details](#)  
1/4 - 1/2 Mile  
Lower

CA WELLS CAEDF0000050586

A3  
SE [Click here for full text details](#)  
1/4 - 1/2 Mile  
Lower

CA WELLS CAEDF0000081362

B4  
SSE [Click here for full text details](#)  
1/4 - 1/2 Mile  
Lower

CA WELLS CAEDF0000021299

A5  
SE [Click here for full text details](#)  
1/4 - 1/2 Mile  
Lower

CA WELLS CAEDF0000031876

A6  
SE [Click here for full text details](#)  
1/4 - 1/2 Mile  
Lower

CA WELLS CAEDF0000102684

B7  
SSE [Click here for full text details](#)  
1/4 - 1/2 Mile  
Lower

CA WELLS CAEDF0000008624

B8  
SSE [Click here for full text details](#)  
1/4 - 1/2 Mile  
Lower

CA WELLS CAEDF0000067249

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
B9 SSE 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000111832
B10 SSE 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000002008
A11 SE 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000126904
B12 SSE 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000032095
A13 SE 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000088700
B14 SSE 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000051851
B15 SSE 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000088672
B16 SSE 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	63702
B17 SSE 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000070819

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
18 SE 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000122136
C19 SSW 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	67429
C20 SW 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	51910
D21 SW 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000058286
D22 SW 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000137153
E23 NNE 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000065574
24 NW 1/4 - 1/2 Mile Higher	<a href="#">Click here for full text details</a>	AQUIFLOW	66613
D25 SW 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000051186
D26 WSW 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	63687

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
D27 SW 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000033600
E28 NNE 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000036821
D29 SW 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000107581
E30 NNE 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000080960
F31 NNW 1/4 - 1/2 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000004319
E32 NNE 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000125419
F33 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000066106
E34 NNE 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000143782
F35 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000071273

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
F36 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000031589
F37 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000099752
F38 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000090931
F39 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000004436
F40 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000086207
F41 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000051773
42 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000110351
G43 West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000122892
G44 West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000136846

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
G45 West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000143617
G46 West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000138403
H47 WSW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000046342
G48 West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000141594
H49 WSW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000080876
H50 WSW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000103712
G51 West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000056285
G52 West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000093340
H53 WSW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000087897

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
G54 West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000133385
G55 West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000033437
G56 West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000037198
G57 West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000036118
H58 West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	55836
H59 West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	55837
60 West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	63897
I61 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000043225
J62 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000143736

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
J63 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000111808
I64 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000116057
J65 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000094016
I66 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000034790
J67 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000071154
J68 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000080656
K69 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000054597
I70 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000007528
I71 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000100586

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
I72 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000007750
I73 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000045277
I74 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000057223
K75 West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000109155
I76 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000106617
K77 West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000139323
I78 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000102096
L79 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000018104
K80 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000121328

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
K81 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000060650
K82 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000055742
M83 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000081121
K84 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000109167
M85 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000054037
K86 West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000007258
L87 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000071778
L88 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000057556
N89 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000003584

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
M90 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000092614
L91 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000114192
L92 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000122074
N93 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000049019
L94 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000012548
N95 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000004885
M96 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000120924
M97 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000054652
M98 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000015646

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
K99 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000039052
O100 West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	67866
L101 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000001977
L102 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000101705
L103 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000109325
L104 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000066024
M105 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000125230
M106 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000059364
N107 WNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	AQUIFLOW	64091

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
M108 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000042188
L109 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000048141
O110 West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	63934
M111 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000108943
M112 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	AQUIFLOW	63931
L113 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000106262
M114 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000082954
L115 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000129067
M116 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000034332

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
L117 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000050615
L118 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000136996
L119 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000129473
L120 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000056040
N121 WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	63622
M122 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000137936
L123 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000115771
P124 SSW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	55832
P125 SSW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	55833

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
L126 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000016222
L127 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000110792
Q128 South 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	55818
Q129 South 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	55819
Q130 South 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	55820
R131 West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	55889
R132 West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	55890
R133 West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	55891
134 WSW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	63635

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
S135 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000143931
S136 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000088821
S137 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000013157
S138 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000041806
S139 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000036170
S140 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000114025
S141 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000078873
142 North 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000067309
S143 NW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000066436

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
T144 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000110866
T145 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000109161
T146 NNW 1/2 - 1 Mile Higher	<a href="#">Click here for full text details</a>	CA WELLS	CAEDF0000085488
1G NNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	63931
2G NW 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	66613
3G WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	64091
4G WNW 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	63622
5G West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	67866
6G West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	63934

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
7G West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	63897
8G West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	55889
9G West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	55890
10G West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	55891
11G West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	55836
12G West 1/2 - 1 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	55837
13G SE 1/8 - 1/4 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	63828
14G WSW 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	63687
15G SW 1/4 - 1/2 Mile Lower	<a href="#">Click here for full text details</a>	AQUIFLOW	51910

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation	Database	EDR ID Number
<b>16G</b> SSW <a href="#">Click here for full text details</a> 1/4 - 1/2 Mile Lower	AQUIFLOW	67429
<b>17G</b> SSE <a href="#">Click here for full text details</a> 1/4 - 1/2 Mile Lower	AQUIFLOW	63702
<b>18G</b> WSW <a href="#">Click here for full text details</a> 1/2 - 1 Mile Lower	AQUIFLOW	63635
<b>19G</b> SSW <a href="#">Click here for full text details</a> 1/2 - 1 Mile Lower	AQUIFLOW	55832
<b>20G</b> SSW <a href="#">Click here for full text details</a> 1/2 - 1 Mile Lower	AQUIFLOW	55833
<b>21G</b> South <a href="#">Click here for full text details</a> 1/2 - 1 Mile Lower	AQUIFLOW	55818
<b>22G</b> South <a href="#">Click here for full text details</a> 1/2 - 1 Mile Lower	AQUIFLOW	55819
<b>23G</b> South <a href="#">Click here for full text details</a> 1/2 - 1 Mile Lower	AQUIFLOW	55820

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

## AREA RADON INFORMATION

State Database: CA Radon

### Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
94610	19	1

Federal EPA Radon Zone for ALAMEDA County: 2

- Note: Zone 1 indoor average level > 4 pCi/L.  
 : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.  
 : Zone 3 indoor average level < 2 pCi/L.

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### Federal Area Radon Information for ALAMEDA COUNTY, CA

Number of sites tested: 49

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.776 pCi/L	100%	0%	0%
Living Area - 2nd Floor	-0.400 pCi/L	100%	0%	0%
Basement	1.338 pCi/L	100%	0%	0%

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Source: U.S. Geological Survey

## HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory

Source: Department of Fish and Wildlife

Telephone: 916-445-0411

## HYDROGEOLOGIC INFORMATION

AQUIFLOW<sup>R</sup> Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

## GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## LOCAL / REGIONAL WATER AGENCY RECORDS

### FEDERAL WATER WELLS

#### PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

#### PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

#### USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

## OTHER STATE DATABASE INFORMATION

### Groundwater Ambient Monitoring & Assessment Program

State Water Resources Control Board

Telephone: 916-341-5577

The GAMA Program is California's comprehensive groundwater quality monitoring program. GAMA collects data by testing the untreated, raw water in different types of wells for naturally-occurring and man-made chemicals. The GAMA data includes Domestic, Monitoring and Municipal well types from the following sources, Department of Water Resources, Department of Health Services, EDF, Agricultural Lands, Lawrence Livermore National Laboratory, Department of Pesticide Regulation, United States Geological Survey, Groundwater Ambient Monitoring and Assessment Program and Local Groundwater Projects.

### Water Well Database

Source: Department of Water Resources

Telephone: 916-651-9648

### California Drinking Water Quality Database

Source: Department of Public Health

Telephone: 916-324-2319

The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

### Geothermal Wells Listing

Department of Conservation

Telephone: 916-445-9686

Geothermal well means a well constructed to extract or return water to the ground after it has been used for heating or cooling purposes. Geothermal wells in California (except for wells on federal leases which are administered by the Bureau of Land Management) are permitted, drilled, operated, and permanently sealed and closed (plugged and abandoned) under requirements and procedures administered by the Geothermal Section of the Department of Conservation's Geologic Energy Management Division (CalGEM, formerly DOGGR).

### California Oil and Gas Well Locations

Source: Dept of Conservation, Geologic Energy Management Division

Telephone: 916-323-1779

Oil and Gas well locations in the state.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## California Earthquake Fault Lines

Source: California Division of Mines and Geology

The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

## RADON

### State Database: CA Radon

Source: Department of Public Health

Telephone: 916-210-8558

Radon Database for California

### Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

### EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

## OTHER

Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

## STREET AND ADDRESS INFORMATION

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**Appendix D -  
Historical Research Documentation**



401 Santa Clara Ave  
401 Santa Clara Avenue  
Oakland, CA 94610

Inquiry Number: 7660283.4

May 22, 2024

# EDR Historical Topo Map Report

with QuadMatch™



6 Armstrong Road, 4th floor  
Shelton, CT 06484  
Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

# EDR Historical Topo Map Report

05/22/24

**Site Name:**

401 Santa Clara Ave  
401 Santa Clara Avenue  
Oakland, CA 94610  
EDR Inquiry # 7660283.4

**Client Name:**

Ninyo & Moore  
1401 Halyard Drive, Suite 110  
West Sacramento, CA 95691  
Contact: Luke Swickard



EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Ninyo & Moore were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDR's Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

**Search Results:**

**Coordinates:**

<b>P.O.#</b>	NA	<b>Latitude:</b>	37.812997 37° 48' 47" North
<b>Project:</b>	404724001	<b>Longitude:</b>	-122.249113 -122° 14' 57" West
		<b>UTM Zone:</b>	Zone 10 North
		<b>UTM X Meters:</b>	566093.40
		<b>UTM Y Meters:</b>	4185332.51
		<b>Elevation:</b>	45.31' above sea level

**Maps Provided:**

2021	1959
2018	1949
2015	1948
2012	1947
1996, 1997	1915
1980	1899
1973	1895, 1897
1968	

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## Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 2021 Source Sheets



Oakland East  
2021  
7.5-minute, 24000



Oakland West  
2021  
7.5-minute, 24000

### 2018 Source Sheets



Oakland East  
2018  
7.5-minute, 24000



Oakland West  
2018  
7.5-minute, 24000

### 2015 Source Sheets



Oakland East  
2015  
7.5-minute, 24000



Oakland West  
2015  
7.5-minute, 24000

### 2012 Source Sheets



Oakland East  
2012  
7.5-minute, 24000



Oakland West  
2012  
7.5-minute, 24000

## Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 1996, 1997 Source Sheets



Oakland West  
1996  
7.5-minute, 24000  
Aerial Photo Revised 1993

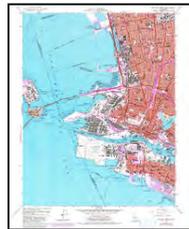


Oakland East  
1997  
7.5-minute, 24000  
Aerial Photo Revised 1993

### 1980 Source Sheets



Oakland East  
1980  
7.5-minute, 24000  
Aerial Photo Revised 1979

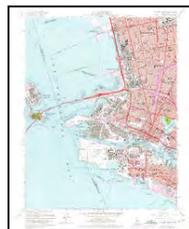


Oakland West  
1980  
7.5-minute, 24000  
Aerial Photo Revised 1979

### 1973 Source Sheets

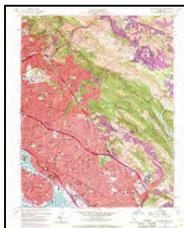


Oakland East  
1973  
7.5-minute, 24000  
Aerial Photo Revised 1973



Oakland West  
1973  
7.5-minute, 24000  
Aerial Photo Revised 1973

### 1968 Source Sheets



Oakland East  
1968  
7.5-minute, 24000  
Aerial Photo Revised 1968



Oakland West  
1968  
7.5-minute, 24000  
Aerial Photo Revised 1947

## Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 1959 Source Sheets



Oakland East  
1959  
7.5-minute, 24000  
Aerial Photo Revised 1958

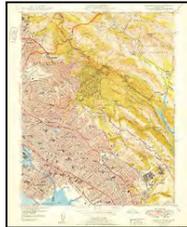


Oakland West  
1959  
7.5-minute, 24000  
Aerial Photo Revised 1958

### 1949 Source Sheets



Oakland West  
1949  
7.5-minute, 24000  
Aerial Photo Revised 1946



Oakland East  
1949  
7.5-minute, 24000  
Aerial Photo Revised 1946

### 1948 Source Sheets



CONCORD  
1948  
15-minute, 50000



SAN FRANCISCO  
1948  
15-minute, 50000

### 1947 Source Sheets



Oakland East  
1947  
7.5-minute, 24000  
Aerial Photo Revised 1946

## Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 1915 Source Sheets



Concord  
1915  
15-minute, 62500



San Francisco  
1915  
15-minute, 62500

### 1899 Source Sheets

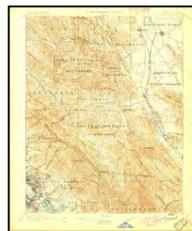


San Francisco  
1899  
15-minute, 62500

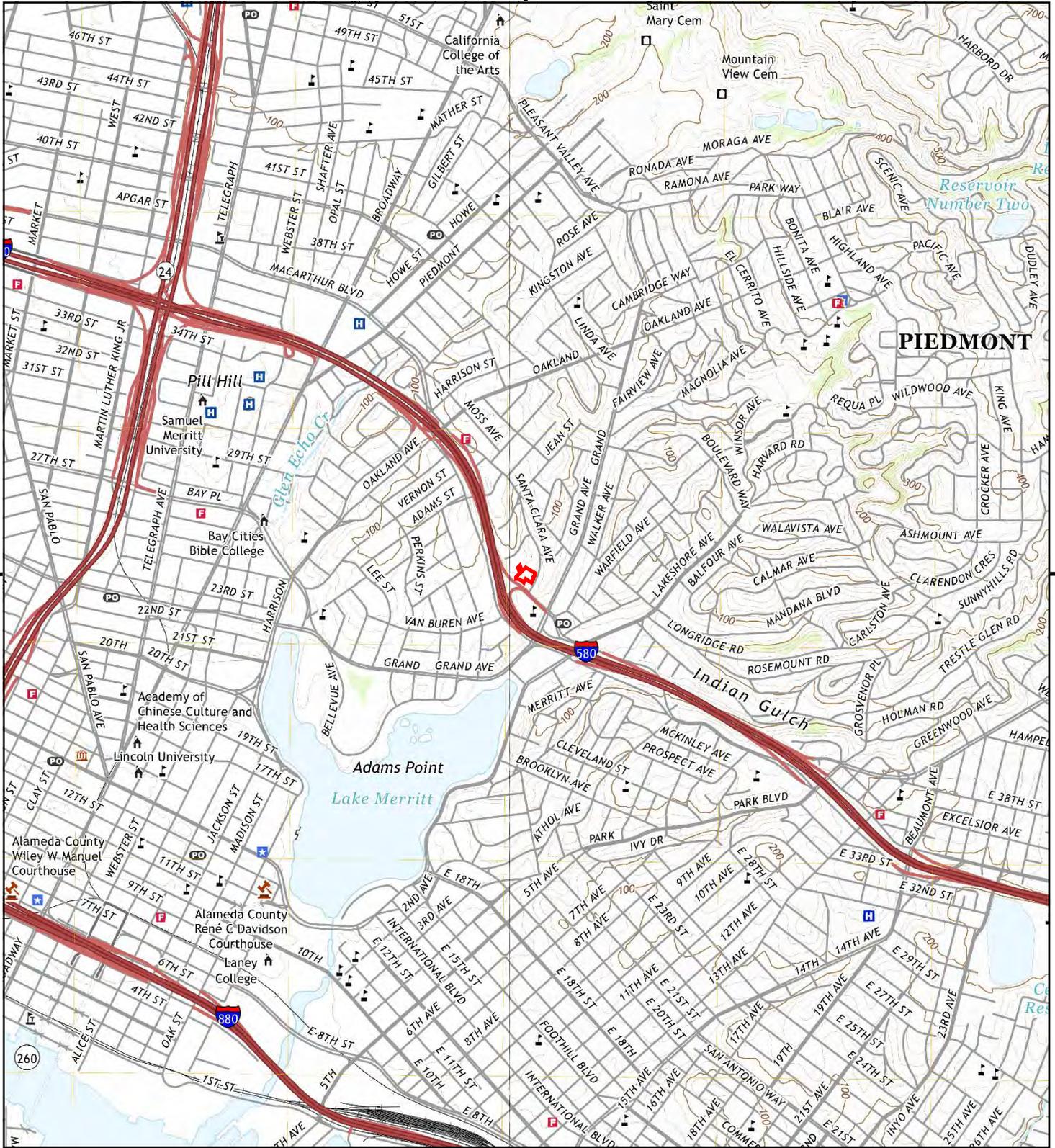
### 1895, 1897 Source Sheets



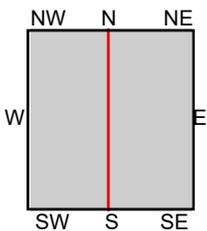
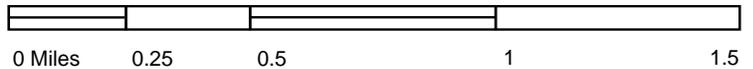
San Francisco  
1895  
15-minute, 62500



Concord  
1897  
15-minute, 62500



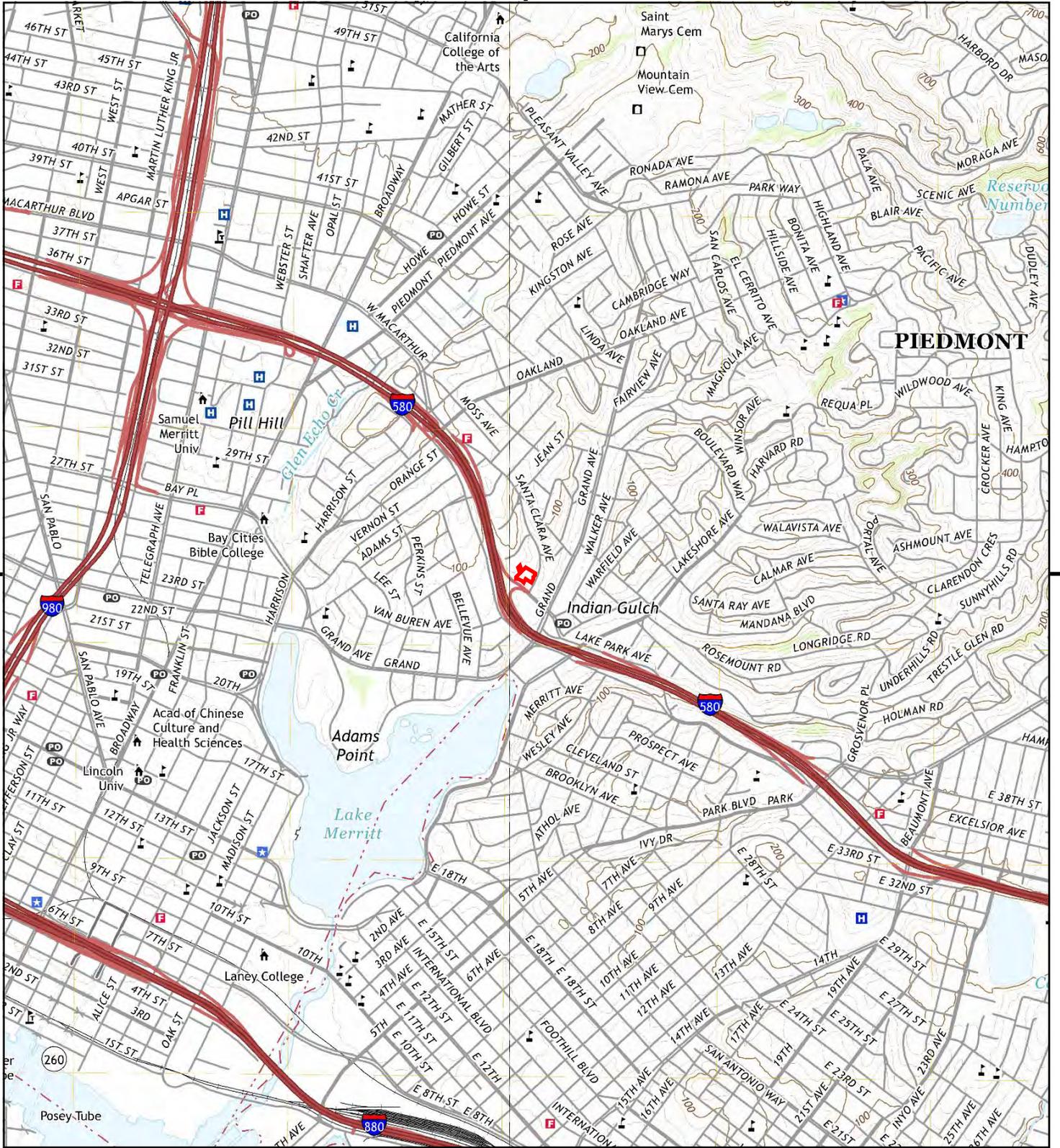
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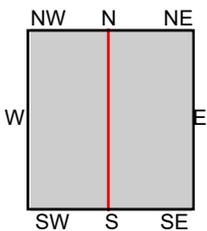
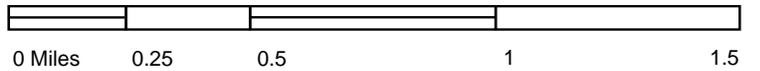
TP, Oakland East, 2021, 7.5-minute  
 W, Oakland West, 2021, 7.5-minute

**SITE NAME:** 401 Santa Clara Ave  
**ADDRESS:** 401 Santa Clara Avenue  
 Oakland, CA 94610  
**CLIENT:** Ninyo & Moore





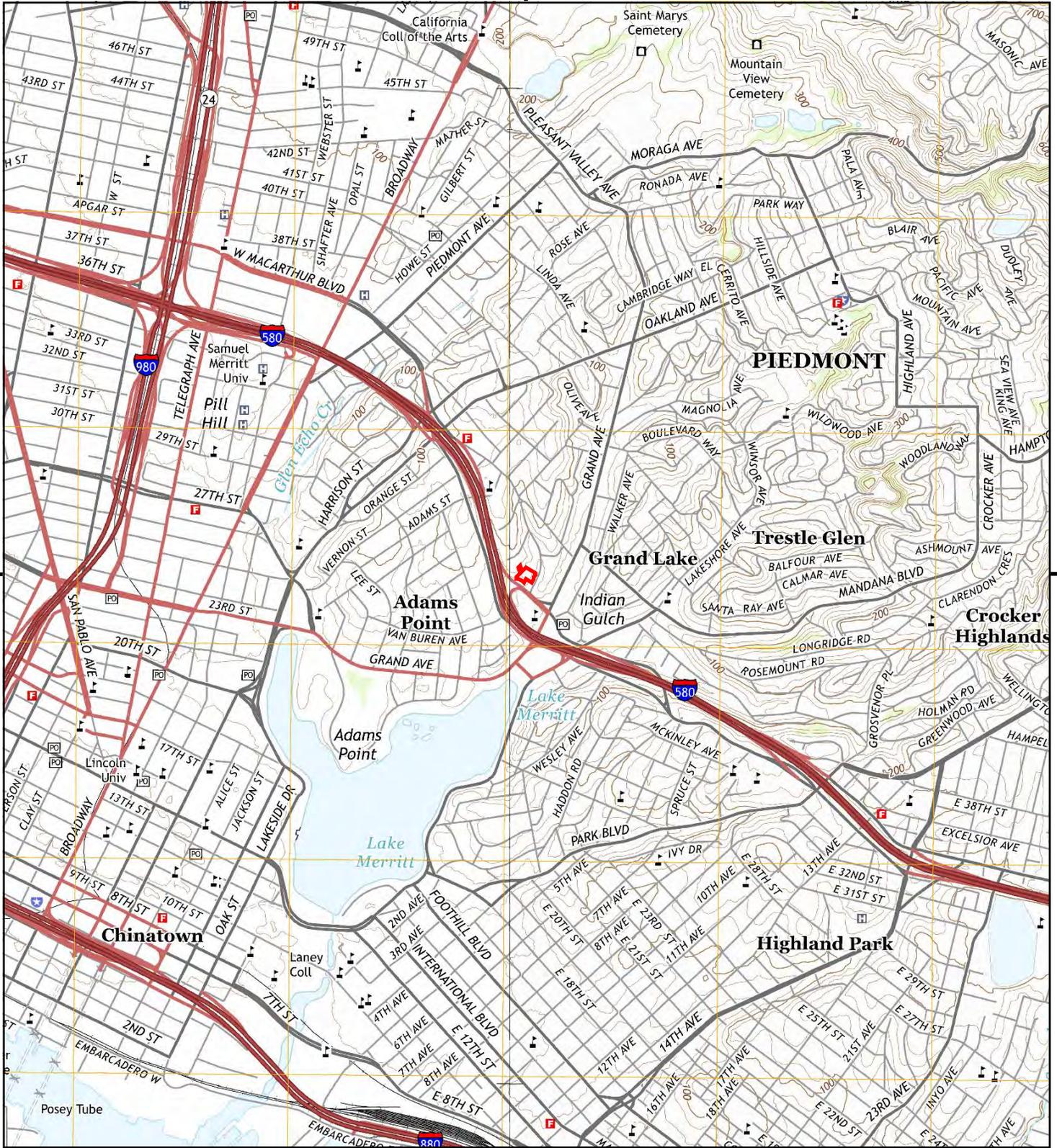
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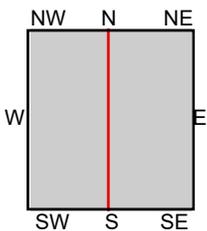
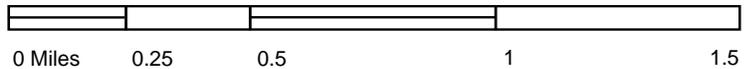
TP, Oakland East, 2018, 7.5-minute  
 W, Oakland West, 2018, 7.5-minute

**SITE NAME:** 401 Santa Clara Ave  
**ADDRESS:** 401 Santa Clara Avenue  
 Oakland, CA 94610  
**CLIENT:** Ninyo & Moore





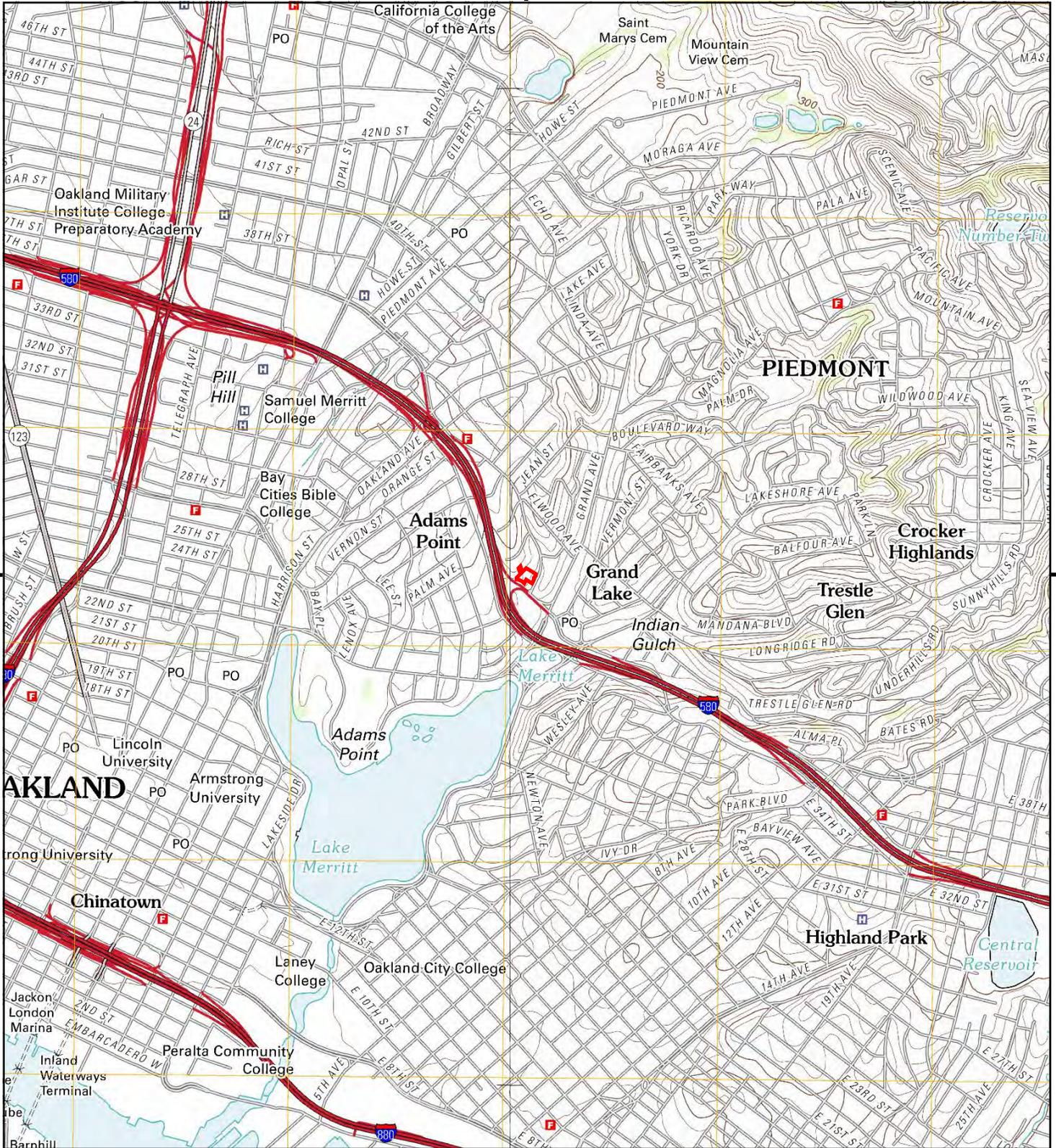
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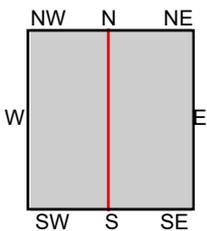
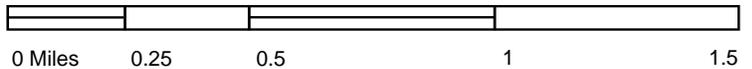
TP, Oakland East, 2015, 7.5-minute  
W, Oakland West, 2015, 7.5-minute

**SITE NAME:** 401 Santa Clara Ave  
**ADDRESS:** 401 Santa Clara Avenue  
Oakland, CA 94610  
**CLIENT:** Ninyo & Moore





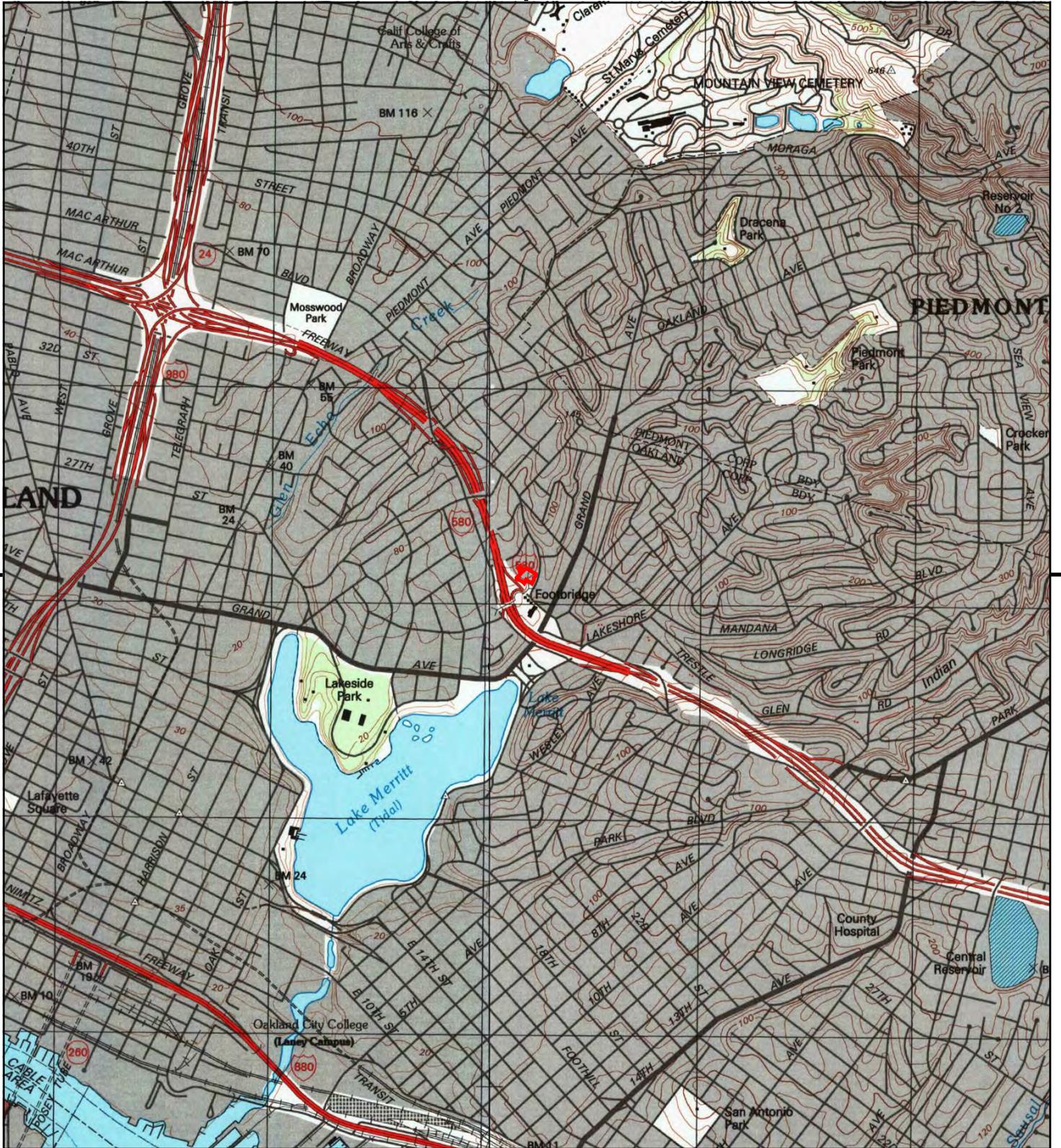
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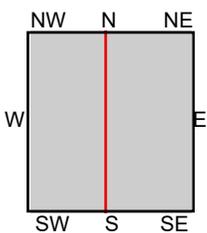
TP, Oakland East, 2012, 7.5-minute  
 W, Oakland West, 2012, 7.5-minute

**SITE NAME:** 401 Santa Clara Ave  
**ADDRESS:** 401 Santa Clara Avenue  
 Oakland, CA 94610  
**CLIENT:** Ninyo & Moore





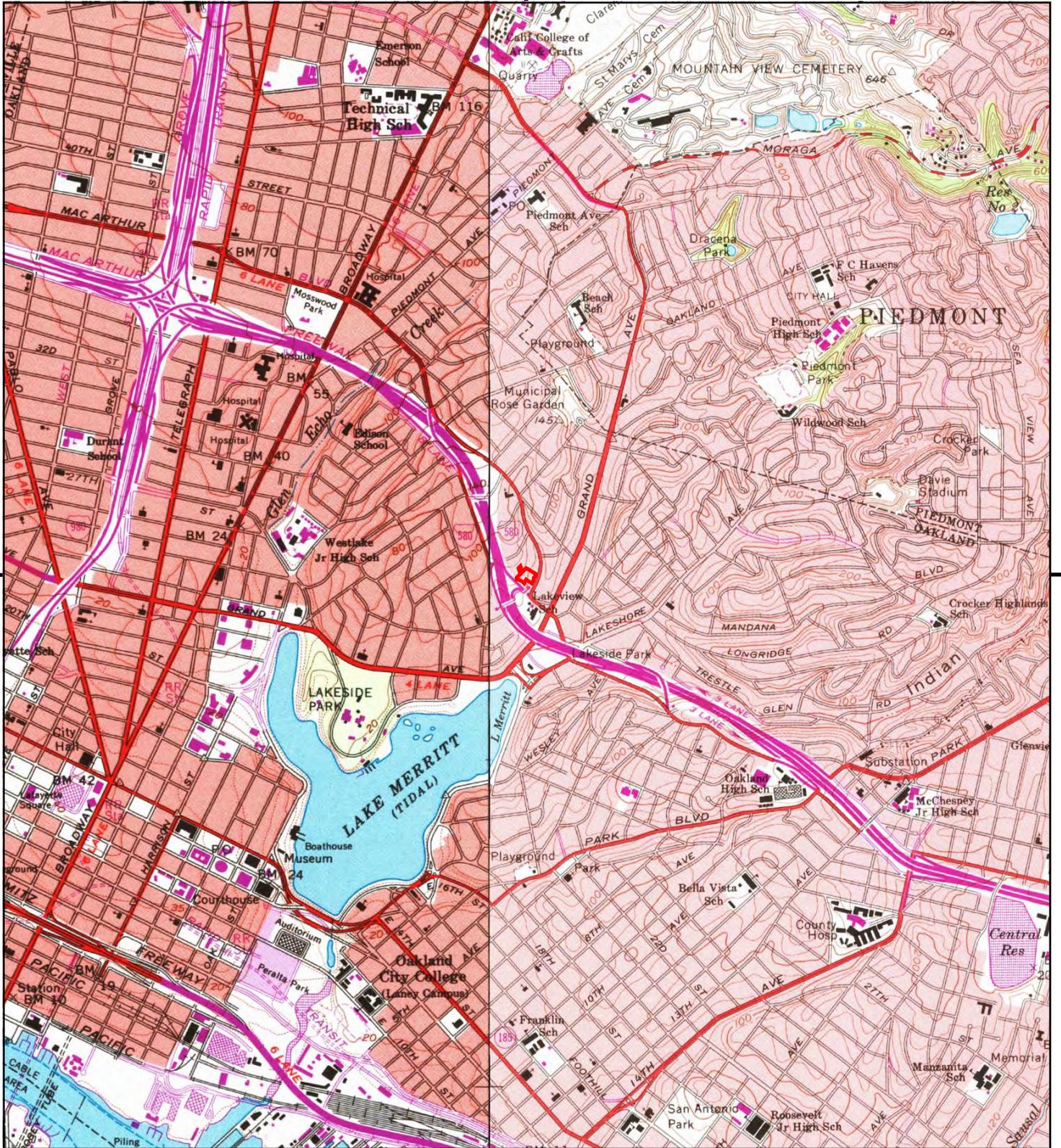
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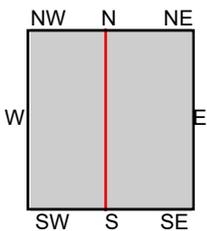
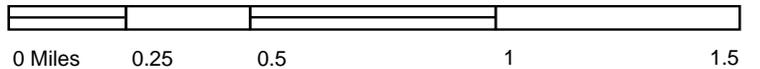
TP, Oakland East, 1997, 7.5-minute  
 W, Oakland West, 1996, 7.5-minute

SITE NAME: 401 Santa Clara Ave  
 ADDRESS: 401 Santa Clara Avenue  
 Oakland, CA 94610  
 CLIENT: Ninyo & Moore





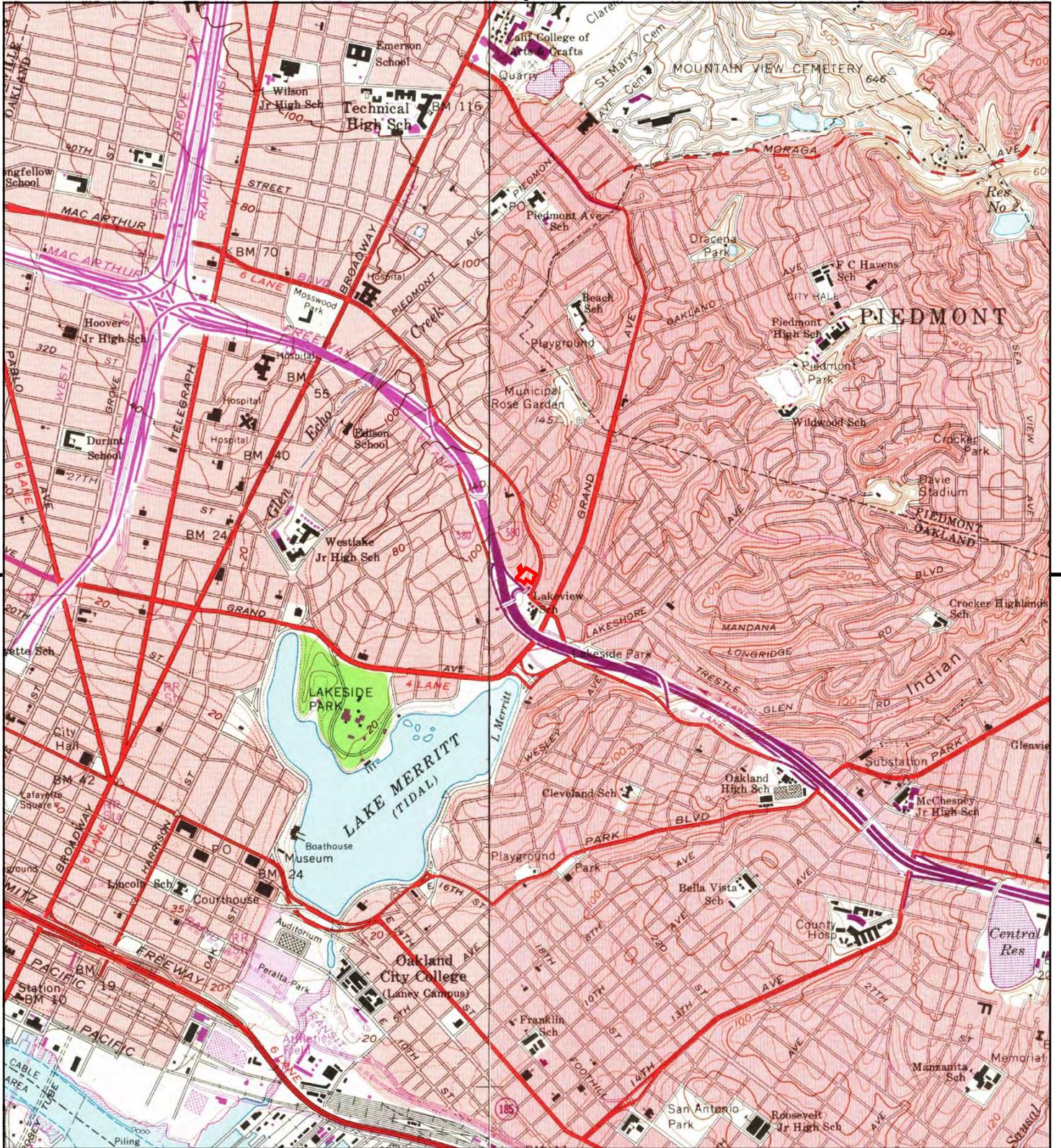
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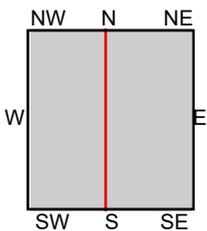
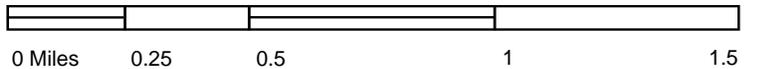
TP, Oakland East, 1980, 7.5-minute  
W, Oakland West, 1980, 7.5-minute

**SITE NAME:** 401 Santa Clara Ave  
**ADDRESS:** 401 Santa Clara Avenue  
Oakland, CA 94610  
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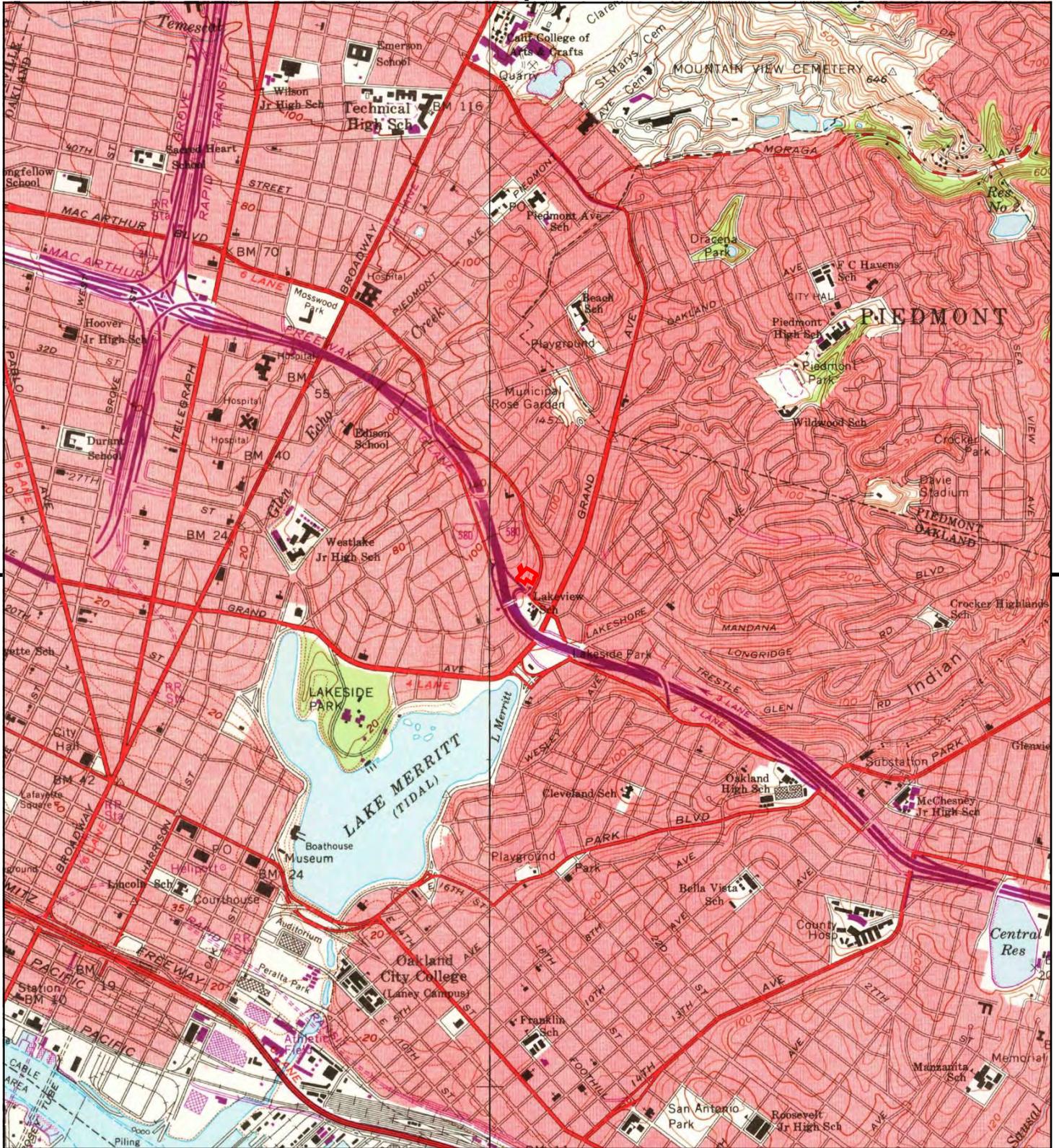
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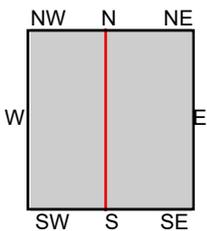
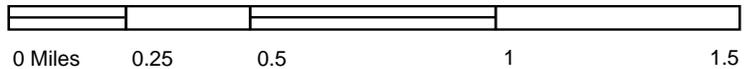
TP, Oakland East, 1973, 7.5-minute  
 W, Oakland West, 1973, 7.5-minute

**SITE NAME:** 401 Santa Clara Ave  
**ADDRESS:** 401 Santa Clara Avenue  
 Oakland, CA 94610  
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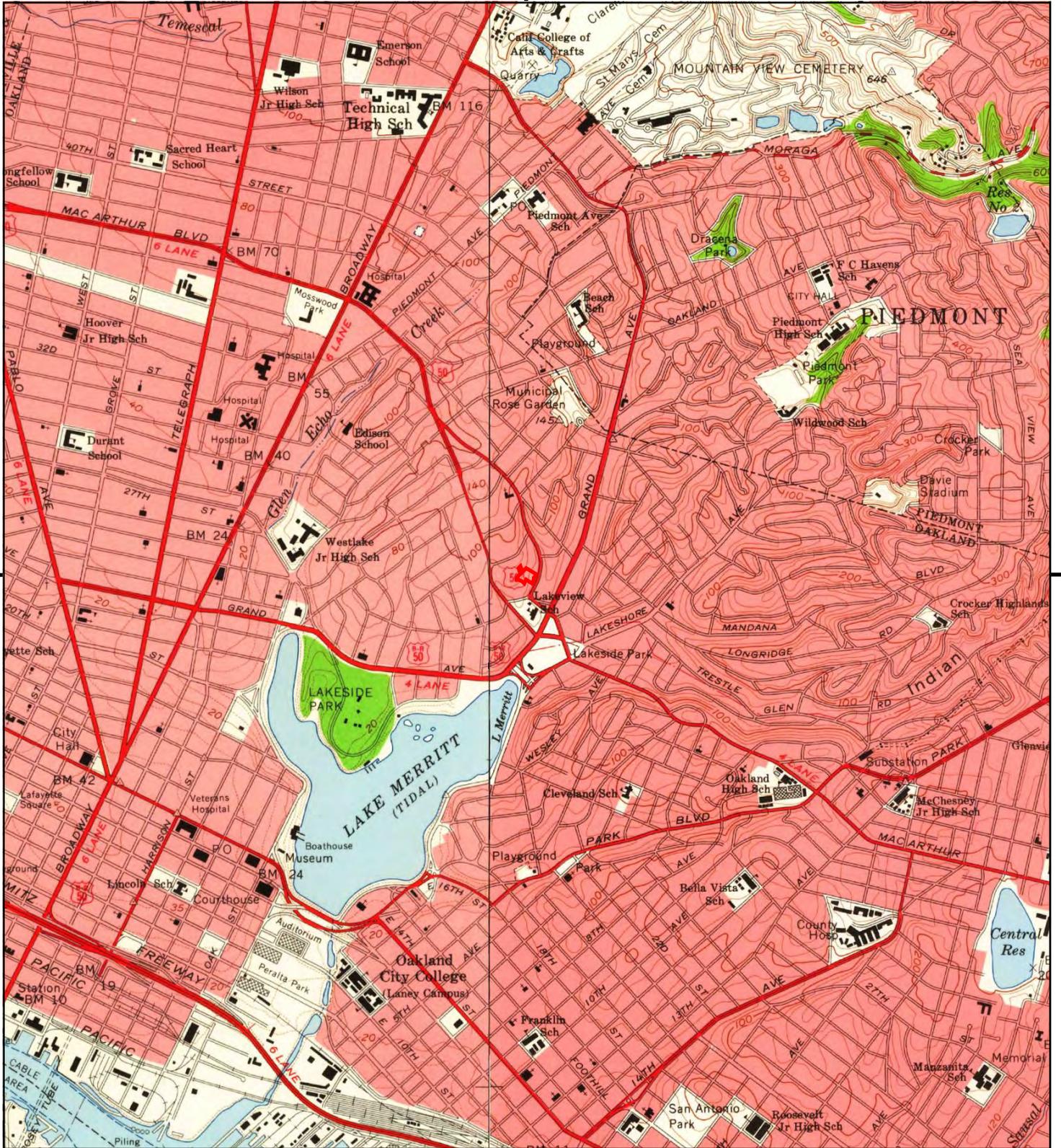
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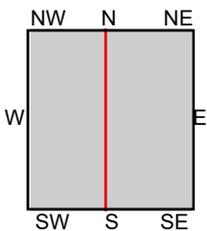
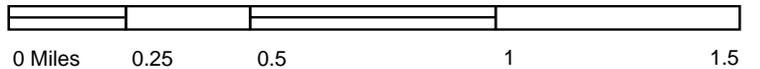
TP, Oakland East, 1968, 7.5-minute  
 W, Oakland West, 1968, 7.5-minute

**SITE NAME:** 401 Santa Clara Ave  
**ADDRESS:** 401 Santa Clara Avenue  
 Oakland, CA 94610  
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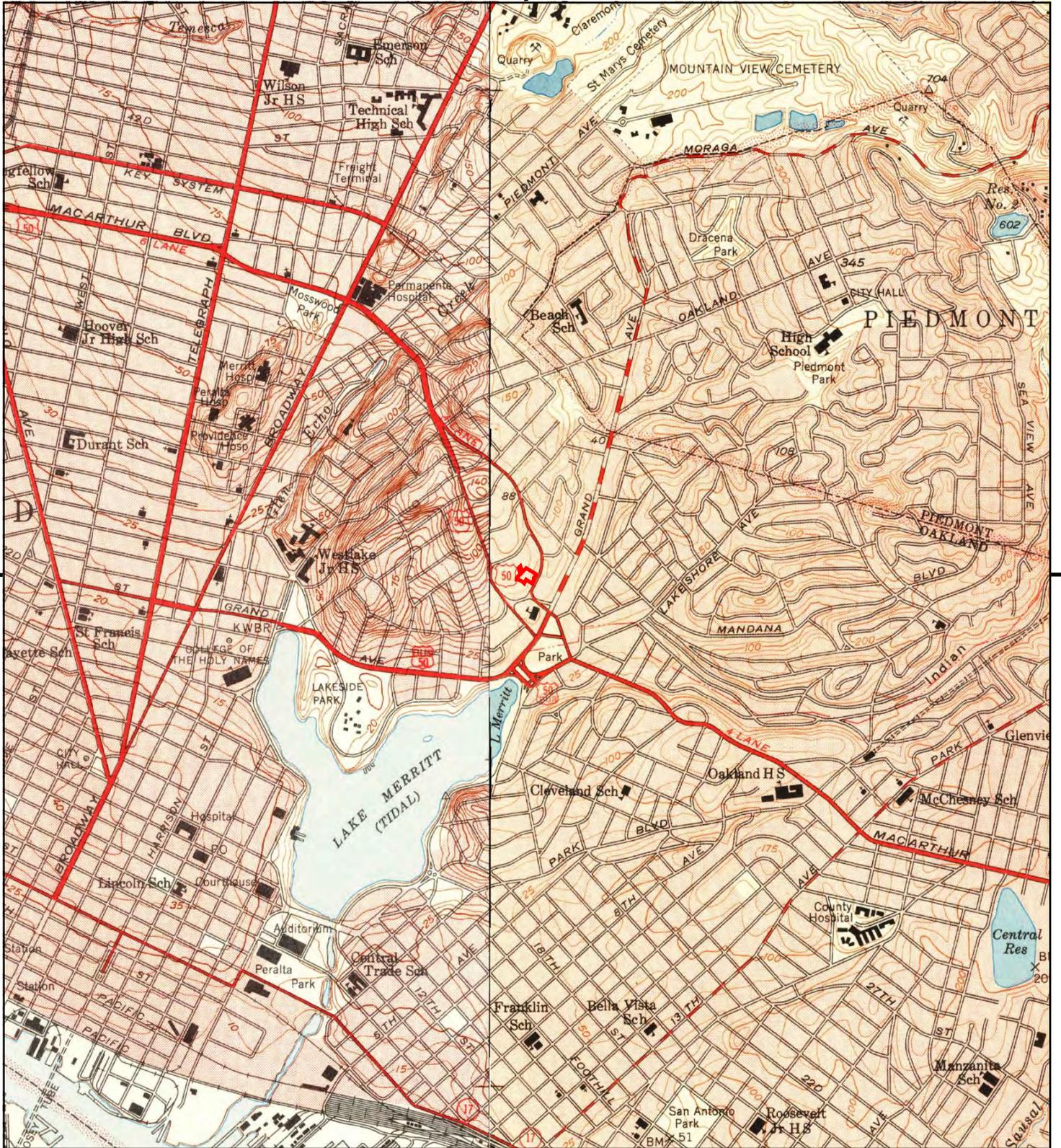
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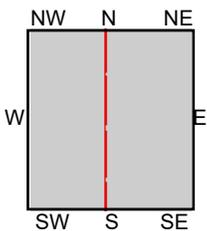
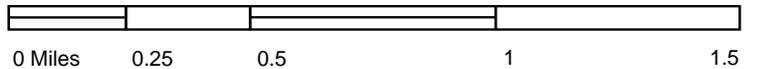
TP, Oakland East, 1959, 7.5-minute  
W, Oakland West, 1959, 7.5-minute

**SITE NAME:** 401 Santa Clara Ave  
**ADDRESS:** 401 Santa Clara Avenue  
Oakland, CA 94610  
**CLIENT:** Ninyo & Moore





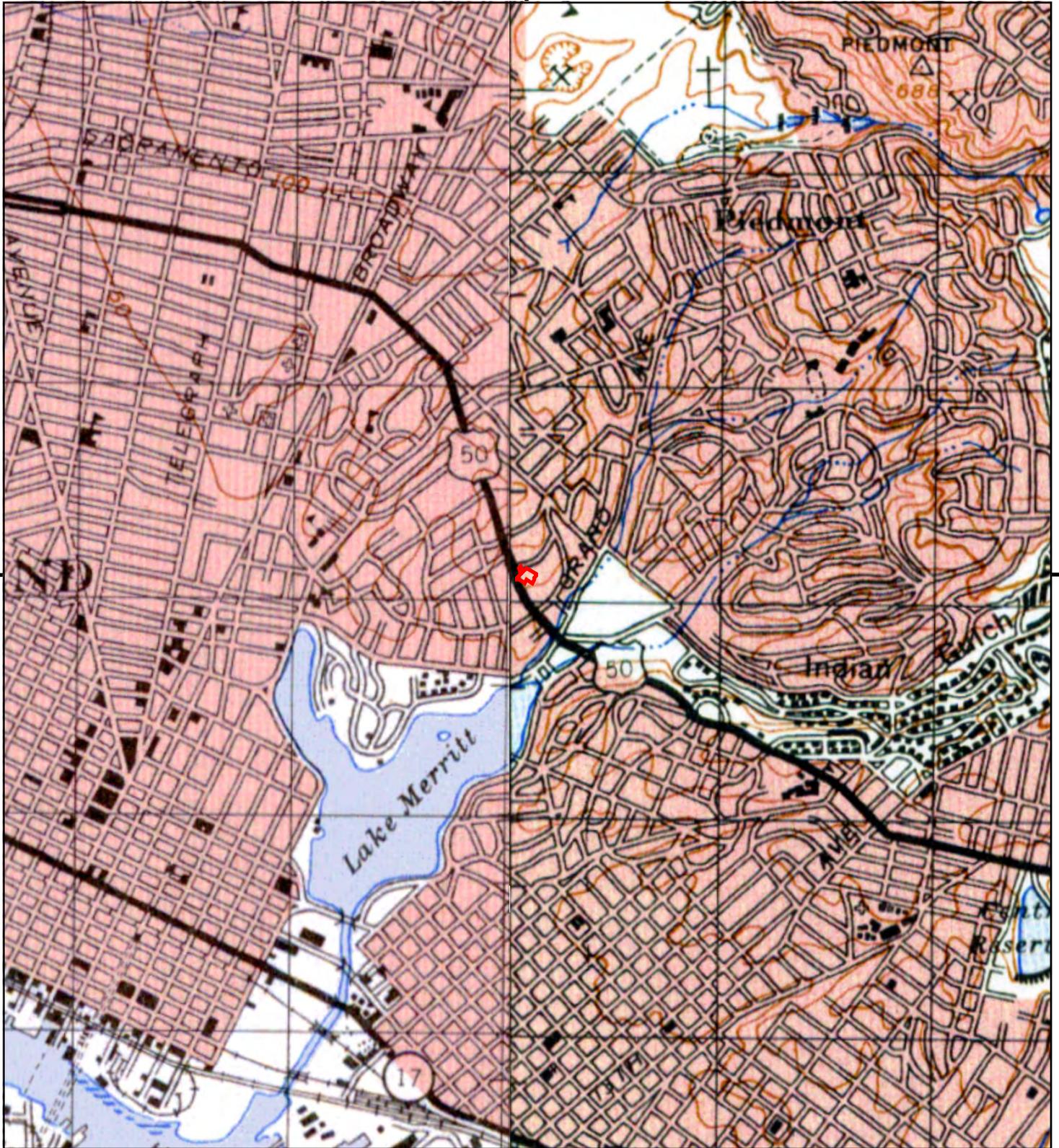
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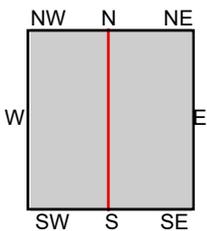
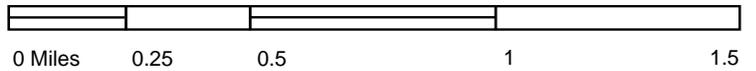
TP, Oakland East, 1949, 7.5-minute  
 W, Oakland West, 1949, 7.5-minute

SITE NAME: 401 Santa Clara Ave  
 ADDRESS: 401 Santa Clara Avenue  
 Oakland, CA 94610  
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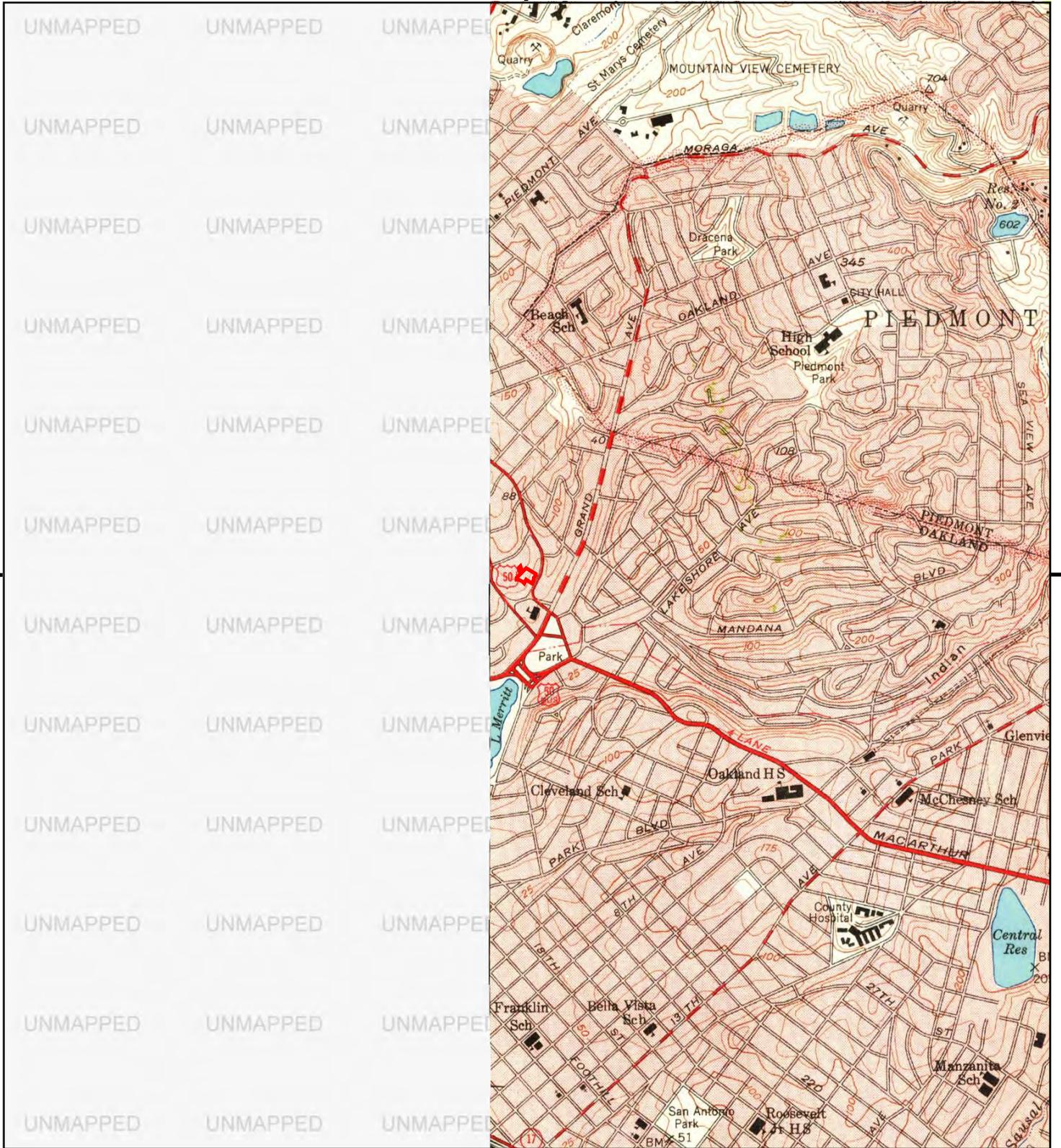
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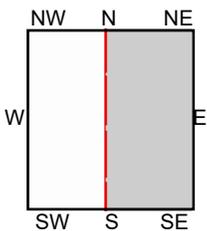
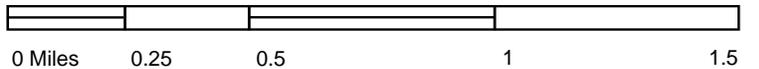
TP, CONCORD, 1948, 15-minute  
 NW, SAN FRANCISCO, 1948, 15-minute

SITE NAME: 401 Santa Clara Ave  
 ADDRESS: 401 Santa Clara Avenue  
 Oakland, CA 94610  
 CLIENT: Ninyo & Moore





This report includes information from the following map sheet(s).



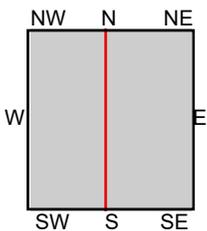
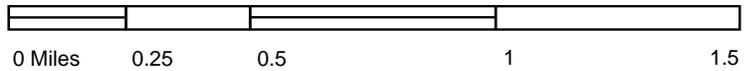
TP, Oakland East, 1947, 7.5-minute

**SITE NAME:** 401 Santa Clara Ave  
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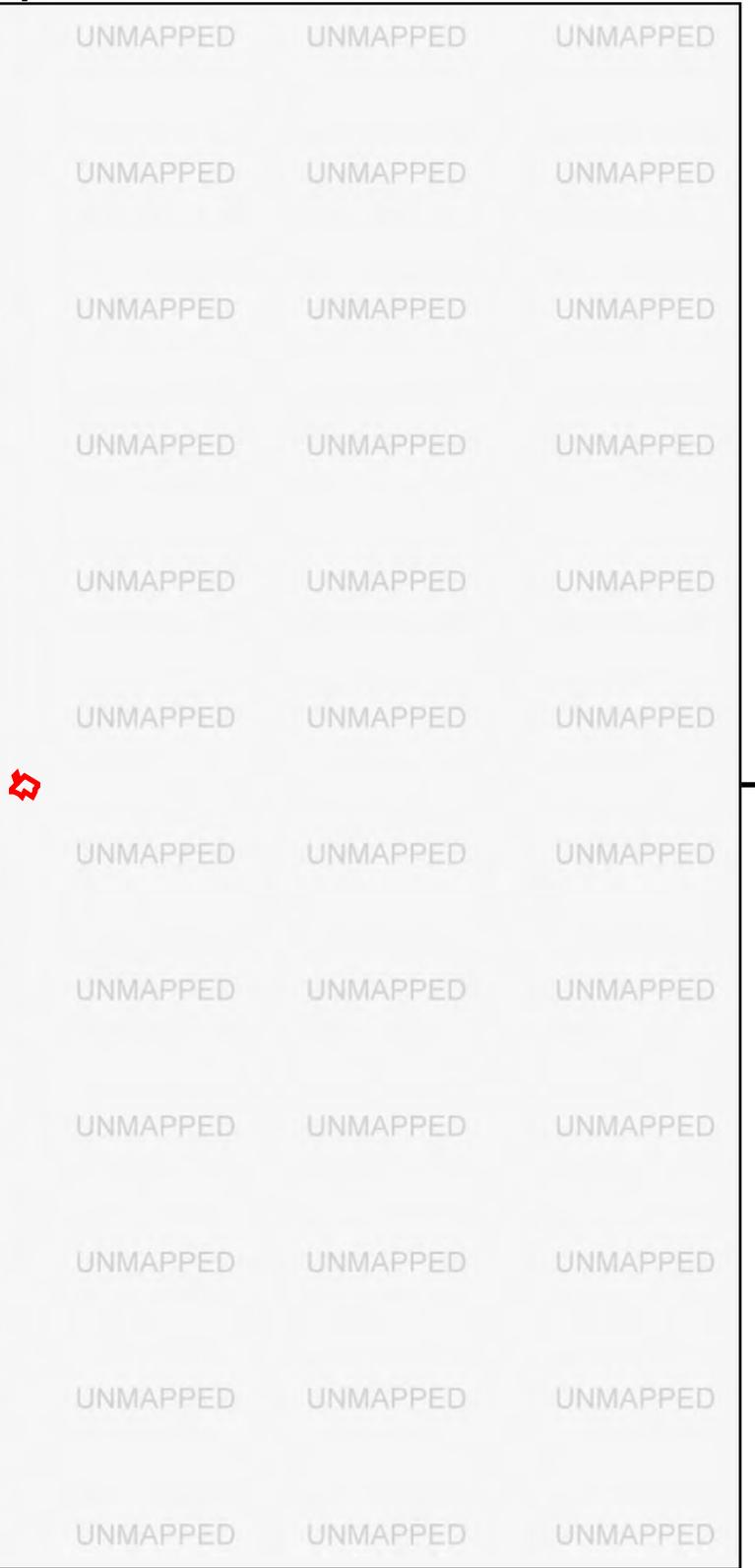
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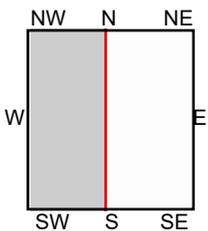
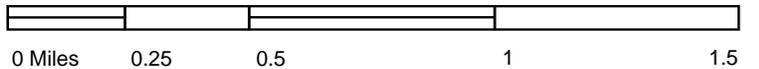
TP, Concord, 1915, 15-minute  
 NW, San Francisco, 1915, 15-minute

SITE NAME: 401 Santa Clara Ave  
 ADDRESS: 401 Santa Clara Avenue  
 Oakland, CA 94610  
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This report includes information from the following map sheet(s).



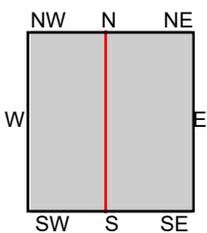
NW, San Francisco, 1899, 15-minute

SITE NAME: 401 Santa Clara Ave  
ADDRESS: 401 Santa Clara Avenue  
Oakland, CA 94610  
CLIENT: Ninyo & Moore





This report includes information from the following map sheet(s).



TP, Concord, 1897, 15-minute  
 NW, San Francisco, 1895, 15-minute

SITE NAME: 401 Santa Clara Ave  
 ADDRESS: 401 Santa Clara Avenue  
 Oakland, CA 94610  
 CLIENT: Ninyo & Moore





**401 Santa Clara Ave**

401 Santa Clara Avenue

Oakland, CA 94610

Inquiry Number: 7660283.8

May 22, 2024

# The EDR Aerial Photo Decade Package



6 Armstrong Road, 4th floor  
Shelton, CT 06484  
Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

# EDR Aerial Photo Decade Package

05/22/24

**Site Name:**

401 Santa Clara Ave  
401 Santa Clara Avenue  
Oakland, CA 94610  
EDR Inquiry # 7660283.8

**Client Name:**

Ninyo & Moore  
1401 Halyard Drive, Suite 110  
West Sacramento, CA 95691  
Contact: Luke Swickard



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**Search Results:**

<u>Year</u>	<u>Scale</u>	<u>Details</u>	<u>Source</u>
2020	1"=500'	Flight Year: 2020	USDA/NAIP
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2005	1"=500'	Flight Year: 2005	USDA/NAIP
1998	1"=500'	Flight Date: September 06, 1998	USDA
1993	1"=500'	Acquisition Date: July 10, 1993	USGS/DOQQ
1982	1"=500'	Flight Date: July 08, 1982	USDA
1974	1"=500'	Flight Date: October 14, 1974	USGS
1968	1"=500'	Flight Date: April 20, 1968	USGS
1963	1"=500'	Flight Date: July 08, 1963	EDR Proprietary Aerial Viewpoint
1958	1"=500'	Flight Date: July 25, 1958	USGS
1946	1"=500'	Flight Date: July 26, 1946	USGS
1939	1"=500'	Flight Date: August 02, 1939	USDA

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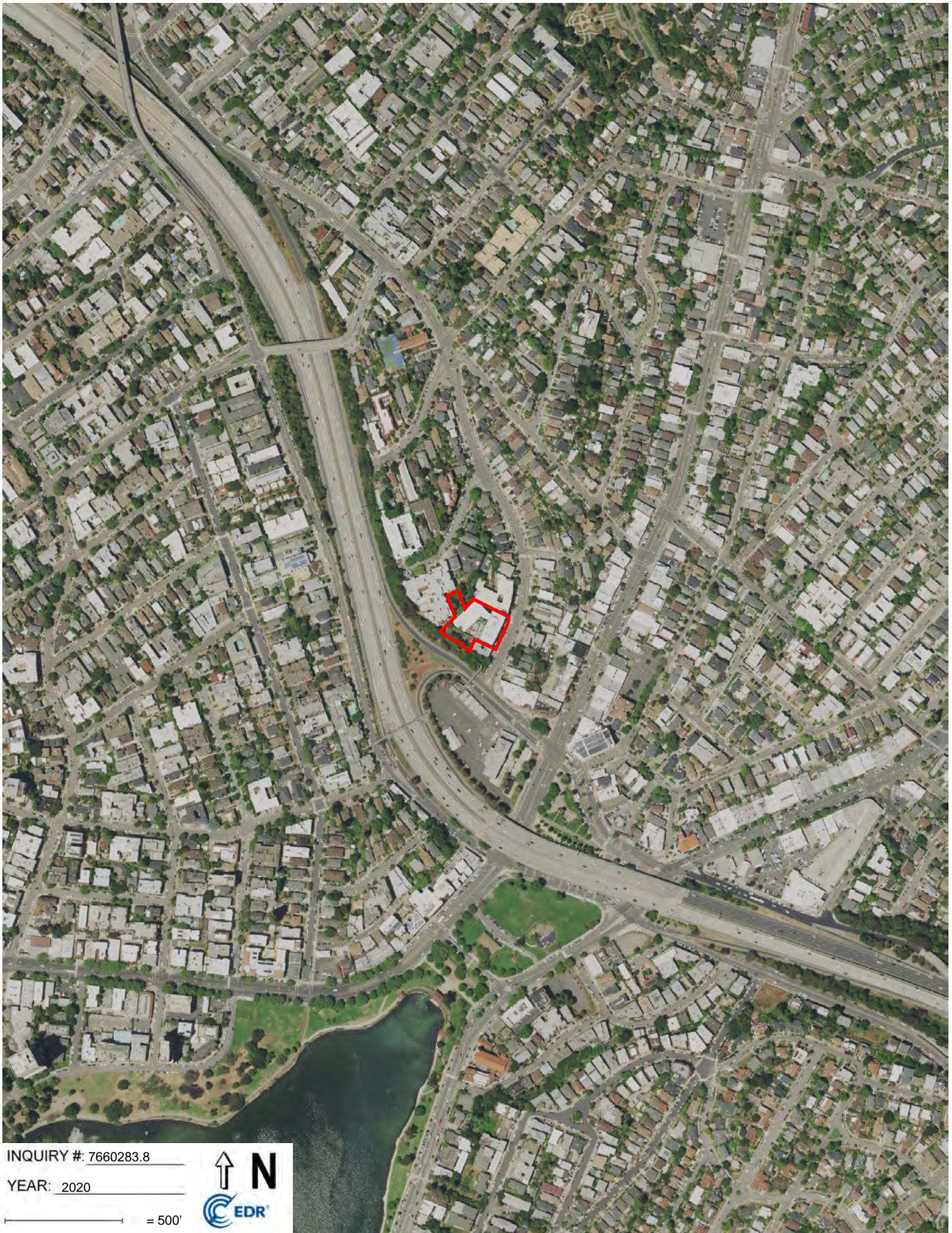
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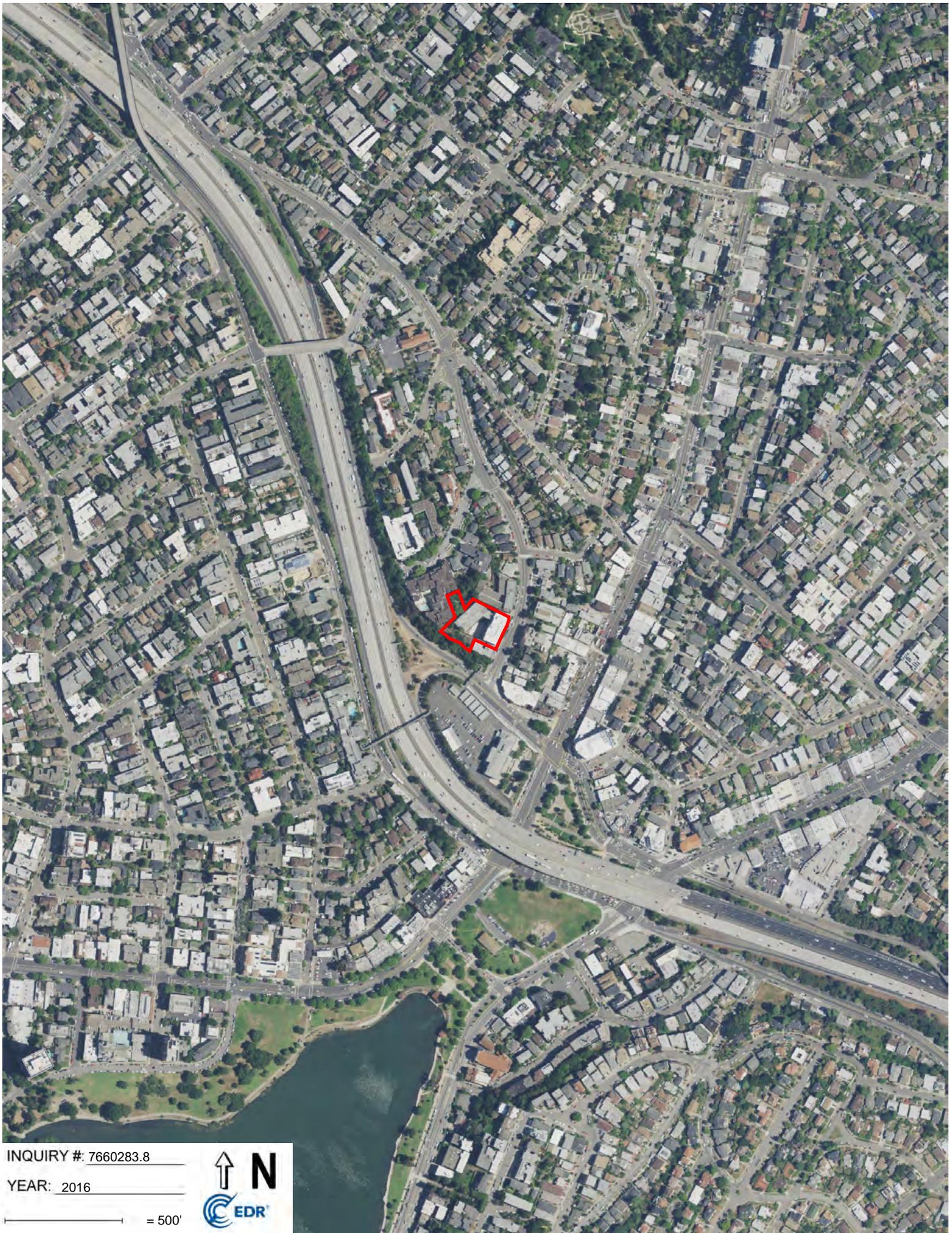


INQUIRY #: 7660283.8

YEAR: 2020

— = 500'





INQUIRY #: 7660283.8

YEAR: 2016

— = 500'



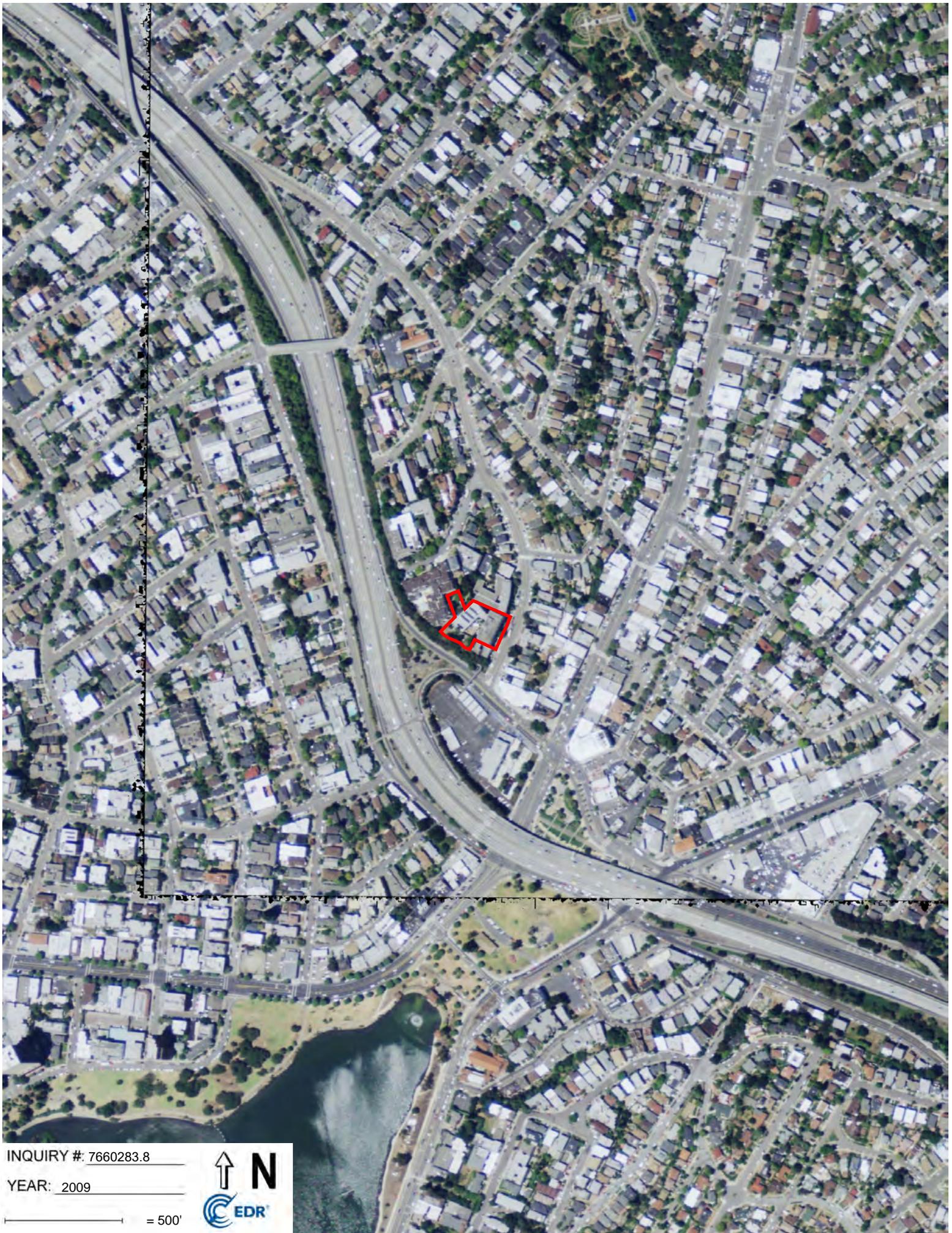


INQUIRY #: 7660283.8

YEAR: 2012

— = 500'



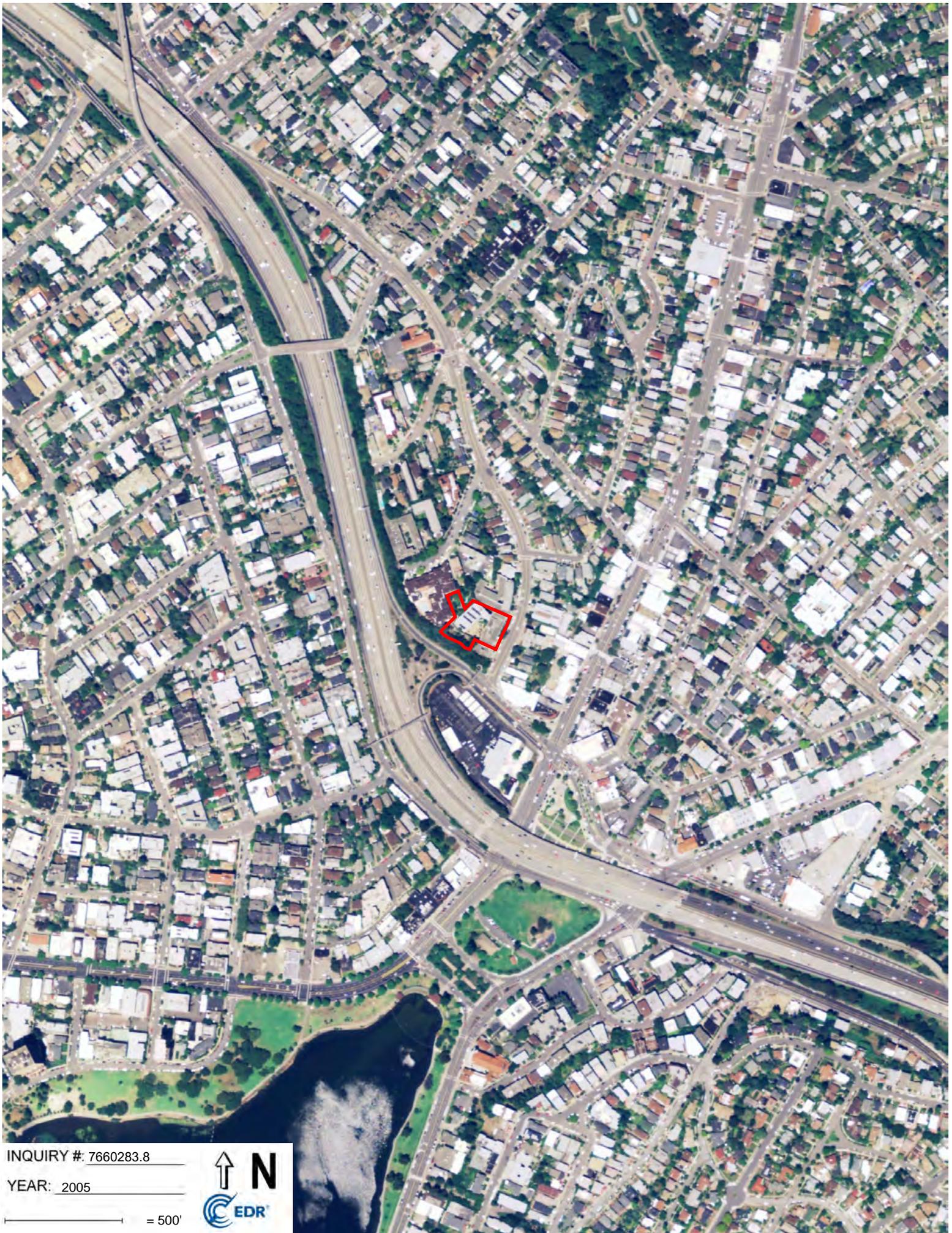


INQUIRY #: 7660283.8

YEAR: 2009

— = 500'



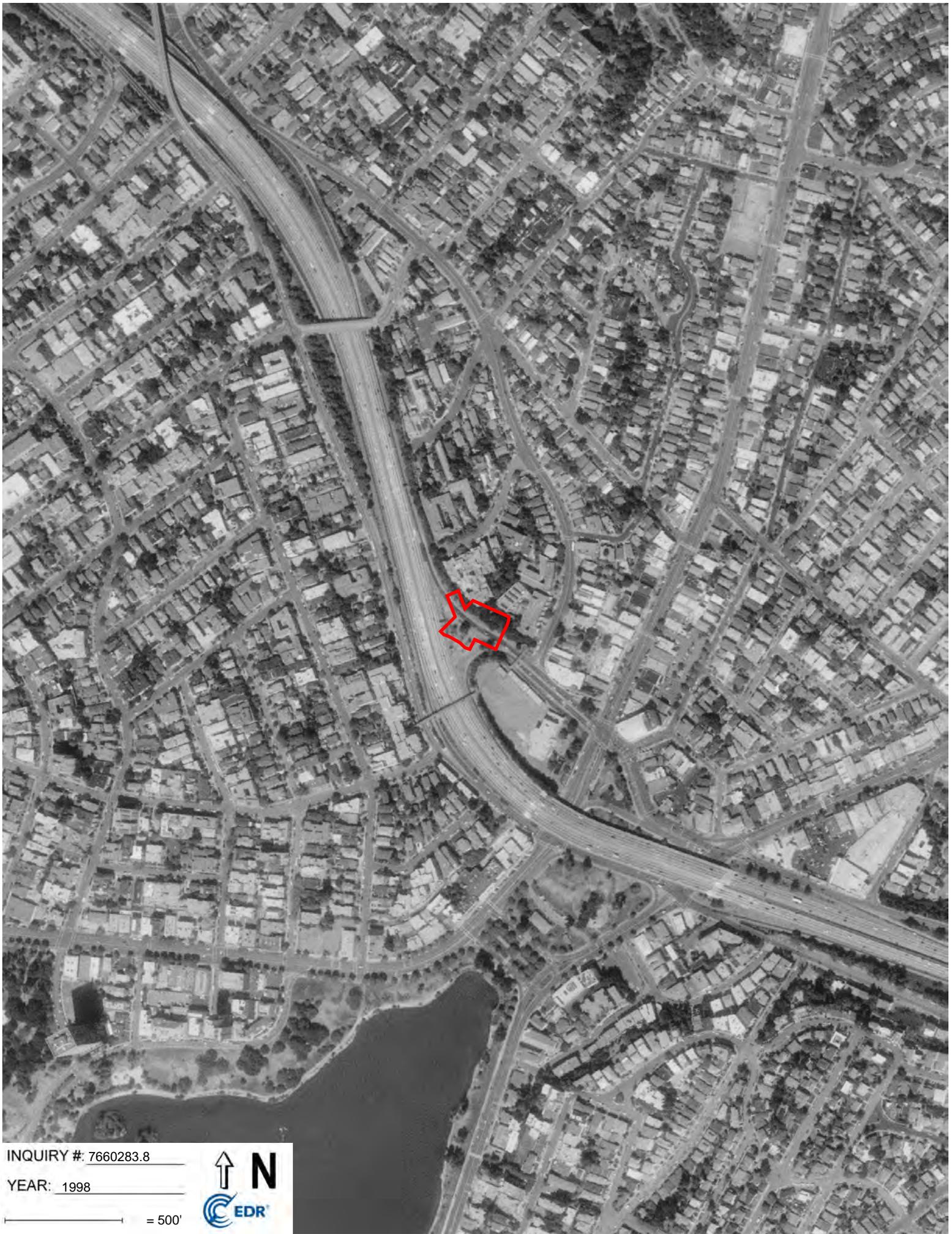


INQUIRY #: 7660283.8

YEAR: 2005

— = 500'





INQUIRY #: 7660283.8

YEAR: 1998

— = 500'





INQUIRY #: 7660283.8

YEAR: 1993

— = 500'



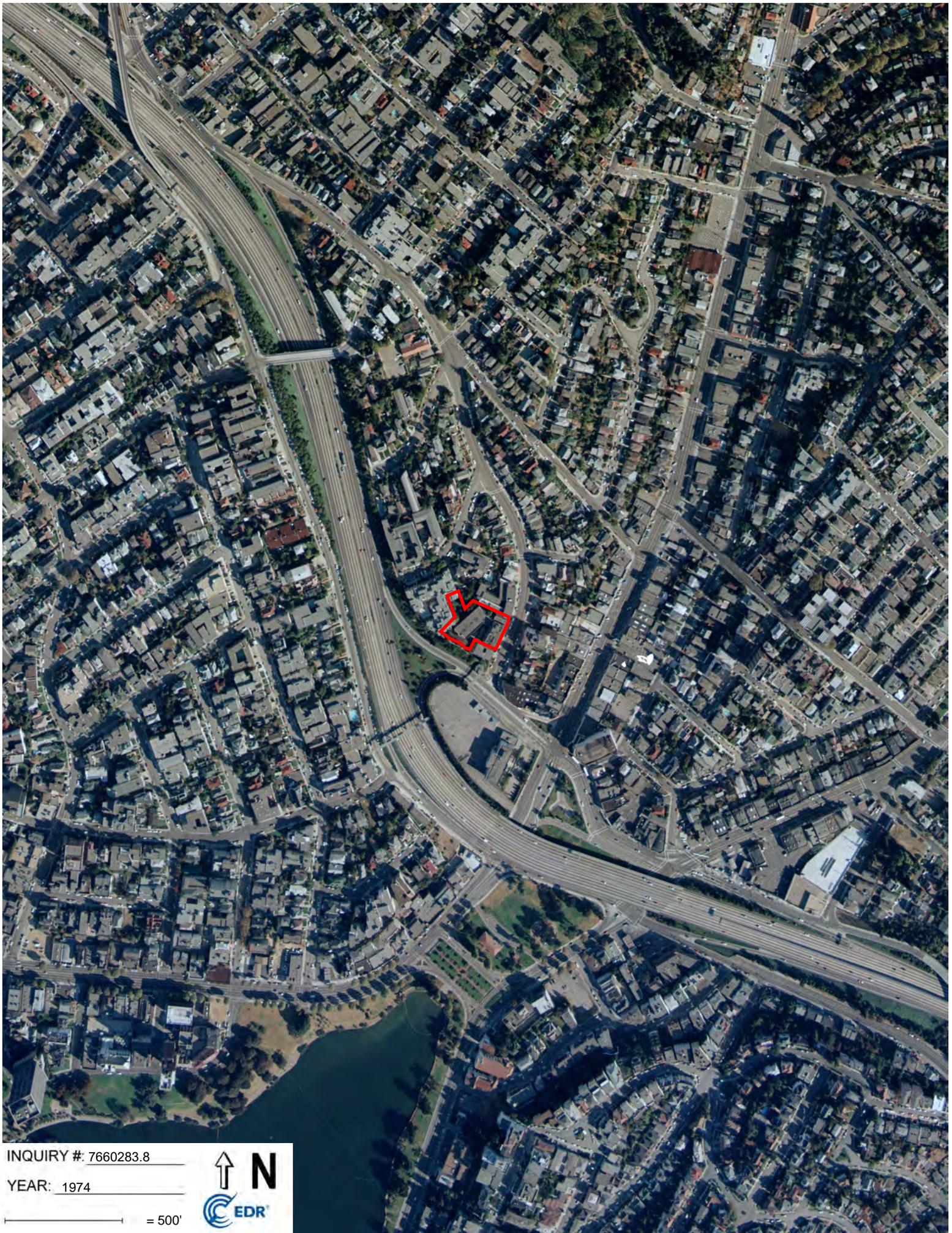


INQUIRY #: 7660283.8

YEAR: 1982

— = 500'



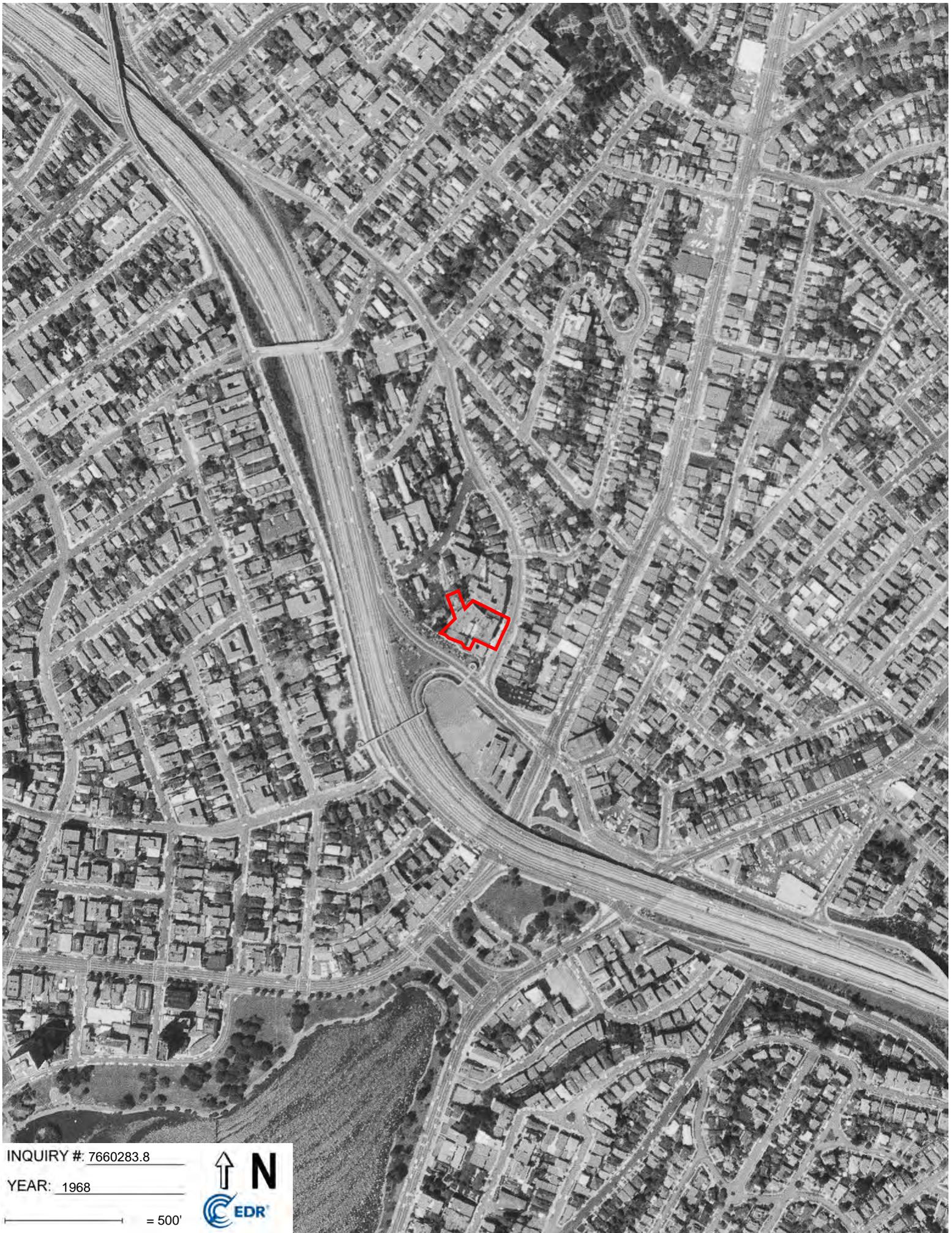


INQUIRY #: 7660283.8

YEAR: 1974

— = 500'



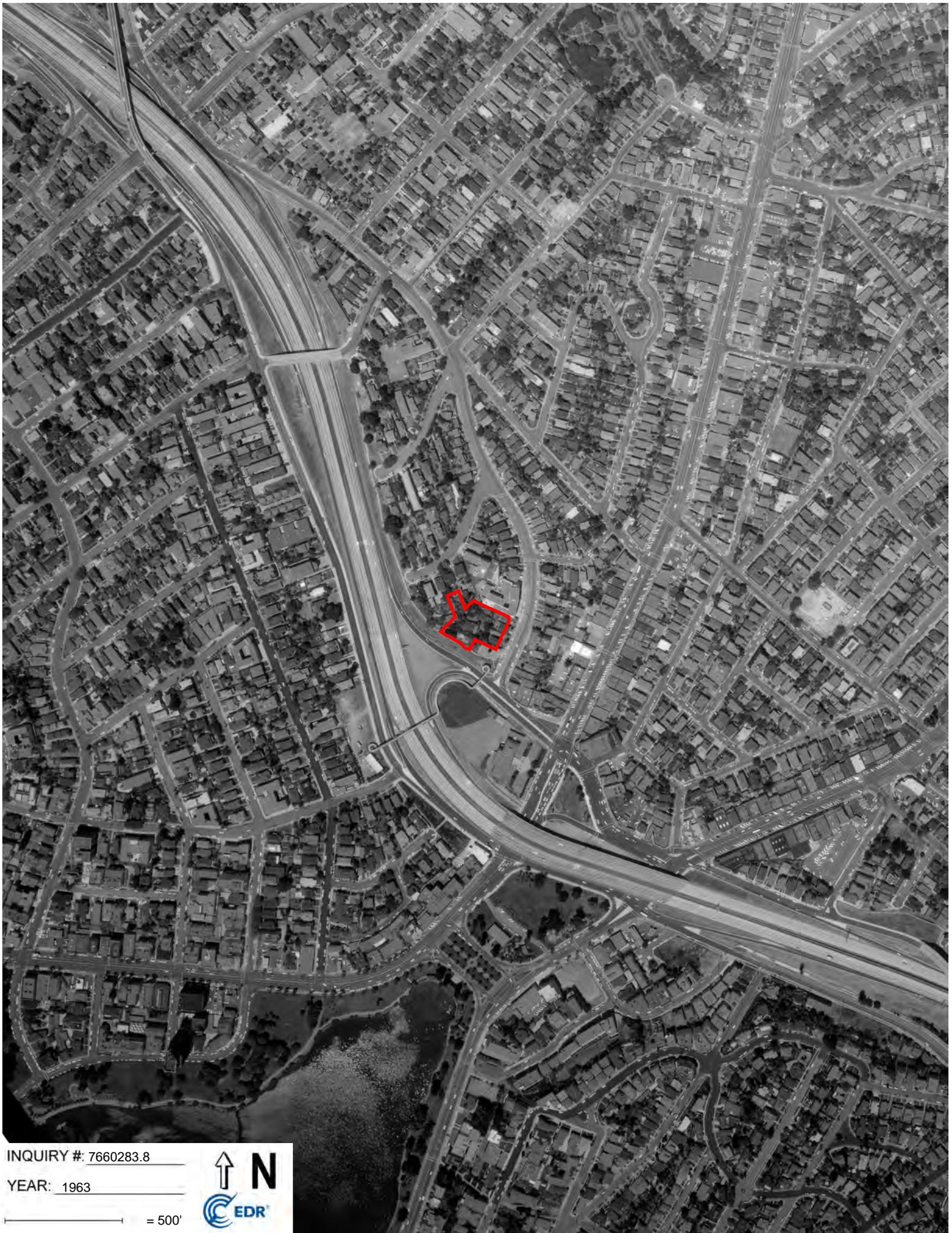


INQUIRY #: 7660283.8

YEAR: 1968

— = 500'





INQUIRY #: 7660283.8

YEAR: 1963

— = 500'





INQUIRY #: 7660283.8

YEAR: 1958

— = 500'



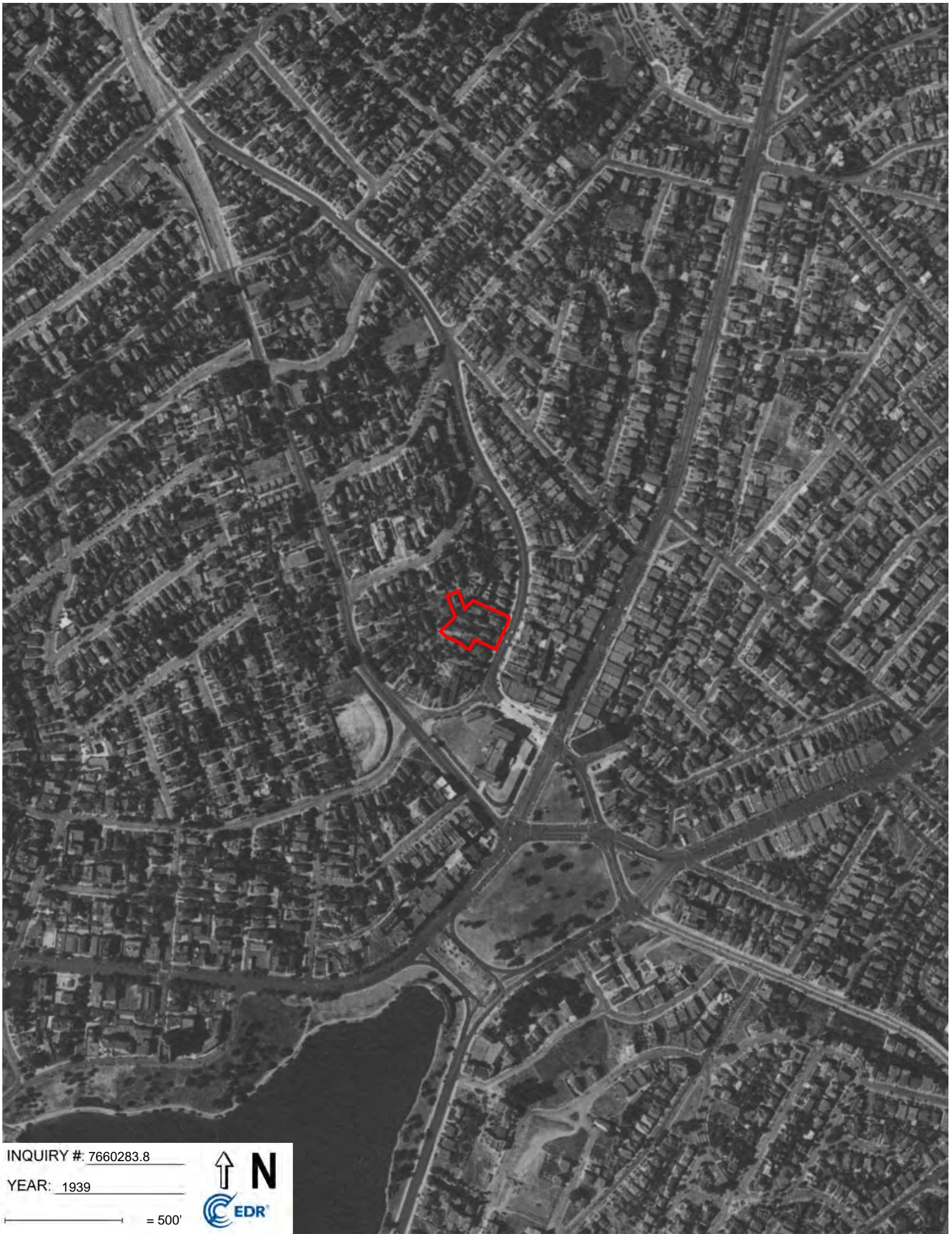


INQUIRY #: 7660283.8

YEAR: 1946

— = 500'





INQUIRY #: 7660283.8

YEAR: 1939

— = 500'





401 Santa Clara Ave  
401 Santa Clara Avenue  
Oakland, CA 94610

Inquiry Number: 7660283.3

May 22, 2024

## Certified Sanborn® Map Report



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Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

# Certified Sanborn® Map Report

05/22/24

**Site Name:**

401 Santa Clara Ave  
401 Santa Clara Avenue  
Oakland, CA 94610  
EDR Inquiry # 7660283.3

**Client Name:**

Ninyo & Moore  
1401 Halyard Drive, Suite 110  
West Sacramento, CA 95691  
Contact: Luke Swickard



The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Ninyo & Moore were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting [www.edrnet.com/sanborn](http://www.edrnet.com/sanborn).

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

## Certified Sanborn Results:

**Certification #** 70AF-4EF1-A041

**PO #** NA

**Project** 404724001

**Maps Provided:**

1970	1954
1969	1952
1968	1950
1967	1929
1962	1928
1960	1912
1959	1911
1957	1903



Sanborn® Library search results

Certification #: 70AF-4EF1-A041

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- Library of Congress
- University Publications of America
- EDR Private Collection

*The Sanborn Library LLC Since 1866™*

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## Sanborn Sheet Key

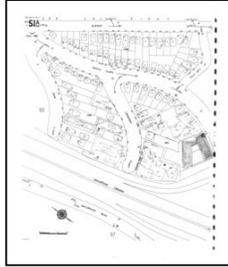
This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.



### 1970 Source Sheets



Volume 1A, Sheet 52a  
1970



Volume 1A, Sheet 51a  
1970

### 1967 Source Sheets



Volume 1A, Sheet 51a  
1967



Volume 1A, Sheet 52a  
1967

### 1962 Source Sheets



Volume 1A, Sheet 51a  
1962



Volume 1A, Sheet 52a  
1962

### 1959 Source Sheets



Volume 1A, Sheet 52a  
1959



Volume 1A, Sheet 51a  
1959

## Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.



### 1954 Source Sheets



Volume 1A, Sheet 51a  
1954



Volume 1A, Sheet 52a  
1954

### 1952 Source Sheets



Volume 1A, Sheet 52a  
1952



Volume 1A, Sheet 51a  
1952

### 1950 Source Sheets



Volume 2, Sheet 130  
1950



Volume 2, Sheet 129  
1950

### 1911 Source Sheets



Volume 2, Sheet 129  
1911



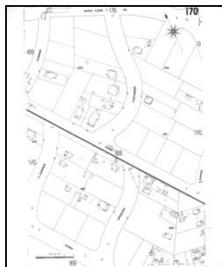
Volume 2, Sheet 130  
1911

**Sanborn Sheet Key**

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**1903 Source Sheets**



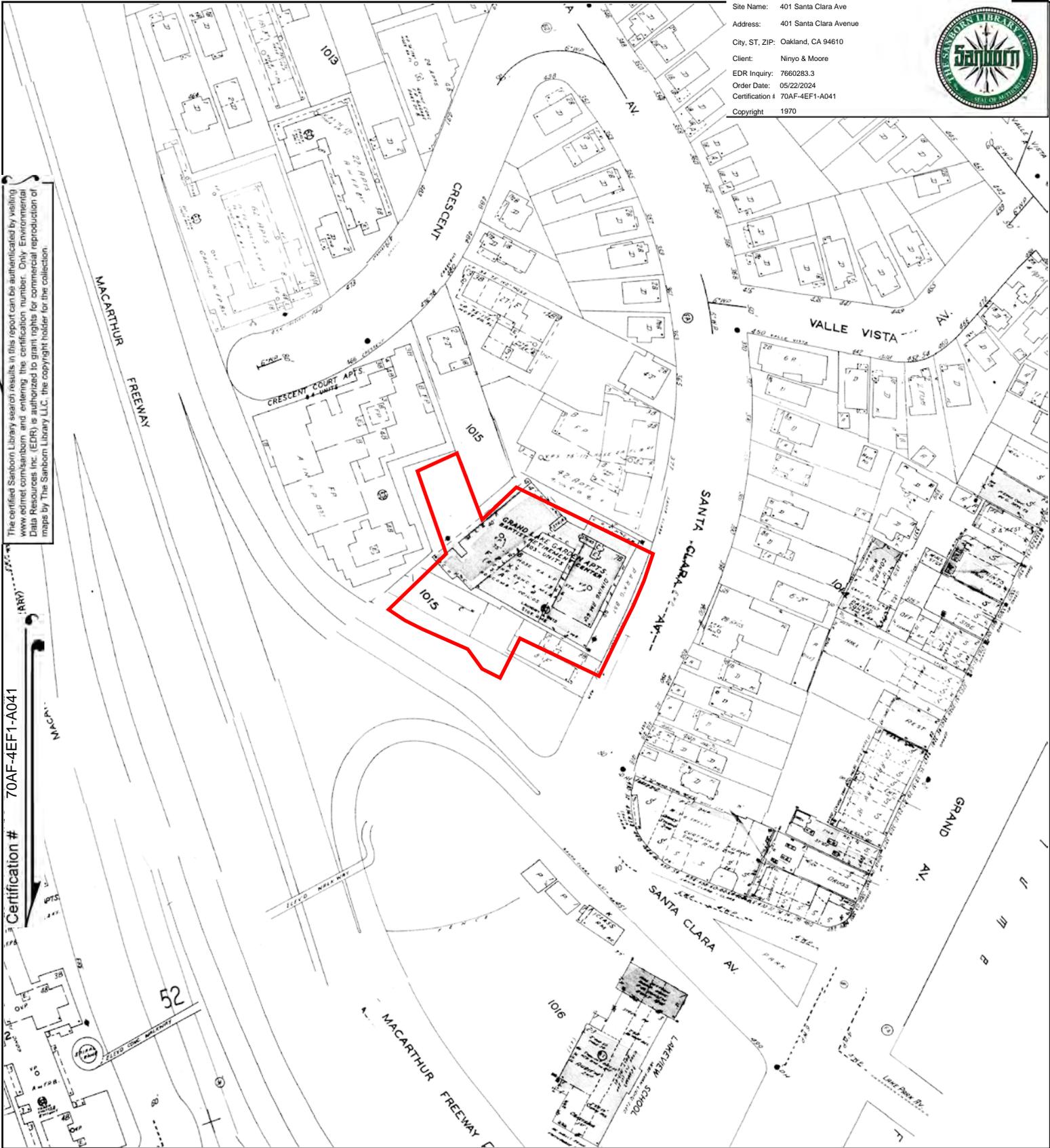
Volume 2, Sheet 170  
1903

Site Name: 401 Santa Clara Ave  
 Address: 401 Santa Clara Avenue  
 City, ST, ZIP: Oakland, CA 94610  
 Client: Ninyo & Moore  
 EDR Inquiry: 7660283.3  
 Order Date: 05/22/2024  
 Certification #: 70AF-4EF1-A041  
 Copyright: 1970

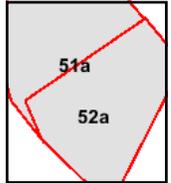
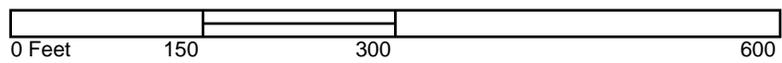


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Volume 1A, Sheet 51a  
 Volume 1A, Sheet 52a

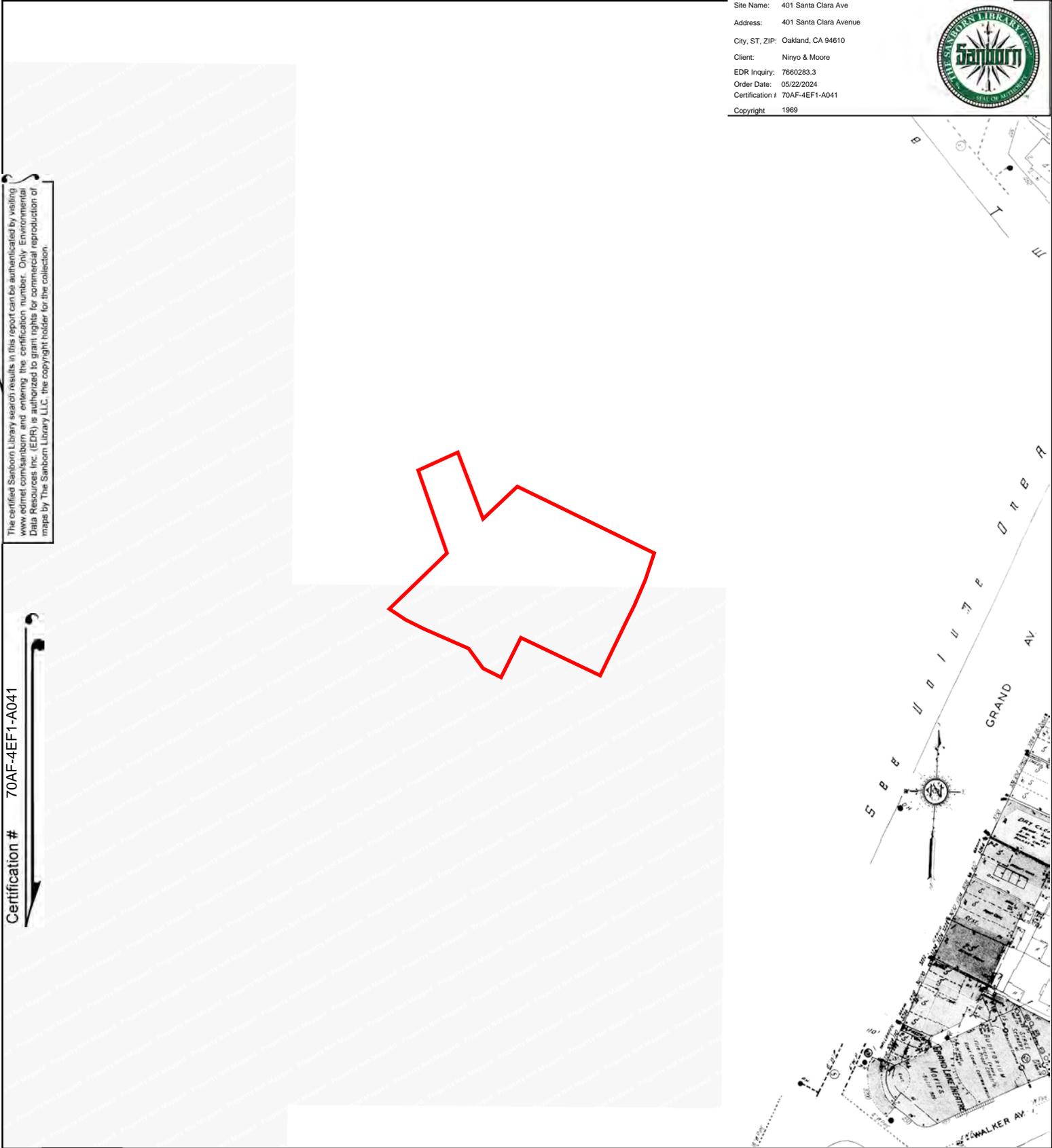


Site Name: 401 Santa Clara Ave  
 Address: 401 Santa Clara Avenue  
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 Copyright: 1969

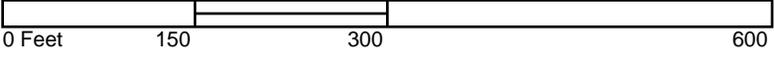


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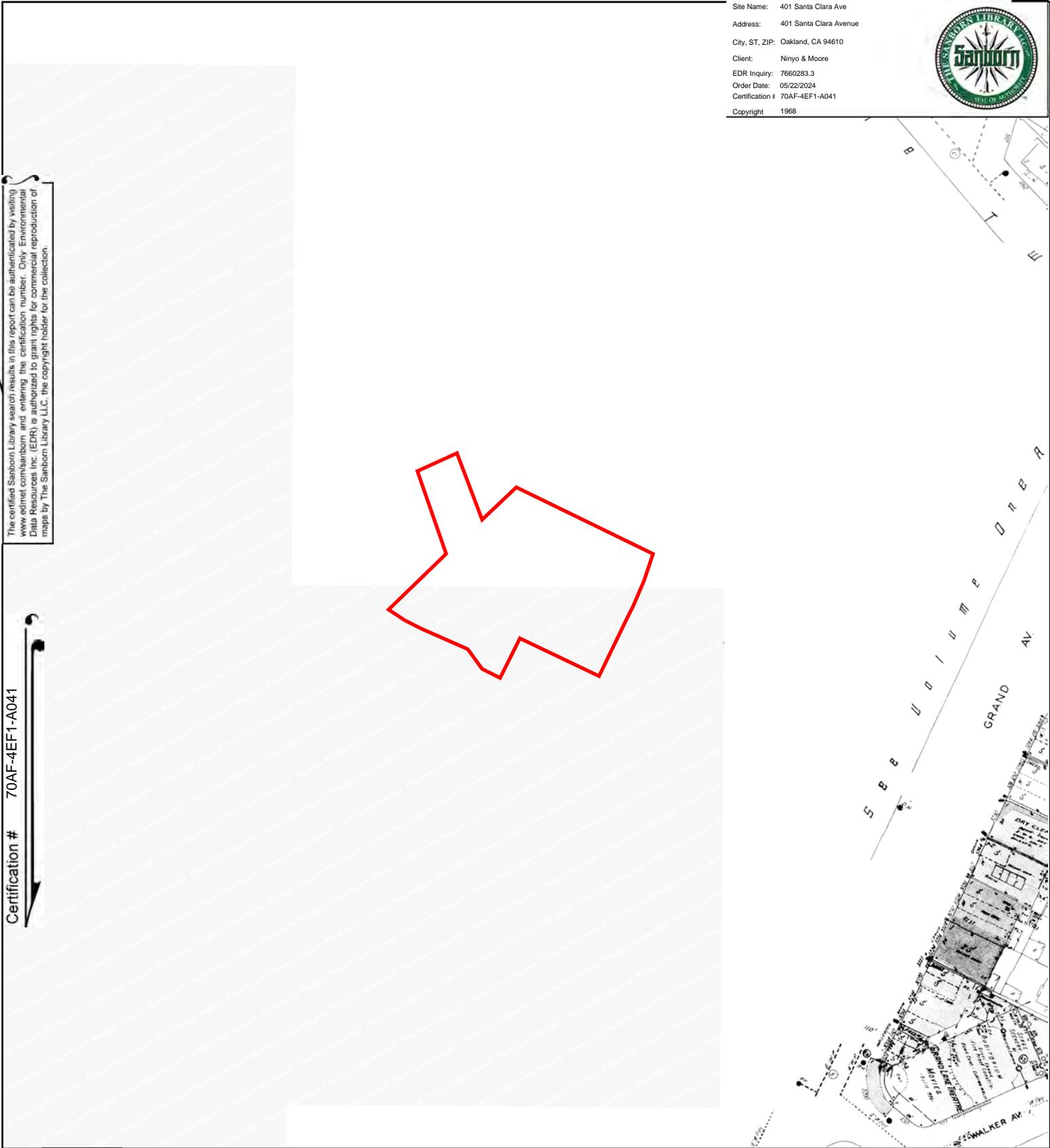


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 Order Date: 05/22/2024  
 Certification #: 70AF-4EF1-A041  
 Copyright: 1968

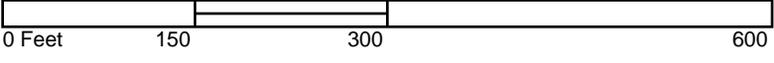


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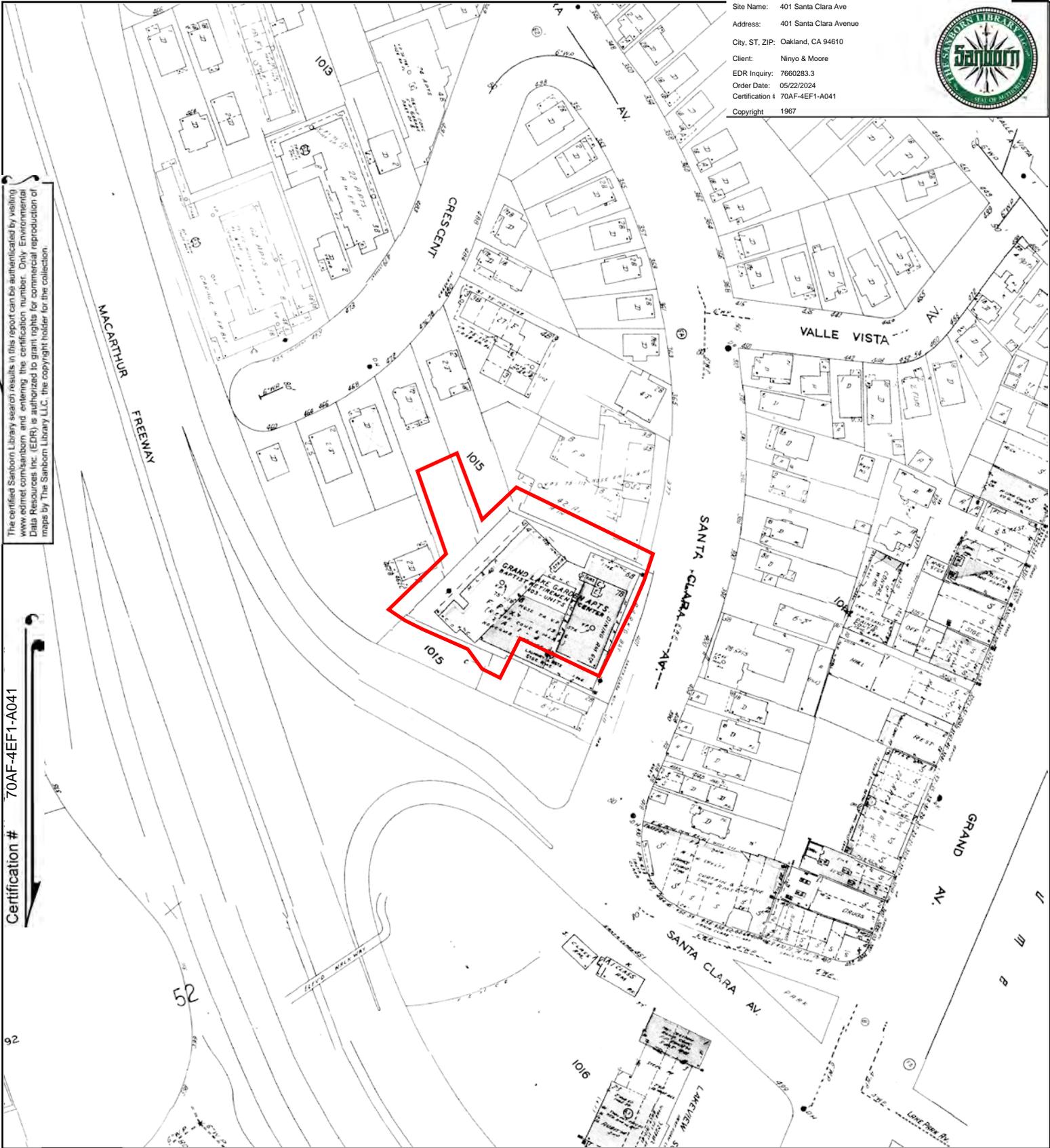


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 EDR Inquiry: 7660283.3  
 Order Date: 05/22/2024  
 Certification #: 70AF-4EF1-A041  
 Copyright: 1967

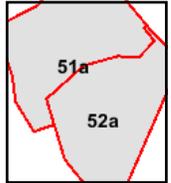
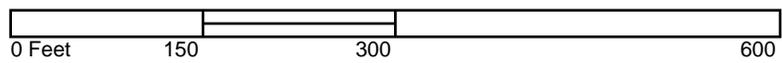


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 Volume 1A, Sheet 51a

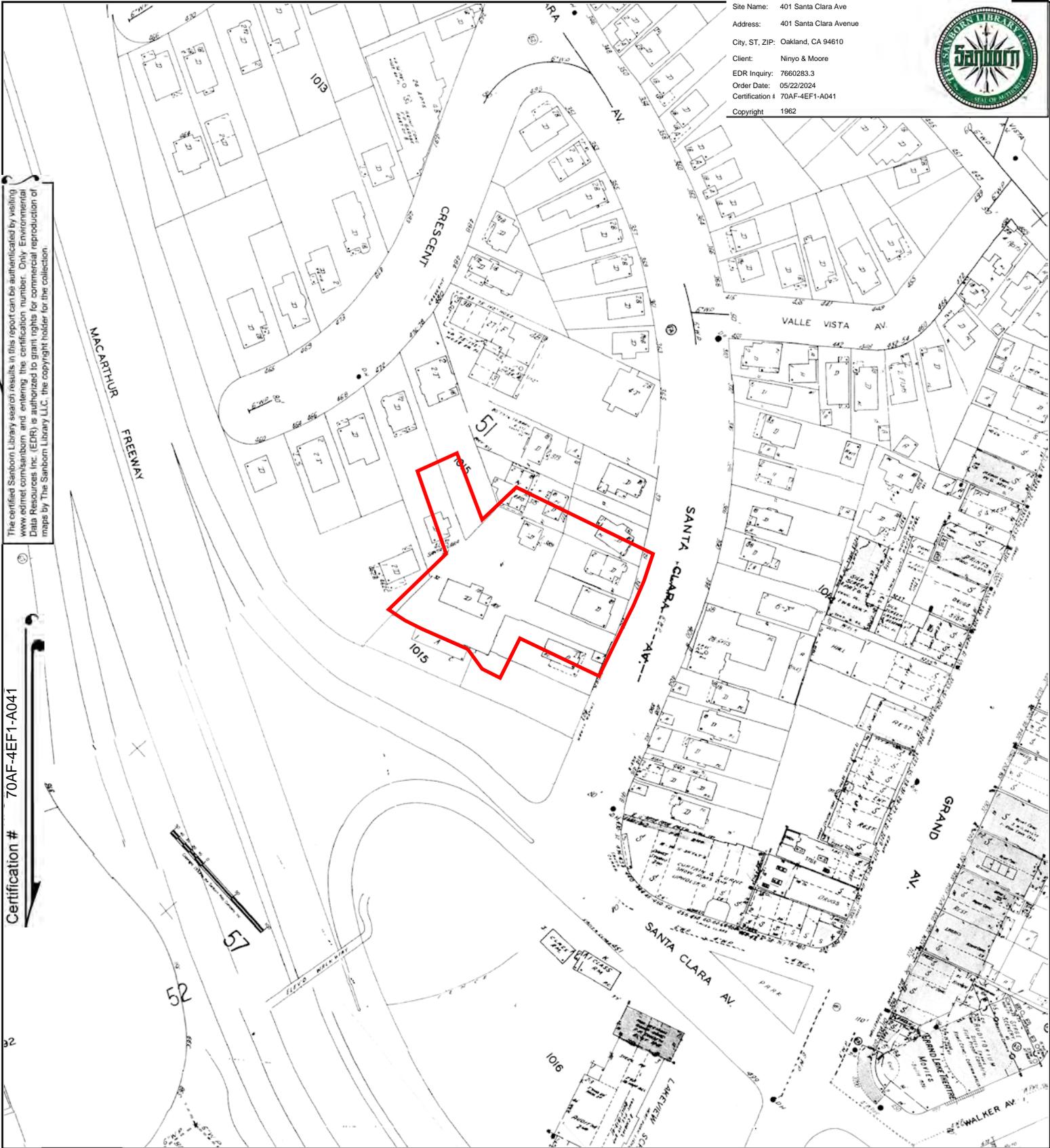


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 Order Date: 05/22/2024  
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 Copyright: 1962

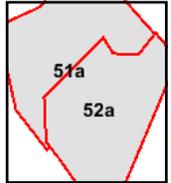
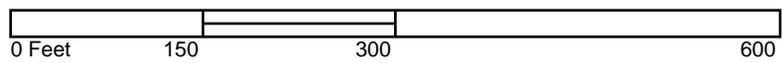


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 Volume 1A, Sheet 51a

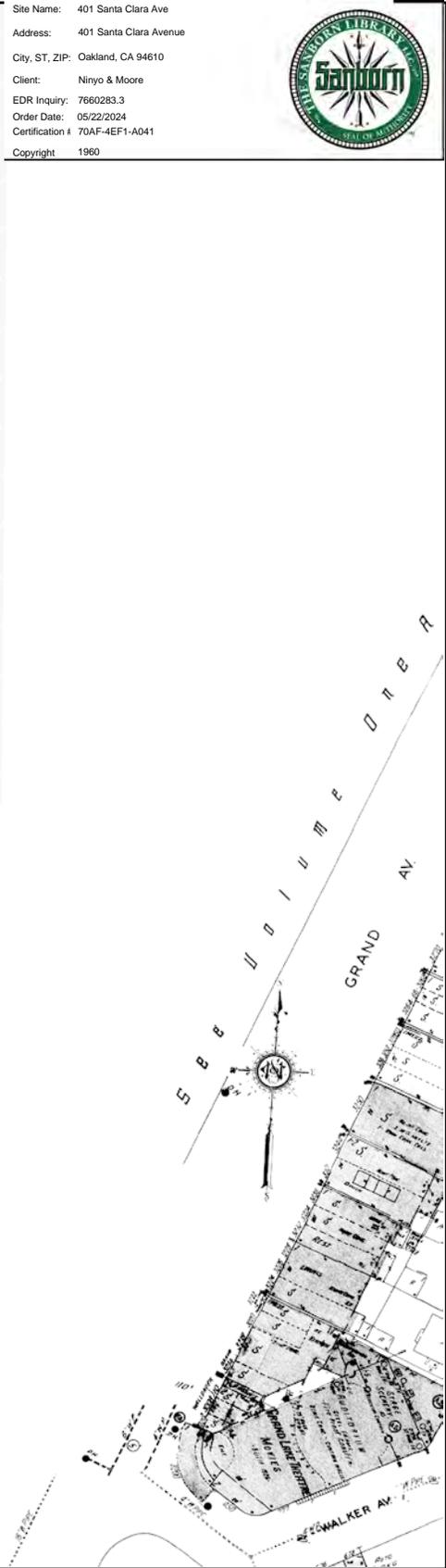
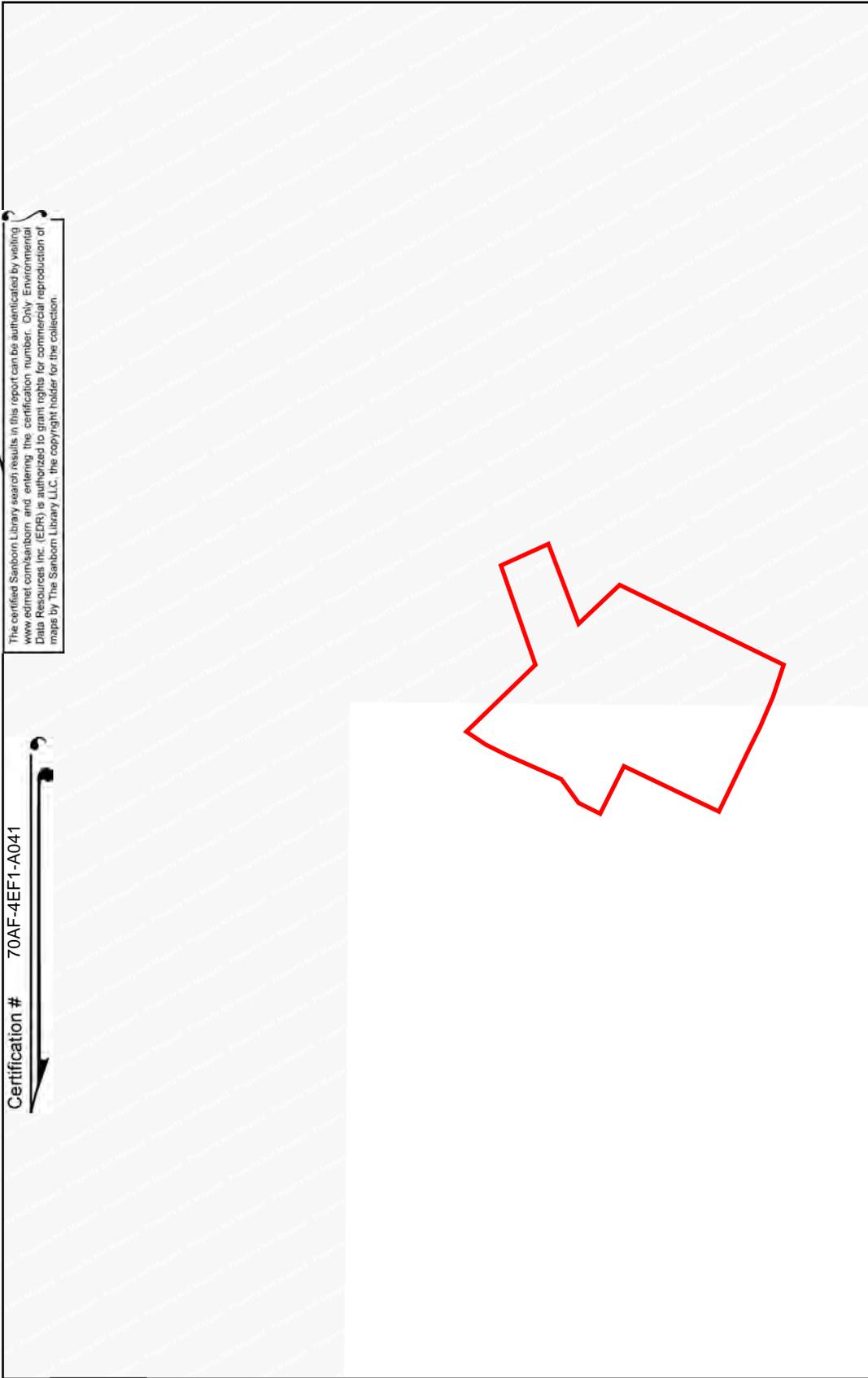


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 City, ST, ZIP: Oakland, CA 94610  
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 Order Date: 05/22/2024  
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 Copyright: 1960

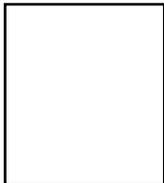
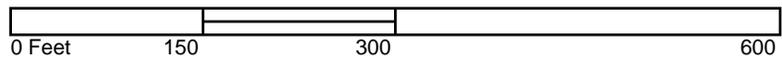


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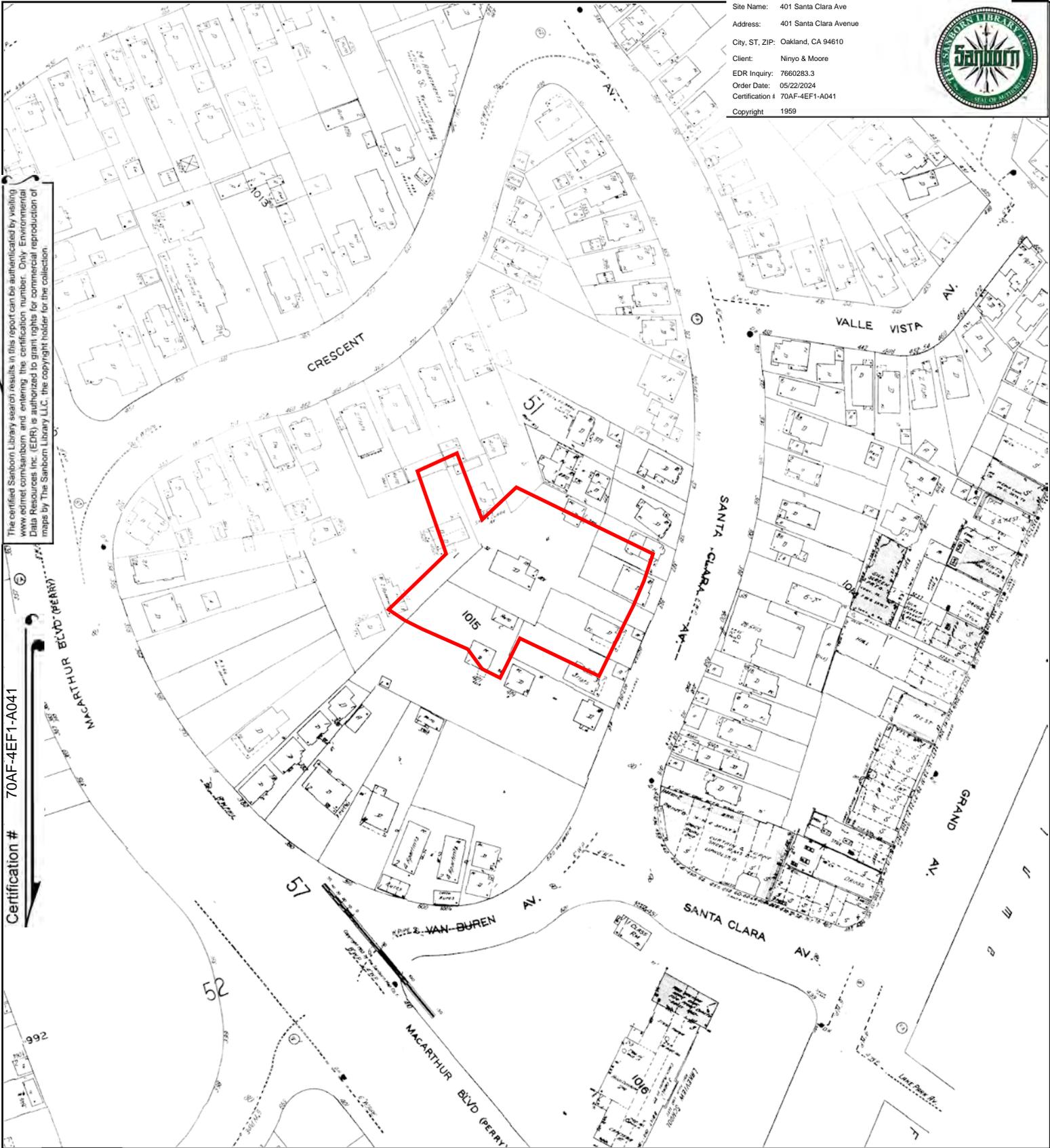


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 Address: 401 Santa Clara Avenue  
 City, ST, ZIP: Oakland, CA 94610  
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 Copyright: 1959

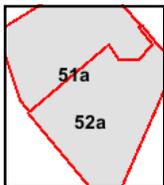
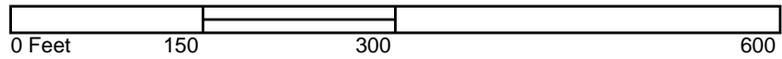


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 Volume 1A, Sheet 52a

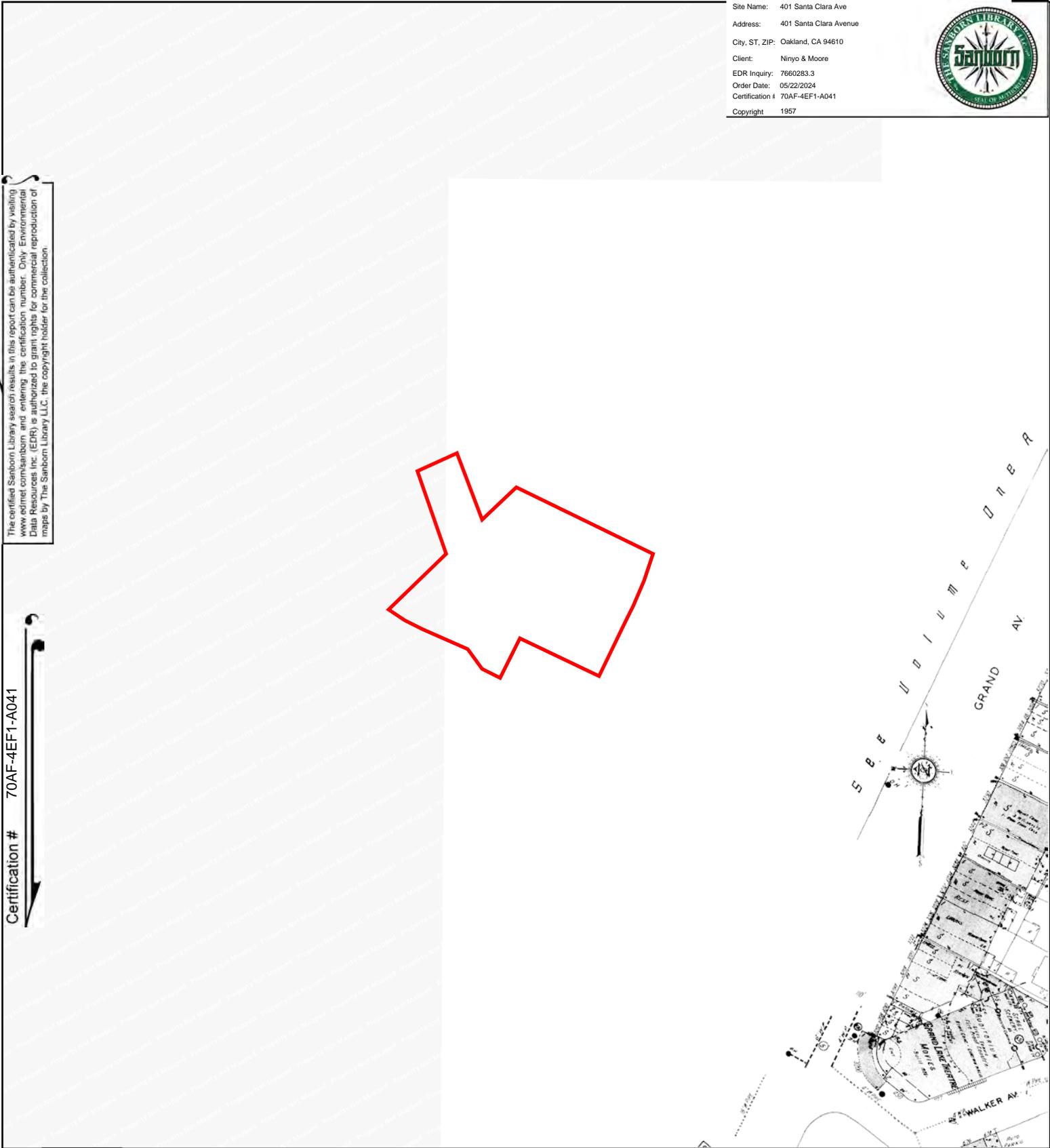


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 City, ST, ZIP: Oakland, CA 94610  
 Client: Ninyo & Moore  
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 Order Date: 05/22/2024  
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 Copyright: 1957

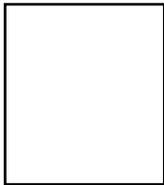
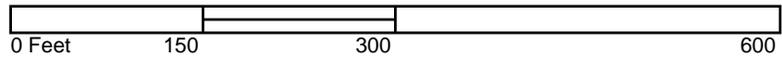


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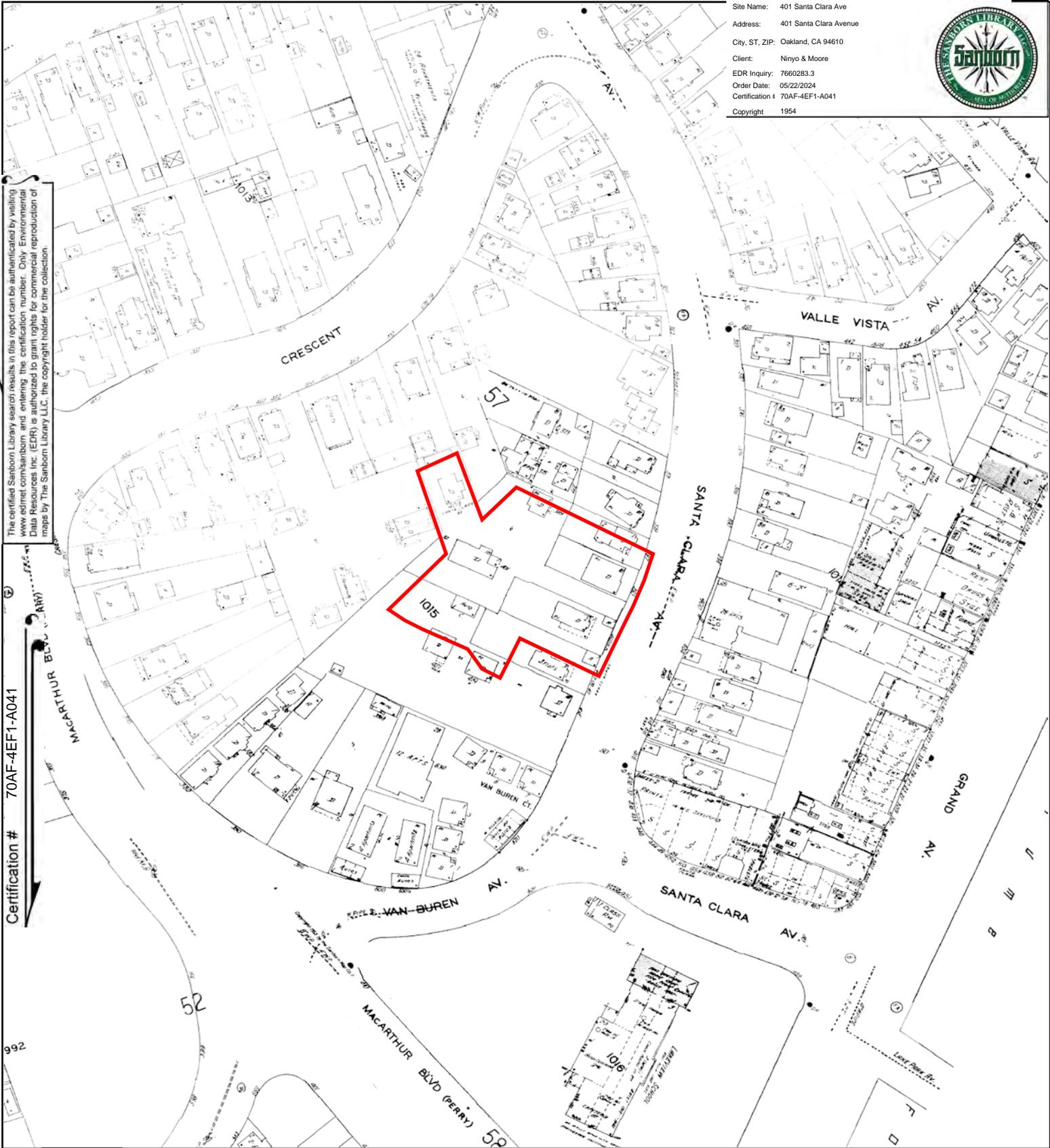


Site Name: 401 Santa Clara Ave  
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 City, ST, ZIP: Oakland, CA 94610  
 Client: Ninyo & Moore  
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 Order Date: 05/22/2024  
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 Copyright: 1954

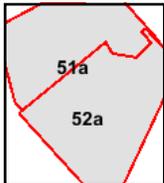
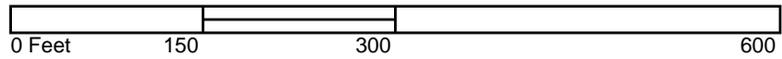


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 Volume 1A, Sheet 51a



52A  
(130 - VOL. 2)

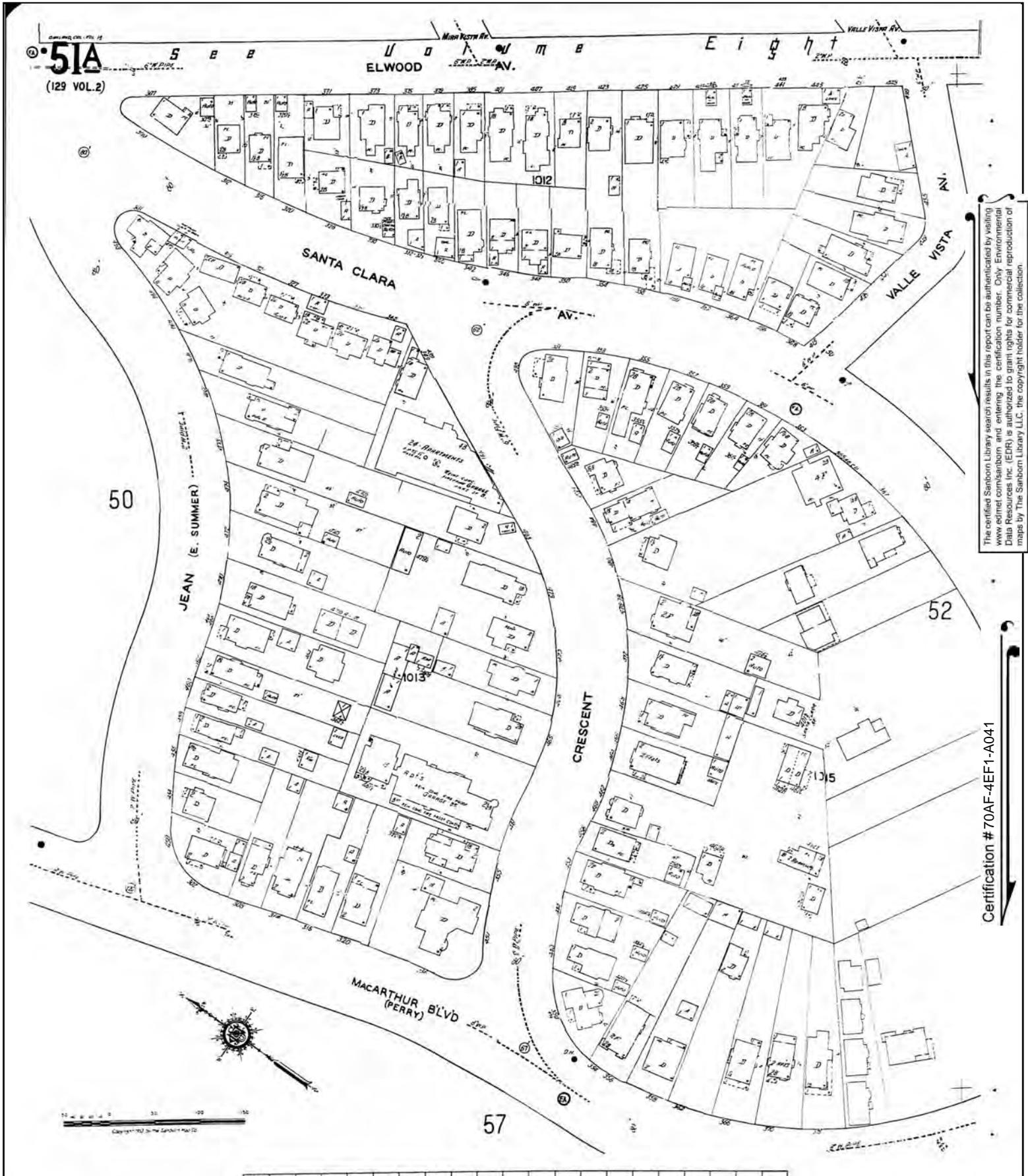


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 Client: Ninyo & Moore  
 EDR Inquiry: 7660283.3  
 Order Date: 05/22/2024  
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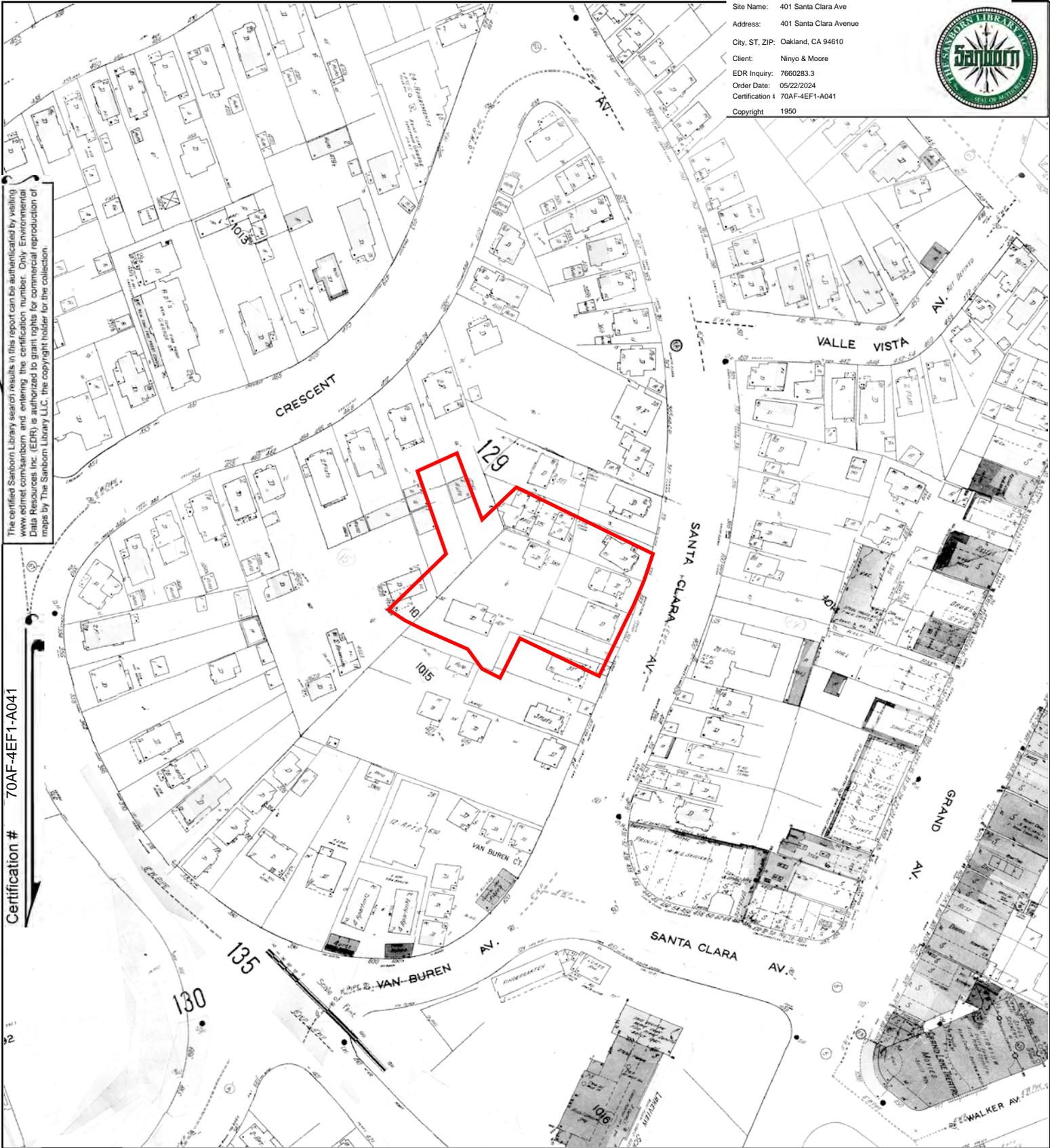


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 Address: 401 Santa Clara Avenue  
 City, ST, ZIP: Oakland, CA 94610  
 Client: Ninyo & Moore  
 EDR Inquiry: 7660283.3  
 Order Date: 05/22/2024  
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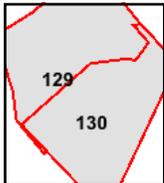
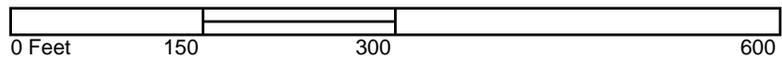


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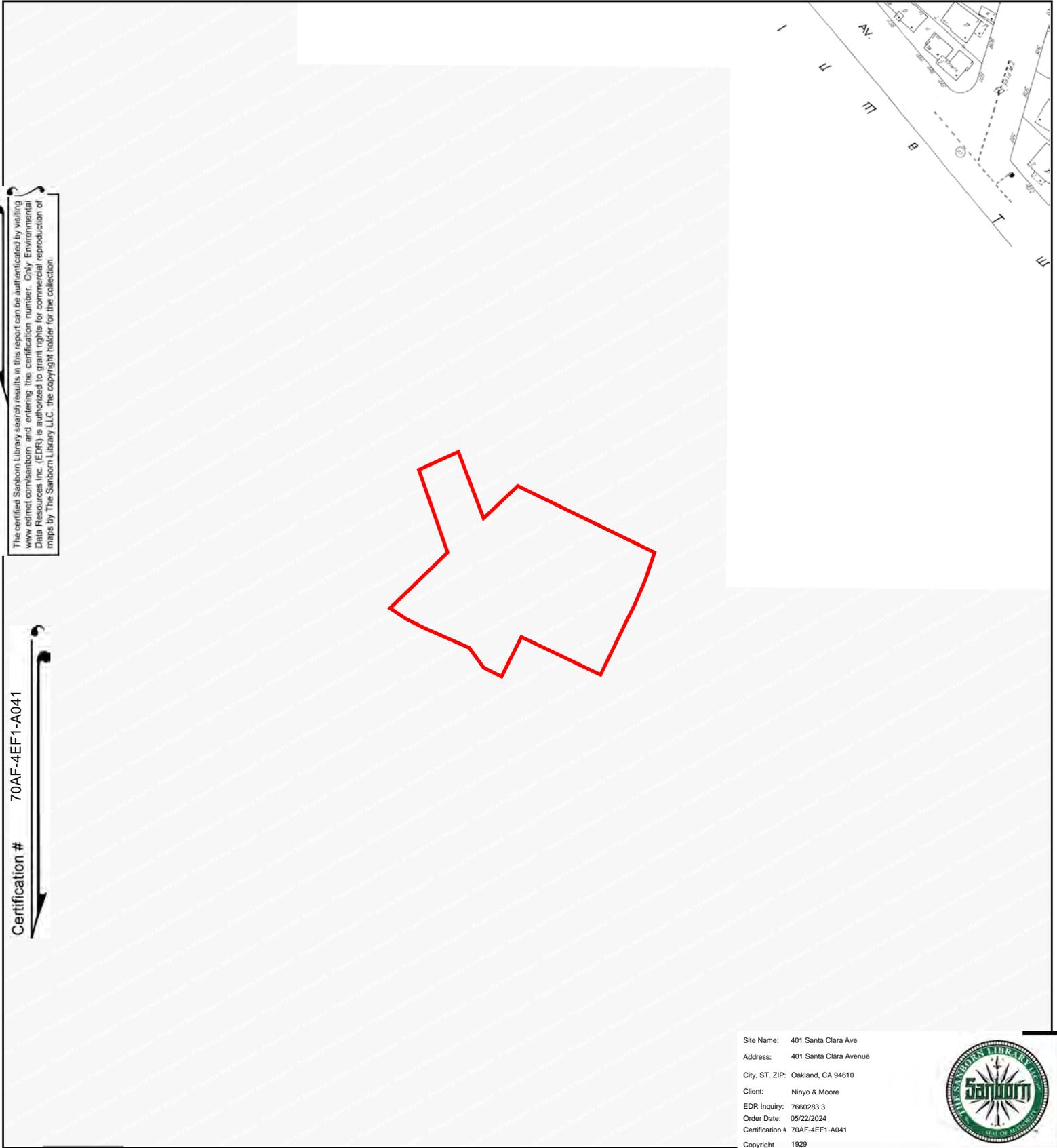


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Volume 2, Sheet 129  
 Volume 2, Sheet 130





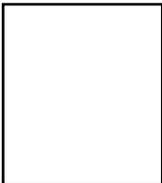
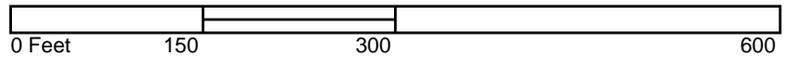
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Outlined areas indicate map sheets within the collection.

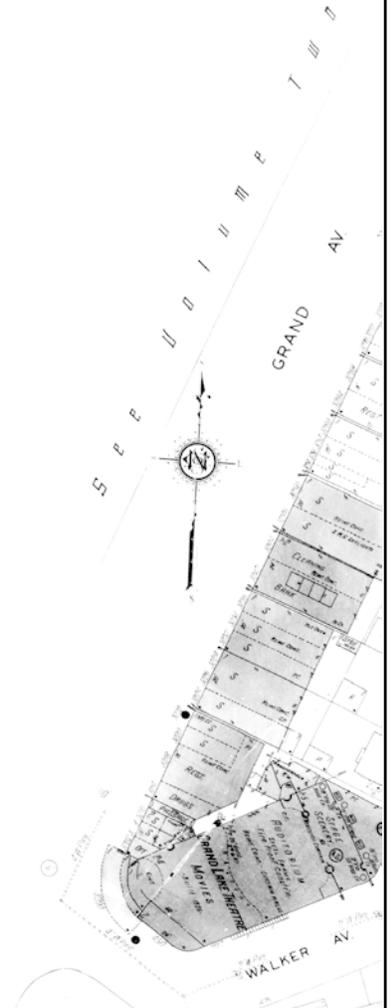
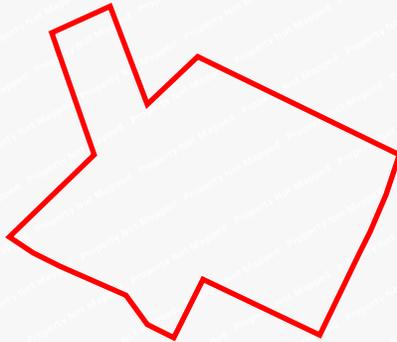


Site Name: 401 Santa Clara Ave  
 Address: 401 Santa Clara Avenue  
 City, ST, ZIP: Oakland, CA 94610  
 Client: Ninyo & Moore  
 EDR Inquiry: 7660283.3  
 Order Date: 05/22/2024  
 Certification #: 70AF-4EF1-A041  
 Copyright: 1928

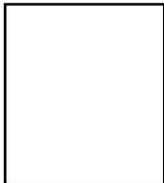
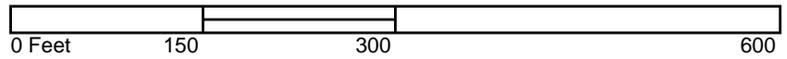


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Certification # 70AF-4EF1-A041



This Certified Sanborn Map combines the following sheets.  
 Outlined areas indicate map sheets within the collection.

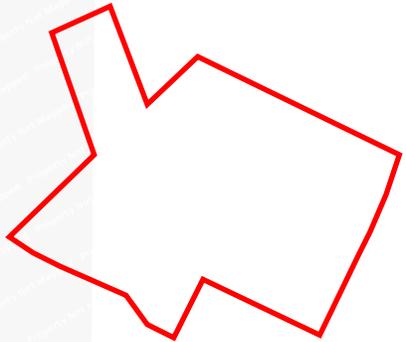


Site Name: 401 Santa Clara Ave  
 Address: 401 Santa Clara Avenue  
 City, ST, ZIP: Oakland, CA 94610  
 Client: Ninyo & Moore  
 EDR Inquiry: 7660283.3  
 Order Date: 05/22/2024  
 Certification # 70AF-4EF1-A041  
 Copyright 1912

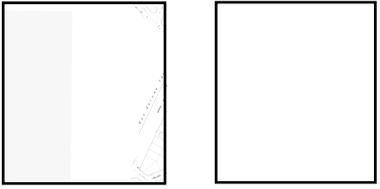
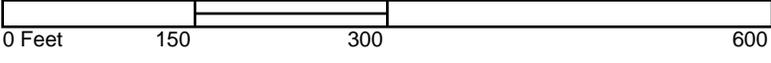


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Certification # 70AF-4EF1-A041



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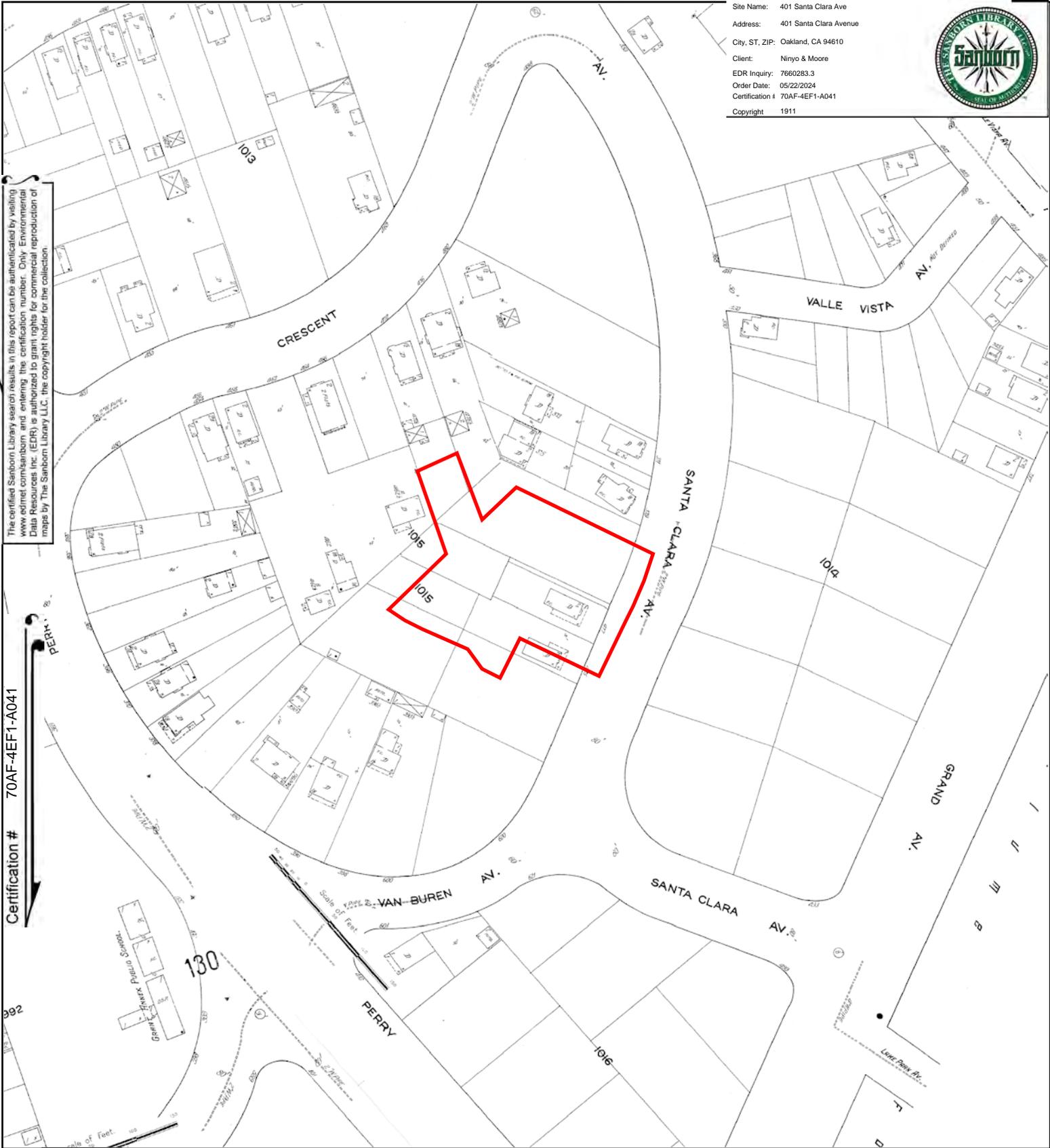


Site Name: 401 Santa Clara Ave  
 Address: 401 Santa Clara Avenue  
 City, ST, ZIP: Oakland, CA 94610  
 Client: Ninyo & Moore  
 EDR Inquiry: 7660283.3  
 Order Date: 05/22/2024  
 Certification #: 70AF-4EF1-A041  
 Copyright: 1911

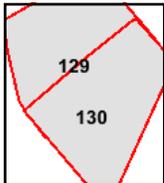
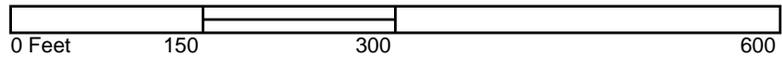


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Certification # 70AF-4EF1-A041

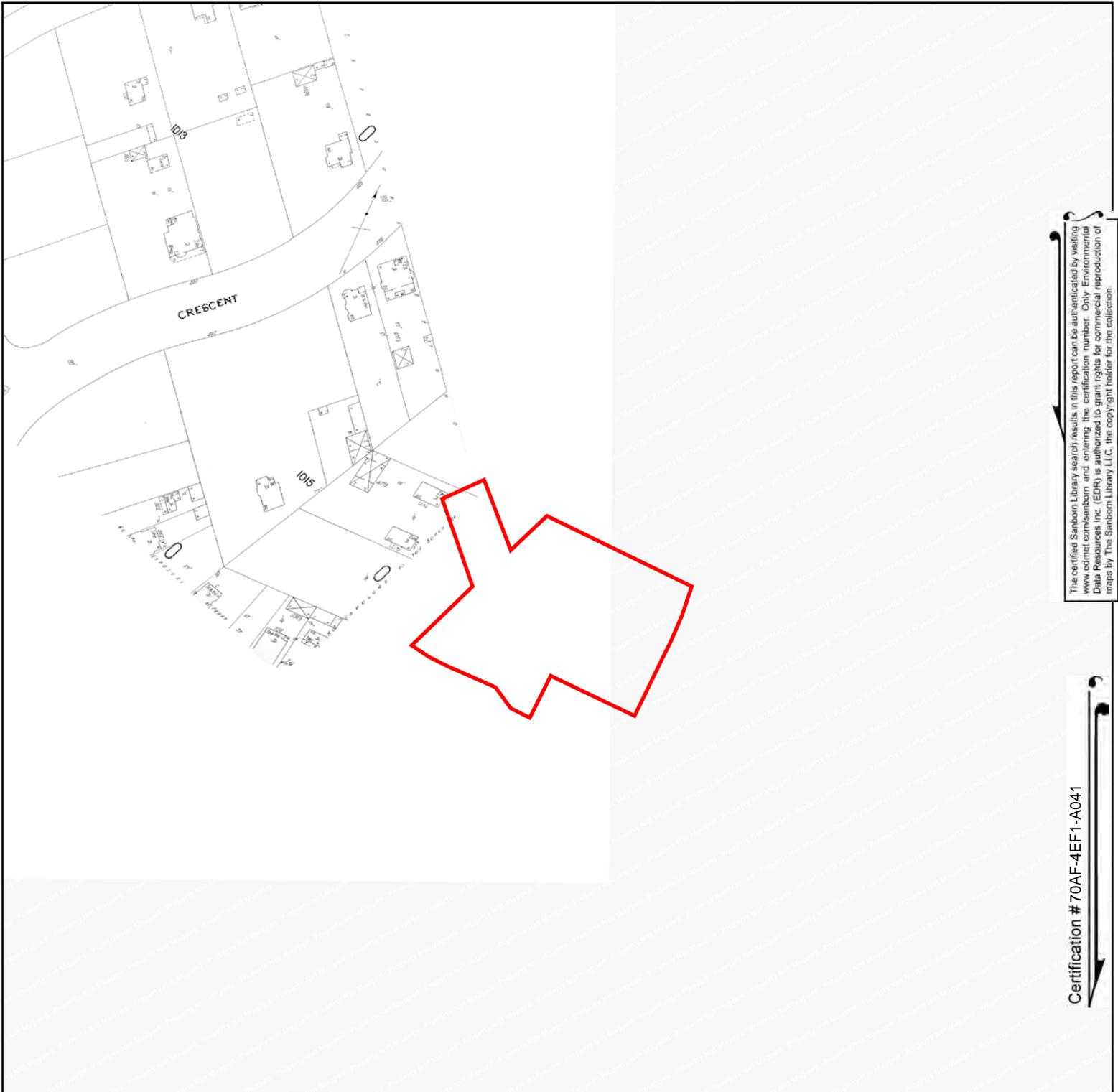


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Volume 2, Sheet 130  
 Volume 2, Sheet 129





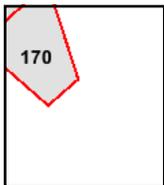
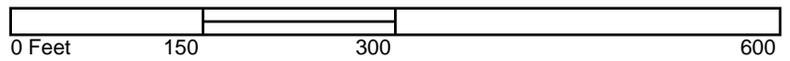
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Certification # 70AF-4EF1-A041

Site Name: 401 Santa Clara Ave  
 Address: 401 Santa Clara Avenue  
 City, ST, ZIP: Oakland, CA 94610  
 Client: Ninyo & Moore  
 EDR Inquiry: 7660283.3  
 Order Date: 05/22/2024  
 Certification # 70AF-4EF1-A041  
 Copyright 1903



This Certified Sanborn Map combines the following sheets. Outlined areas indicate map sheets within the collection.



Volume 2, Sheet 170



**401 Santa Clara Ave**

401 Santa Clara Avenue  
Oakland, CA 94610

Inquiry Number: 7660283.5

May 22, 2024

# The EDR-City Directory Abstract

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## SECTION

Executive Summary

Findings

City Directory Images

*Thank you for your business.*

Please contact EDR at 1-800-352-0050  
with any questions or comments.

### **Disclaimer - Copyright and Trademark Notice**

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## EXECUTIVE SUMMARY

### DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at approximately five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1920 through current. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 660 feet of the target property.

Summary information obtained is provided in the text of this report.

### RECORD SOURCES

The EDR City Directory Report accesses a variety of business directory sources, including Haines, InfoUSA, Polk, Cole, Bresser, and Stewart. Listings marked as EDR Digital Archive access Cole and InfoUSA records. The various directory sources enhance and complement each other to provide a more thorough and accurate report.

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### RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

<u>Year</u>	<u>Source</u>	<u>TP</u>	<u>Adjoining</u>	<u>Text Abstract</u>	<u>Source Image</u>
2020	EDR Digital Archive	X	X	X	-
2017	Cole Information	X	X	X	-
2014	Cole Information	X	X	X	-
2010	Cole Information	X	X	X	-
2006	Haines Company, Inc.	X	X	X	-
2005	Cole Information	X	X	X	-
2002	R. L. Polk & Co.	-	-	-	-
2000	Cole Information	X	X	X	-
	Pacific Bell	X	X	X	-
1996	PACIFIC BELL DIRECTORY	X	X	X	-
1995	Cole Information	X	X	X	-
1993	Pacific Bell	-	-	-	-
1992	Cole Information	X	X	X	-
	PACIFIC BELL DIRECTORY	X	X	X	-
1991	PACIFIC BELL WHITE PAGES	X	X	X	-
1986	Pacific Bell	X	X	X	-

## EXECUTIVE SUMMARY

<u>Year</u>	<u>Source</u>	<u>TP</u>	<u>Adjoining</u>	<u>Text Abstract</u>	<u>Source Image</u>
1986	PACIFIC BELL WHITE PAGES	X	X	X	-
1984	Pacific Bell	-	X	X	-
1982	Pacific Telephone	-	X	X	-
1980	Pacific Telephone	X	X	X	-
1979	Pacific Telephone	-	X	X	-
1976	R. L. Polk & Co.	-	X	X	-
1975	Pacific Telephone	X	X	X	-
1973	Pacific Telephone	-	X	X	-
1970	Pacific Telephone Directory	X	X	X	-
1967	R. L. Polk Co.	X	X	X	-
1965	R. L. Polk & Co.	-	X	X	-
1962	Pacific Telephone	X	X	X	-
1960	Pacific Telephone	-	-	-	-
1959	R. L. Polk & Co.	-	X	X	-
1956	Pacific Telephone	-	-	-	-
1955	The Pacific Telephone & Telegraph Co.	X	X	X	-
1954	R. L. Polk & Co. of California	-	-	-	-
1951	R. L. Polk & Co.	-	X	X	-
1950	The Pacific Telephone & Telegraph Co.	X	X	X	-
1946	R. L. Polk & Co.	-	-	-	-
1945	The Pacific Telephone & Telegraph Co.	X	X	X	-
1943	R. L. Polk & Co.	X	X	X	-
1940	R. L. Polk & Co.	-	-	-	-
1938	Pacific Telephone	X	X	X	-
1933	R. L. Polk & Co.	X	X	X	-
1932	R. L. Polk & Co. of California	-	-	-	-
1928	R.L. Polk and Co of California	X	X	X	-
1926	R. L. Polk & Co.	-	-	-	-
1925	R. L. Polk & Co. of California	X	X	X	-
1920	R. L. Polk & Co. of California	-	X	X	-

# FINDINGS

## TARGET PROPERTY INFORMATION

### ADDRESS

401 Santa Clara Avenue  
Oakland, CA 94610

### FINDINGS DETAIL

Target Property research detail.

### SANTA CLARA AVE

#### 401 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ALLAN ESSEX	EDR Digital Archive
	AMERICAN BAPTIST HMS-THE WEST	EDR Digital Archive
	BARBARA WICKSTRAND	EDR Digital Archive
	BENJAMIN HALIMAH	EDR Digital Archive
	CARMELLA LEIPZIG	EDR Digital Archive
	CAROLYN PRIEST	EDR Digital Archive
	CECIL KENNEY	EDR Digital Archive
	CHARLES SCHWARTZ	EDR Digital Archive
	CHARLES WICKSTRAND	EDR Digital Archive
	CLEO MAYER	EDR Digital Archive
	CYNTHIA LEW	EDR Digital Archive
	DARLENE SCOTT	EDR Digital Archive
	DAVID WEBER	EDR Digital Archive
	DAYLE SCOTT	EDR Digital Archive
	EARL DOLVEN	EDR Digital Archive
	ELEANOR MASON	EDR Digital Archive
	EVELYN DOLVEN	EDR Digital Archive
	FAYE LEE	EDR Digital Archive
	GAYLE ESSEX	EDR Digital Archive
	GEORGE TURNER	EDR Digital Archive
	GLADYS RIDEOUT	EDR Digital Archive
	GRAND LAKE GARDENS	EDR Digital Archive

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	HERBERT ROTH	EDR Digital Archive
	IRA NELKEN	EDR Digital Archive
	JACK NAKASHIMA	EDR Digital Archive
	JAMES ZAHNLEY	EDR Digital Archive
	JOAN EARLE	EDR Digital Archive
	JOAN WICKSTRAND	EDR Digital Archive
	JOHN WYATT	EDR Digital Archive
	JOSEPH JEDEIKIN	EDR Digital Archive
	JOYCE STONE	EDR Digital Archive
	JULIA VITERO	EDR Digital Archive
	JUNE AIREY	EDR Digital Archive
	KORKUT BARDAKCI	EDR Digital Archive
	LEAH EMDY	EDR Digital Archive
	LOUISE GLYNN	EDR Digital Archive
	MARIE SIMIRENKO	EDR Digital Archive
	MARY MOODY	EDR Digital Archive
	MILDRED LANZY	EDR Digital Archive
	MITSURU TAMURA	EDR Digital Archive
	MURIEL ROTH	EDR Digital Archive
	MURIEL TAMURA	EDR Digital Archive
	ROSA JAMES	EDR Digital Archive
	RUTH BARDAKCI	EDR Digital Archive
	SALLY HOUSTON	EDR Digital Archive
	SARAH REDICK	EDR Digital Archive
	SUZANNE MEYER	EDR Digital Archive
	SUZANNE SOPER	EDR Digital Archive
	SYLVIA SCHWARTZ	EDR Digital Archive
	TEDDY BARE	EDR Digital Archive
	WALTER BECK	EDR Digital Archive
	WILLIAM BONSEY	EDR Digital Archive
2017	ALLAN ESSEX	Cole Information
	ANNEMARIE NEIGHBOR	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	BOB KELLEY	Cole Information
	BOYD HAMILTON	Cole Information
	BRENDA KOPLIN	Cole Information
	BRIAN COOPER	Cole Information
	CHALICE FONG	Cole Information
	CHARLES WICKSTRAND	Cole Information
	CLARA COHEN	Cole Information
	EDMUND BUSSEY	Cole Information
	ELIZABETH PORTER	Cole Information
	ESTELLE LEWIS	Cole Information
	FAYE LEE	Cole Information
	GEORGE FLANAGAN	Cole Information
	GILLETTE JAMES	Cole Information
	GLORIA CONN	Cole Information
	GRAND LAKE GARDENS	Cole Information
	GREGORY MOROZUMI	Cole Information
	HELEN STRAHAN	Cole Information
	HERBERT ROTH	Cole Information
	JACK ZEFF	Cole Information
	JAMES SOPER	Cole Information
	JANE MELBOURNE	Cole Information
	JEAN JONES	Cole Information
	JOAN CLOUTIER	Cole Information
	JOAN THATCHER	Cole Information
	JOE JEDEKIN	Cole Information
	JOHN NELSON	Cole Information
	JOHN OSHIRO	Cole Information
	JOYCE TRENTACOSTE	Cole Information
	JUDITH MONTELL	Cole Information
	JULIA VITERO	Cole Information
	KAREN WELSH	Cole Information
	KATHIE ZATKIN	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	LESTER MARKS	Cole Information
	LINDA VELDHUIZEN	Cole Information
	MARGERY RENDAHL	Cole Information
	MARION LEE	Cole Information
	MARION SCIRE	Cole Information
	MARJORIE WONG	Cole Information
	MARY GAMSON	Cole Information
	MARY MOODY	Cole Information
	MARY PASTERNAK	Cole Information
	MILDRED LANZY	Cole Information
	MILDRED WONG	Cole Information
	PATRICIA BUTTERFIELD	Cole Information
	RHONDA RIGHTER	Cole Information
	RICHELLE JONES	Cole Information
	ROBERT JOLLY	Cole Information
	ROBERT WILLIAMS	Cole Information
	ROWENA JACKSON	Cole Information
	SCOTT HOUSTON	Cole Information
	SHEREE ANDERSON	Cole Information
	SIMPSON DONG	Cole Information
	SKAIDRITE RUBENE	Cole Information
	THEODORE HEXTER	Cole Information
	WILLIAM BONSEY	Cole Information
2014	AGI BAN	Cole Information
	ALLEN MOY	Cole Information
	ANA ANGULO	Cole Information
	ANITA CURTIS-HINES	Cole Information
	ANNABELLE GRAVES	Cole Information
	ANTOINETTE HARRIS	Cole Information
	BEVERLY COOPER	Cole Information
	CAROL BYRNE	Cole Information
	CAROLINE SUMMER	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	CECILIA ALVAREZ	Cole Information
	CHALICE FONG	Cole Information
	CLARA COHEN	Cole Information
	DANIEL WINTER	Cole Information
	EDMUND BUSSEY	Cole Information
	ELIZABETH JAMES	Cole Information
	ETHEL FISHMAN	Cole Information
	FRANKLIN CHAN	Cole Information
	GEORGE FLANAGAN	Cole Information
	GLORIA CONN	Cole Information
	GORDON WHITE	Cole Information
	GRAND LAKE GARDEND SALES OFFICE	Cole Information
	GRAND LAKE GARDENS	Cole Information
	GREGORY MOROZUMI	Cole Information
	HELEN TRYON	Cole Information
	HENRY LEE	Cole Information
	IRENE JENNINGS	Cole Information
	JACK ZEFF	Cole Information
	JASON WARD	Cole Information
	JEANNE MAT	Cole Information
	JOAN CLOUTIER	Cole Information
	JOAN EARLE	Cole Information
	JOAN THATCHER	Cole Information
	JOHN OSHIRO	Cole Information
	KAREN WELSH	Cole Information
	LESTER MARKS	Cole Information
	LINDA VELDHUIZEN	Cole Information
	LUCILLE HIMMEL	Cole Information
	MARJORIE WONG	Cole Information
	MARY RANDOLPH	Cole Information
	MILDRED LANZY	Cole Information
	MILDRED MASSEY	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	MILDRED WONG	Cole Information
	NANCY NOVICK	Cole Information
	NINA OLMEDO-JAQUENOD	Cole Information
	NONA OWENS	Cole Information
	NORMA FREY	Cole Information
	PATRICIA BUTTERFIELD	Cole Information
	PAULINE KOLENDA	Cole Information
	RICHELLE JONES	Cole Information
	ROBERT JOLLY	Cole Information
	ROWENA JACKSON	Cole Information
	SCOTT HOUSTON	Cole Information
	SIMPSON DONG	Cole Information
	STENNIS RAYMOND	Cole Information
	THEODORE HEXTER	Cole Information
TIM NUVEEN	Cole Information	
WANDA KELLEY	Cole Information	
WILLIAM BONSEY	Cole Information	
2010	BERTHA BECK	Cole Information
	BRIAN COOPER	Cole Information
	CAROL BYRNE	Cole Information
	CECILIA ALVAREZ	Cole Information
	CHIH HU	Cole Information
	CLARA COHEN	Cole Information
	D ABRAHAMSON	Cole Information
	DOROTHY ANGULO	Cole Information
	EDDIE CHING	Cole Information
	EDMUND BUSSEY	Cole Information
	ELIZABETH JAMES	Cole Information
	ELLENOR SCHULLER	Cole Information
	ETHEL FISHMAN	Cole Information
	EVERETT SHOCKLEY	Cole Information
FLORENCE LEBBERT	Cole Information	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2010	GEORGE CRAPO	Cole Information
	GEORGE FLANAGAN	Cole Information
	GRAND LAKE GARDENS	Cole Information
	GRANT HANSON	Cole Information
	HELEN TRYON	Cole Information
	HENRY LEE	Cole Information
	IADORA KELLEY	Cole Information
	IRENE JENNINGS	Cole Information
	ISABELLA PAGANO	Cole Information
	JAKE ZEFF	Cole Information
	JEANETTE FISS	Cole Information
	JENNIE MILANI	Cole Information
	JOAN THATCHER	Cole Information
	JOHN TAYLOR	Cole Information
	JOHN VELDHUIZEN	Cole Information
	JOSEPH PUMMILL	Cole Information
	LUCILLE HIMMEL	Cole Information
	MARCEL PAHLAVAN	Cole Information
	MARIE KROVOZA	Cole Information
	MILTON BRAVES	Cole Information
	NONA OWENS	Cole Information
	OGDEN JONES	Cole Information
	PATRICIA BUTTERFIELD	Cole Information
	ROWENA JACKSON	Cole Information
	RUTH SCHNELLER	Cole Information
	RUTH YOUNG	Cole Information
	SALLY HOUSTON	Cole Information
	STANLEY BENSON	Cole Information
	STELLA HEXTER	Cole Information
	VIRGINIA MERSCHEL	Cole Information
	WILLIAM BONSEY	Cole Information
	XYZ WILSON	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2010	YOLA HALL	Cole Information
2006	ABRAHAMSON D	Haines Company, Inc.
	AMERBAPTHMS OF	Haines Company, Inc.
	ANDERSON Russell G	Haines Company, Inc.
	BALL William	Haines Company, Inc.
	BECK Walter	Haines Company, Inc.
	BETTS MERVYN REV	Haines Company, Inc.
	BINGHAM Elsie	Haines Company, Inc.
	BONSEY Ed	Haines Company, Inc.
	FLANAGAN George	Haines Company, Inc.
	GARDENS	Haines Company, Inc.
	GARDENS MRKTG	Haines Company, Inc.
	GARDENSTHE	Haines Company, Inc.
	GRAND LAKE	Haines Company, Inc.
	GRAND LAKE GARDENS	Haines Company, Inc.
	HARRISON E REV	Haines Company, Inc.
	JACKSON Row ena	Haines Company, Inc.
	JENNINGS Ray	Haines Company, Inc.
	KENNEY V Irginia	Haines Company, Inc.
	LEBBERT Florence	Haines Company, Inc.
	NELSON Jean	Haines Company, Inc.
	New m AN Rulh	Haines Company, Inc.
	OWENS Mary	Haines Company, Inc.
	OWENS Nona	Haines Company, Inc.
	SCHNELLER R M	Haines Company, Inc.
	SCHULLER Frederick	Haines Company, Inc.
	TAYLOR John	Haines Company, Inc.
	THE WST GRND	Haines Company, Inc.
	TRYON Warren V	Haines Company, Inc.
	WAGENER H Heath	Haines Company, Inc.
	WHITE Rosemary	Haines Company, Inc.
	WILSONY	Haines Company, Inc.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	WILUAMS	Haines Company, Inc.
	WINTER M	Haines Company, Inc.
	WONG Mildred	Haines Company, Inc.
	WOODALL B	Haines Company, Inc.
2005	A BOYD	Cole Information
	A GIPNER	Cole Information
	ANGELINA JOHNSON	Cole Information
	BETTY WILL	Cole Information
	BETTY WOODALL	Cole Information
	CLAY WILSON	Cole Information
	D HAMILTON	Cole Information
	ELSIE BINGHAM	Cole Information
	FLORENCE LEBBERT	Cole Information
	GEORGE FLANAGAN	Cole Information
	GRAND LAKE GARDENS	Cole Information
	GRAND LAKE GARDENS BEAUTY SHOP	Cole Information
	HENRY WAGENER	Cole Information
	JANET PHILLIPS	Cole Information
	JEAN NELSON	Cole Information
	JEAN WOODS	Cole Information
	JOHN FRANCESCO	Cole Information
	JOHN TAYLOR	Cole Information
	JOHNNIE CRUMPTON	Cole Information
	L LOUIE	Cole Information
	LELA CROMWELL	Cole Information
	MARIA JUNE	Cole Information
	MARY OWENS	Cole Information
	MATTYE ROBINSON	Cole Information
MERVYN BETTS	Cole Information	
MILDRED WONG	Cole Information	
RAY JENNINGS	Cole Information	
RITA TURNER	Cole Information	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	ROSEMARY WHITE	Cole Information
	RUTH NEWMAN	Cole Information
	STACIE BLAIR	Cole Information
	THOMAS WOODSIDE	Cole Information
	WALTER BECK	Cole Information
	WANDA HADDEN	Cole Information
	WILLIAM BALL	Cole Information
2000	ALICE NORBALLE	Cole Information
	AMERICAN BAPTIST HOMES OF THE WEST	Cole Information
	AMERICAN BAPTIST HOMES OF THE WEST PDMNT GARDENS	Cole Information
	AVA GORDON	Cole Information
	BETTY WOODALL	Cole Information
	CARL FREEMAN	Cole Information
	D ABRAHAMSON	Cole Information
	D ROMANKIW	Cole Information
	D SIMON	Cole Information
	DAVID COOK	Cole Information
	DOROTHY FARR	Cole Information
	DOROTHY WIEST	Cole Information
	E BINGHAM	Cole Information
	E PEHRSON	Cole Information
	ESTHER JOPLIN	Cole Information
	FRANCES JOHNSON	Cole Information
	FRANK TAYLOR	Cole Information
	GARDENS THE	Cole Information
	GENEVA BOWIE	Cole Information
	GRAND LAKE GARDENS	Cole Information
	GRAND LAKE GARDENS BEAUTY SHOP	Cole Information
	GRAND LAKE GARDENS MARKETING OFFICE	Cole Information
	H BREAULT	Cole Information
H WAGENER	Cole Information	
HELEN COLLIS	Cole Information	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	J PHILLIPS	Cole Information
	JAMES WELLS	Cole Information
	JOHN DIFRANCESCO	Cole Information
	JOHN FRANCESCO	Cole Information
	L CONVERSE	Cole Information
	M DORMEYER	Cole Information
	M MACNAIR	Cole Information
	MERVYN BETTS	Cole Information
	RAY JENNINGS	Cole Information
	RICHARD QUEY	Cole Information
	RUSSELL ANDERSON	Cole Information
	RUTH NEWMAN	Cole Information
	SHIRLEY MOORE	Cole Information
	STEPHEN STRONG	Cole Information
	TANJA STURMAN	Cole Information
	V MEYER	Cole Information
	W ELLIS	Cole Information
	WILLARD CALDEN	Cole Information
	101 BETTS MERVYN REV	Pacific Bell
	102 ABRAHAMSON D	Pacific Bell
	106 SIMON D	Pacific Bell
	108 MEYER V M	Pacific Bell
	201 FREEMAN CARL	Pacific Bell
	202 TAYLOR FRANK H	Pacific Bell
	204 BROWN JOY	Pacific Bell
	205 MOORE RUSSELL & SHIRLEY	Pacific Bell
	211 ANDERSON RUSSELL G	Pacific Bell
	214 DI FRANCESCO JOHN	Pacific Bell
	220 BOWIE GENEVA	Pacific Bell
	302 COLLIS HELEN	Pacific Bell
	309 STURMAN TANJA B	Pacific Bell
	310 CONVERSE L B	Pacific Bell

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	314 WAGENER H HEATH	Pacific Bell
	318 PEHRSON E M	Pacific Bell
	409 GORDON AVA J	Pacific Bell
	411 DORMEYER M	Pacific Bell
	414 JOHNSON FRANCES	Pacific Bell
	419 MACNAIR MARJORIE D	Pacific Bell
	424 WELLS JAMES H	Pacific Bell
	501 WIEST DOROTHY	Pacific Bell
	502 NEWMAN RUTH	Pacific Bell
	508 NORBALLE A	Pacific Bell
	509 FARR DOROTHY W	Pacific Bell
	511 BINGHAM E M	Pacific Bell
	COOK DAVID L & JEAN	Pacific Bell
	GRAND LAKE GARDENS	Pacific Bell
	GRAND LAKE GARDENS BEAUTY SHOP	Pacific Bell
	JENNINGS RAY & IRENE	Pacific Bell
1996	101 BETTS MERVYN REV	PACIFIC BELL DIRECTORY
	102 ABRAHAMSON D	PACIFIC BELL DIRECTORY
	106 MEYER V M	PACIFIC BELL DIRECTORY
	110 O BRYAN CHAS W	PACIFIC BELL DIRECTORY
	202 TAYLOR FRANK H	PACIFIC BELL DIRECTORY
	208 GOMBERG HELEN	PACIFIC BELL DIRECTORY
	211 ANDERSON RUSSELL G	PACIFIC BELL DIRECTORY
	212 MANGRUM G P	PACIFIC BELL DIRECTORY
	218 LAFAILLE M L	PACIFIC BELL DIRECTORY
	302 COLLIS HELEN	PACIFIC BELL DIRECTORY
	306 LEE T KONG	PACIFIC BELL DIRECTORY
	310 CONVERSE L B	PACIFIC BELL DIRECTORY
	314 WAGENER H HEATH	PACIFIC BELL DIRECTORY
	317 LEWIS ALICE H	PACIFIC BELL DIRECTORY
	318 PEHRSON E M	PACIFIC BELL DIRECTORY
	322 MCBRIDE LAVINA U	PACIFIC BELL DIRECTORY

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1996	409 GORDON AVA J	PACIFIC BELL DIRECTORY
	411 DORMEYER M	PACIFIC BELL DIRECTORY
	414 JOHNSON FRANCES	PACIFIC BELL DIRECTORY
	416 UNDERWOOD HELEN S	PACIFIC BELL DIRECTORY
	417 PICK D	PACIFIC BELL DIRECTORY
	419 MACNAIR MARJORIE D	PACIFIC BELL DIRECTORY
	420 OGDEN D C	PACIFIC BELL DIRECTORY
	423 FORD M	PACIFIC BELL DIRECTORY
	505 MACLAREN PETER A	PACIFIC BELL DIRECTORY
	509 PETERSON ASTRID	PACIFIC BELL DIRECTORY
	511 BINGHAM E M	PACIFIC BELL DIRECTORY
	516 CALDEN RUTH M	PACIFIC BELL DIRECTORY
	519 FAULHABER AUDREY E	PACIFIC BELL DIRECTORY
	524 JOPLIN E G	PACIFIC BELL DIRECTORY
	COOK DAVID L & JEAN	PACIFIC BELL DIRECTORY
	GRAND LAKE GARDENS	PACIFIC BELL DIRECTORY
GRAND LAKE GARDENS BEAUTY SHOP	PACIFIC BELL DIRECTORY	
1995	ABRAHAMSON, D	Cole Information
	ADAMS, EDWARD P	Cole Information
	BAILEY, RICHARD	Cole Information
	BETTS, MERVYN	Cole Information
	BINGHAM, E M	Cole Information
	CALDEN, RUTH	Cole Information
	CARPENTER, A M	Cole Information
	CLARK, JOHN P	Cole Information
	COLLIS, HELEN	Cole Information
	CONVERSE, L B	Cole Information
	COOK, DAVID L	Cole Information
	CRUMPTON, J L	Cole Information
	EBERHARDT, DOROTHY C	Cole Information
	FORD, M	Cole Information
	FORSTER, CLAIRE E	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1995	GORDON, ARTHUR E	Cole Information
	GRAND LAKE GARDENS	Cole Information
	GRAND LAKE GARDENS BEAUTY SHOP	Cole Information
	HEALY, THOMAS	Cole Information
	HENDRICKSON, J A	Cole Information
	HOPKINS, M E	Cole Information
	JOHNSON, FRANCES	Cole Information
	JOTTRAND, G	Cole Information
	KEELER, M A	Cole Information
	LAFAILLE, M L	Cole Information
	LAFLEUR, LLOYD B	Cole Information
	LEE, T K	Cole Information
	LESLEY, B J	Cole Information
	LEWIS, ALICE H	Cole Information
	MACLAREN, PETER A	Cole Information
	MANGRUM, GOLDIE P	Cole Information
	MCBRIDE, LAVINA U	Cole Information
	MEYER, V M	Cole Information
	OBRYAN, CHARLES W	Cole Information
	OGDEN, D C	Cole Information
	PHILLIPS, J A	Cole Information
	PICK, D	Cole Information
	POLLACK, LOUIS R	Cole Information
	ROSS, HARRY H	Cole Information
	SWYTER, WILHELM	Cole Information
	TAYLOR, FRANK H	Cole Information
	WAGENER, E J	Cole Information
YAGER, STEPHAN S	Cole Information	
YERKES, ROBERT	Cole Information	
1992	AMER BAPT HOMES WST	Cole Information
	BAILEY, RICHARD	Cole Information
	CARPENTER, A M	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1992	COOK, DAVID L	Cole Information
	FAREY, ART	Cole Information
	HENDRICKSON, J A	Cole Information
	HOPKINS, M E	Cole Information
	LAFAILLE, M L	Cole Information
	MURRISH, JOHN B	Cole Information
	PETERSON, ASTRID	Cole Information
	QUINBY, M E	Cole Information
	ROGERS, IRVIN	Cole Information
	WILL, K H	Cole Information
	WOOD, MAXINE	Cole Information
	101 BETTS MERVYN REV	PACIFIC BELL DIRECTORY
	102 ABRAHAMSON D	PACIFIC BELL DIRECTORY
	104 BRINK A K	PACIFIC BELL DIRECTORY
	106 MEYER V M	PACIFIC BELL DIRECTORY
	107 BANTLEY AL	PACIFIC BELL DIRECTORY
	108 MURRISH JOHN BOB	PACIFIC BELL DIRECTORY
	109 COOKSON LEAH	PACIFIC BELL DIRECTORY
	110 O BRYAN CHAS W	PACIFIC BELL DIRECTORY
	201 SMITH RUTH E	PACIFIC BELL DIRECTORY
	202 TOMASH TIMA	PACIFIC BELL DIRECTORY
	206 TERRY E R	PACIFIC BELL DIRECTORY
	207 FREDERICKS VERA A	PACIFIC BELL DIRECTORY
	210 HOAG K	PACIFIC BELL DIRECTORY
	212 CASSMAN VICTOR R	PACIFIC BELL DIRECTORY
	217 SWYTER WILHELMINE	PACIFIC BELL DIRECTORY
	218 LAFAILLE M L	PACIFIC BELL DIRECTORY
	219 STAUFFER N H	PACIFIC BELL DIRECTORY
	220 HOPKINS M E	PACIFIC BELL DIRECTORY
	223 POLLACK LOUIS R	PACIFIC BELL DIRECTORY
	302 WOOD MAXINE	PACIFIC BELL DIRECTORY
	307 MALCOLM FLORENCE	PACIFIC BELL DIRECTORY

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1992	310 CONVERSE L B	PACIFIC BELL DIRECTORY
	314 WAGENER H HEATH	PACIFIC BELL DIRECTORY
	317 LEWIS ALICE H	PACIFIC BELL DIRECTORY
	319 DALBY D J	PACIFIC BELL DIRECTORY
	322 MCBRIDE LAVINA U	PACIFIC BELL DIRECTORY
	323 HENDRICKSON J A	PACIFIC BELL DIRECTORY
	403 LANDGRAF E	PACIFIC BELL DIRECTORY
	406 LOZIER AIMEE A	PACIFIC BELL DIRECTORY
	409 CLARK JOHN P MRS	PACIFIC BELL DIRECTORY
	410 SILBER FRITZ & PRISCILLA	PACIFIC BELL DIRECTORY
	411 DORMEYER M	PACIFIC BELL DIRECTORY
	412 RODE LINCOLN	PACIFIC BELL DIRECTORY
	414 JOHNSON FRANCES	PACIFIC BELL DIRECTORY
	416 UNDERWOOD HELEN S	PACIFIC BELL DIRECTORY
	417 PICK D	PACIFIC BELL DIRECTORY
	420 OGDEN D C	PACIFIC BELL DIRECTORY
	422 FAREY ART	PACIFIC BELL DIRECTORY
	423 FORD M	PACIFIC BELL DIRECTORY
	424 GLASER JULIUS	PACIFIC BELL DIRECTORY
	505 MACDONALD RUTH	PACIFIC BELL DIRECTORY
	508 BAILEY RICHARD	PACIFIC BELL DIRECTORY
	509 PETERSON ASTRID	PACIFIC BELL DIRECTORY
	510 ROSS HARRY H	PACIFIC BELL DIRECTORY
	511 BINGHAM E M	PACIFIC BELL DIRECTORY
	512 QUINBY M E	PACIFIC BELL DIRECTORY
	516 KLICK I C	PACIFIC BELL DIRECTORY
	518 FORSTER CLAIRE E	PACIFIC BELL DIRECTORY
	519 WEIGUM RAYMOND REV	PACIFIC BELL DIRECTORY
	520 WILL K H	PACIFIC BELL DIRECTORY
	523 JOTTRAND G	PACIFIC BELL DIRECTORY
	524 JOPLIN E G	PACIFIC BELL DIRECTORY
	GRAND LAKE GARDENS	PACIFIC BELL DIRECTORY

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1992	GRAND LAKE GARDENS BEAUTY SHOP	PACIFIC BELL DIRECTORY
1991	Adams Edward P	PACIFIC BELL WHITE PAGES
	Brink AK	PACIFIC BELL WHITE PAGES
	Burke C A	PACIFIC BELL WHITE PAGES
	Carpenter A M	PACIFIC BELL WHITE PAGES
	Carpenter Adelbert	PACIFIC BELL WHITE PAGES
	Carpenter AN	PACIFIC BELL WHITE PAGES
	Clark John P Mrs	PACIFIC BELL WHITE PAGES
	Converse LB	PACIFIC BELL WHITE PAGES
	Cookson Leah	PACIFIC BELL WHITE PAGES
	Criswell Marion	PACIFIC BELL WHITE PAGES
	Criswell PJ	PACIFIC BELL WHITE PAGES
	Dalby David & Kitty	PACIFIC BELL WHITE PAGES
	Dalby DJ	PACIFIC BELL WHITE PAGES
	Dodge E M	PACIFIC BELL WHITE PAGES
	Dodge E W	PACIFIC BELL WHITE PAGES
	Dormeyer M	PACIFIC BELL WHITE PAGES
	Farey Art & Edith	PACIFIC BELL WHITE PAGES
	Fletcher Florence I	PACIFIC BELL WHITE PAGES
	Fletcher Gary W	PACIFIC BELL WHITE PAGES
	Ford M	PACIFIC BELL WHITE PAGES
	Forster Claire E	PACIFIC BELL WHITE PAGES
	GARDEN S	PACIFIC BELL WHITE PAGES
	Glaser Julius	PACIFIC BELL WHITE PAGES
	Glaser K	PACIFIC BELL WHITE PAGES
	Gordon	PACIFIC BELL WHITE PAGES
	Gordon Arthur E & Joyce	PACIFIC BELL WHITE PAGES
	Gordon B	PACIFIC BELL WHITE PAGES
	Grand Lake Gardens	PACIFIC BELL WHITE PAGES
	Grand Lake Gardens Beauty Shop	PACIFIC BELL WHITE PAGES
	Grant A	PACIFIC BELL WHITE PAGES
	Hart Harry Pendleton	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1991	Hazlett M V	PACIFIC BELL WHITE PAGES
	Hoag K	PACIFIC BELL WHITE PAGES
	Hopkins ME	PACIFIC BELL WHITE PAGES
	Johnson Allen	PACIFIC BELL WHITE PAGES
	Joplin E G	PACIFIC BELL WHITE PAGES
	Jottrand G	PACIFIC BELL WHITE PAGES
	Joubert Betty	PACIFIC BELL WHITE PAGES
	Joubert L	PACIFIC BELL WHITE PAGES
	Joubert Patsy R	PACIFIC BELL WHITE PAGES
	Jouganatos G	PACIFIC BELL WHITE PAGES
	Joung R	PACIFIC BELL WHITE PAGES
	Kilck I C	PACIFIC BELL WHITE PAGES
	La Fleur Lloyd B	PACIFIC BELL WHITE PAGES
	Lafaille ML	PACIFIC BELL WHITE PAGES
	Landgraf E	PACIFIC BELL WHITE PAGES
	Lewis Alice H	PACIFIC BELL WHITE PAGES
	Lozier Aimee A	PACIFIC BELL WHITE PAGES
	Mac Donald Ruth	PACIFIC BELL WHITE PAGES
	Malcolm Florence	PACIFIC BELL WHITE PAGES
	Mc Connell T R	PACIFIC BELL WHITE PAGES
	Mc Hale Cheryl	PACIFIC BELL WHITE PAGES
	Mc Hale CM	PACIFIC BELL WHITE PAGES
	Meyer V M	PACIFIC BELL WHITE PAGES
	Meyer Virginia L telcommunctn constnt	PACIFIC BELL WHITE PAGES
	Meyer W C Capt US N	PACIFIC BELL WHITE PAGES
	Murrish John Bob	PACIFIC BELL WHITE PAGES
	Murrow Jack	PACIFIC BELL WHITE PAGES
	Murry B	PACIFIC BELL WHITE PAGES
	OBryan Chas W	PACIFIC BELL WHITE PAGES
	Peterson Astrid	PACIFIC BELL WHITE PAGES
	Pick D	PACIFIC BELL WHITE PAGES
	Quinby M E	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1991	Ross Harry H	PACIFIC BELL WHITE PAGES
	S Bber Irw in	PACIFIC BELL WHITE PAGES
	S Ober Fritz & Priscilla	PACIFIC BELL WHITE PAGES
	Saber Gary	PACIFIC BELL WHITE PAGES
	Siber K	PACIFIC BELL WHITE PAGES
	Smith A L	PACIFIC BELL WHITE PAGES
	Smith AM Knsngtn	PACIFIC BELL WHITE PAGES
	Smith Ruth E	PACIFIC BELL WHITE PAGES
	Stauffer N H	PACIFIC BELL WHITE PAGES
	Sw yter Wilhelmine	PACIFIC BELL WHITE PAGES
	TDD Only	PACIFIC BELL WHITE PAGES
	Terry E R	PACIFIC BELL WHITE PAGES
	Underw ood Helen S	PACIFIC BELL WHITE PAGES
	Wagener Elizabeth J	PACIFIC BELL WHITE PAGES
	Wagener J Parry	PACIFIC BELL WHITE PAGES
	Wagener M	PACIFIC BELL WHITE PAGES
	Wagoner H Heath	PACIFIC BELL WHITE PAGES
	Wagoner M	PACIFIC BELL WHITE PAGES
	Wickham J H	PACIFIC BELL WHITE PAGES
	Wickhorst F H	PACIFIC BELL WHITE PAGES
	Will K H	PACIFIC BELL WHITE PAGES
	Witcl Bw ide Lavina U	PACIFIC BELL WHITE PAGES
	Wolcott AS	PACIFIC BELL WHITE PAGES
	Wolcott Wayne E	PACIFIC BELL WHITE PAGES
	Wold A	PACIFIC BELL WHITE PAGES
	Wold David	PACIFIC BELL WHITE PAGES
	Wold Erling	PACIFIC BELL WHITE PAGES
	Wood Maxine	PACIFIC BELL WHITE PAGES
	Woodhead W A	PACIFIC BELL WHITE PAGES
	Woodhouse Keith & Leighton	PACIFIC BELL WHITE PAGES
Woodhouse Thos E	PACIFIC BELL WHITE PAGES	
1986	Anspach L	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Anspach Ruth	PACIFIC BELL WHITE PAGES
	Ansten Karen	PACIFIC BELL WHITE PAGES
	Anstenson H 6	PACIFIC BELL WHITE PAGES
	Brown DE	PACIFIC BELL WHITE PAGES
	Brown DF	PACIFIC BELL WHITE PAGES
	Brownell Kathryn	PACIFIC BELL WHITE PAGES
	Burke CA	PACIFIC BELL WHITE PAGES
	Clark B	PACIFIC BELL WHITE PAGES
	Clark John P Mrs	PACIFIC BELL WHITE PAGES
	Clark John R	PACIFIC BELL WHITE PAGES
	Converse L B	PACIFIC BELL WHITE PAGES
	Converse MB	PACIFIC BELL WHITE PAGES
	Converse Marie B	PACIFIC BELL WHITE PAGES
	Cooper FM	PACIFIC BELL WHITE PAGES
	Cooper Fred F atty Tribune Tower	PACIFIC BELL WHITE PAGES
	Cree MA	PACIFIC BELL WHITE PAGES
	Criswell Marion	PACIFIC BELL WHITE PAGES
	Curtis MG	PACIFIC BELL WHITE PAGES
	Davis H	PACIFIC BELL WHITE PAGES
	Dexter ES	PACIFIC BELL WHITE PAGES
	Dodge EM	PACIFIC BELL WHITE PAGES
	Dodge EW	PACIFIC BELL WHITE PAGES
	Doherty EM	PACIFIC BELL WHITE PAGES
	Dormeyer M	PACIFIC BELL WHITE PAGES
	Downer SB	PACIFIC BELL WHITE PAGES
	Early EJ	PACIFIC BELL WHITE PAGES
	Ebbert EA Mrs	PACIFIC BELL WHITE PAGES
	Ebbert N	PACIFIC BELL WHITE PAGES
	Ebbert Nancy E MD	PACIFIC BELL WHITE PAGES
	Ebbig G	PACIFIC BELL WHITE PAGES
	Ebco Enterprises Watergate Tower Emvl	PACIFIC BELL WHITE PAGES
	Euclid Av& Van Buren Av	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Farey Art & Edith	PACIFIC BELL WHITE PAGES
	Feldmann Siebe S Rev	PACIFIC BELL WHITE PAGES
	Fletcher Ralph A	PACIFIC BELL WHITE PAGES
	Ford M	PACIFIC BELL WHITE PAGES
	Ford M C	PACIFIC BELL WHITE PAGES
	Forster Claire E	PACIFIC BELL WHITE PAGES
	Fowler L N	PACIFIC BELL WHITE PAGES
	Frishholz MB	PACIFIC BELL WHITE PAGES
	Frishman R I	PACIFIC BELL WHITE PAGES
	GARRETT FREIGHTLINES INC	PACIFIC BELL WHITE PAGES
	Garrett Floyd & Marie	PACIFIC BELL WHITE PAGES
	Gerbig A L	PACIFIC BELL WHITE PAGES
	Gerbo D L	PACIFIC BELL WHITE PAGES
	Glaser Julius	PACIFIC BELL WHITE PAGES
	Gordon Arthur E & Joyce	PACIFIC BELL WHITE PAGES
	Goss Merle & Constance	PACIFIC BELL WHITE PAGES
	Goss P	PACIFIC BELL WHITE PAGES
	Grand Lake Gardens	PACIFIC BELL WHITE PAGES
	Grand Lake Lutheran Church	PACIFIC BELL WHITE PAGES
	Hahn L J	PACIFIC BELL WHITE PAGES
	Hart Harry Pendleton	PACIFIC BELL WHITE PAGES
	Hoag K	PACIFIC BELL WHITE PAGES
	Holm L K	PACIFIC BELL WHITE PAGES
	Hopkins M E	PACIFIC BELL WHITE PAGES
	Hunt Loren W	PACIFIC BELL WHITE PAGES
	Hunt M	PACIFIC BELL WHITE PAGES
	Hunt M A	PACIFIC BELL WHITE PAGES
	Hunt M S O S Liberty E C	PACIFIC BELL WHITE PAGES
	I Grand Lake Gardens Beauty Shop	PACIFIC BELL WHITE PAGES
	I Lahrson Glennard Mrs	PACIFIC BELL WHITE PAGES
	Jacobs Geo S	PACIFIC BELL WHITE PAGES
	Jorgensen J H	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Jottrand G	PACIFIC BELL WHITE PAGES
	La Fleur Lloyd B	PACIFIC BELL WHITE PAGES
	Leuenberger C	PACIFIC BELL WHITE PAGES
	Luxford D W	PACIFIC BELL WHITE PAGES
	Mac Donald Ruth	PACIFIC BELL WHITE PAGES
	Macfle MF	PACIFIC BELL WHITE PAGES
	MATTHE W ROOF CO	PACIFIC BELL WHITE PAGES
	Matthew Mary A	PACIFIC BELL WHITE PAGES
	Mc Connell T R	PACIFIC BELL WHITE PAGES
	Mc Connell William A	PACIFIC BELL WHITE PAGES
	Medford Georgia Mrs	PACIFIC BELL WHITE PAGES
	Meyer VM	PACIFIC BELL WHITE PAGES
	Morse Miriam W	PACIFIC BELL WHITE PAGES
	Ogden D & S	PACIFIC BELL WHITE PAGES
	Ogden D C	PACIFIC BELL WHITE PAGES
	Peterson Astrid	PACIFIC BELL WHITE PAGES
	Pick D	PACIFIC BELL WHITE PAGES
	Pollack Louis R	PACIFIC BELL WHITE PAGES
	Ross Harry H	PACIFIC BELL WHITE PAGES
	Seyler A	PACIFIC BELL WHITE PAGES
	Smethers Dora May	PACIFIC BELL WHITE PAGES
	Sobotka V	PACIFIC BELL WHITE PAGES
	Stauffer N H	PACIFIC BELL WHITE PAGES
	Sw yter Wilhelmine	PACIFIC BELL WHITE PAGES
	Terry E R	PACIFIC BELL WHITE PAGES
	Torre Gary J	PACIFIC BELL WHITE PAGES
	Torre GM	PACIFIC BELL WHITE PAGES
	TTD & Voice	PACIFIC BELL WHITE PAGES
	Wickham J H	PACIFIC BELL WHITE PAGES
	Wickhorst Frank H	PACIFIC BELL WHITE PAGES
	Wickland P	PACIFIC BELL WHITE PAGES
	Wickliffe E H	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Winegarden Howard M	PACIFIC BELL WHITE PAGES
	Wolcott AS	PACIFIC BELL WHITE PAGES
	Woodhead W A	PACIFIC BELL WHITE PAGES
	Zipin E	PACIFIC BELL WHITE PAGES
1980	Adams Adeline L	Pacific Telephone
	Anderson Jas A	Pacific Telephone
	Anderson Nora M	Pacific Telephone
	Anspach L	Pacific Telephone
	Baldwin E W	Pacific Telephone
	Bauer John J	Pacific Telephone
	Bingham J H	Pacific Telephone
	Brown D E	Pacific Telephone
	Burke C A	Pacific Telephone
	Buss F M	Pacific Telephone
	Cary A E	Pacific Telephone
	Chance R	Pacific Telephone
	Clark B	Pacific Telephone
	Clark John P Mrs	Pacific Telephone
	Converse L B	Pacific Telephone
	Cooper F M	Pacific Telephone
	Criswell Marion	Pacific Telephone
	Curtis M G	Pacific Telephone
	Davis Myrtle M	Pacific Telephone
	Davison R F	Pacific Telephone
	Dexter E S	Pacific Telephone
	Dodge E M	Pacific Telephone
	Doherty E M	Pacific Telephone
	Downer C B	Pacific Telephone
	Downer S B	Pacific Telephone
	Ebbert E A Mrs	Pacific Telephone
	England D C	Pacific Telephone
Feldmann S S Rev	Pacific Telephone	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Fletcher Ralph A	Pacific Telephone
	Ford M	Pacific Telephone
	Fowler L N	Pacific Telephone
	French C	Pacific Telephone
	Gerbig A L	Pacific Telephone
	Giegerich Lewis A Mrs	Pacific Telephone
	Gordon Grace E	Pacific Telephone
	GRAND LAKE GARDENS	Pacific Telephone
	Gregoire Wm E	Pacific Telephone
	Hahn L J	Pacific Telephone
	Harper C F	Pacific Telephone
	Hart Harry Pendleton	Pacific Telephone
	Holiday D M	Pacific Telephone
	Holm L K	Pacific Telephone
	Jacobs Geo S	Pacific Telephone
	Job M	Pacific Telephone
	Jorgensen J H	Pacific Telephone
	Kalenius M B	Pacific Telephone
	Kleinclaus Freda G	Pacific Telephone
	Knight M M	Pacific Telephone
	La Fleur Lloyd B	Pacific Telephone
	Leedom Leona Mrs	Pacific Telephone
	Leuenberger C	Pacific Telephone
	Lewis S A	Pacific Telephone
	Macfie M F	Pacific Telephone
	Main Mabel F	Pacific Telephone
	Martin Barbara L	Pacific Telephone
	Matthew Mary A	Pacific Telephone
	Mc Connell T R	Pacific Telephone
	Mc Hale C M	Pacific Telephone
	Mc Murtry G L	Pacific Telephone
	Medford Georgia Mrs	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Miller M J	Pacific Telephone
	Moody Edith	Pacific Telephone
	Morse Miriam W	Pacific Telephone
	Murphy D I	Pacific Telephone
	Oberg Alfred	Pacific Telephone
	Ogden Dunbar H Rev	Pacific Telephone
	Olker Lawrence O	Pacific Telephone
	Peterson Astrid	Pacific Telephone
	Phelps B R	Pacific Telephone
	Phillis H	Pacific Telephone
	Pitchford Golda	Pacific Telephone
	Price Jas H Mrs	Pacific Telephone
	Prosser Grace E	Pacific Telephone
	Remick Howard T	Pacific Telephone
	Rudd Sara G	Pacific Telephone
	Savstrom John Mrs	Pacific Telephone
	Seyler A	Pacific Telephone
	Smethers Dora May	Pacific Telephone
	Smith Lylas P	Pacific Telephone
	Smith Maury F Mrs	Pacific Telephone
	Stephenson M L	Pacific Telephone
	Stevens A M	Pacific Telephone
	Torre G M	Pacific Telephone
	Total Eva Khalil	Pacific Telephone
	Vallow C C	Pacific Telephone
	Vanaudestrade F J	Pacific Telephone
Woodhead W A	Pacific Telephone	
Zamloch L E	Pacific Telephone	
Zipin E	Pacific Telephone	
1975	ALDRICH J C	Pacific Telephone
	AMBROSE NATHAN F	Pacific Telephone
	AMERICAN BAPTIST HOMES OF THE WEST	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	ANDERSON NORA M	Pacific Telephone
	ANDERSON RUTH M	Pacific Telephone
	BAKER MAUDE F	Pacific Telephone
	BALDWIN E W	Pacific Telephone
	BAUD AURELIA	Pacific Telephone
	BEEBEE JOHN	Pacific Telephone
	BINIGHAM J H	Pacific Telephone
	BROWN A J	Pacific Telephone
	BUNNELL VESTA	Pacific Telephone
	BURKE C A	Pacific Telephone
	BURTON HELEN A	Pacific Telephone
	CARY A E	Pacific Telephone
	CLARK A PEARL	Pacific Telephone
	CLARK B	Pacific Telephone
	COHN E M	Pacific Telephone
	CONVERSE J ALDEN	Pacific Telephone
	COOPER GRACE A	Pacific Telephone
	CUSICANQUI A D	Pacific Telephone
	DAVIS I H	Pacific Telephone
	DEXTER E S	Pacific Telephone
	DODG E MN	Pacific Telephone
	DOHERTY E M	Pacific Telephone
	DOWNER S B	Pacific Telephone
	EBBERT E A MRS	Pacific Telephone
	EVEY DOUGLAS	Pacific Telephone
	EYBEL A	Pacific Telephone
	FLETCHER RALPH A	Pacific Telephone
	FORD M	Pacific Telephone
	GERBIG A L	Pacific Telephone
	GIEG ERICH LEWIS A MRS	Pacific Telephone
	GRAND LAKE GARDENS	Pacific Telephone
	GREGOIRE WAM E	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	HAGMAN A M	Pacific Telephone
	HAHN LJ	Pacific Telephone
	HARMON MYRTLE I	Pacific Telephone
	HART HARRY PENDLETON	Pacific Telephone
	HART HOWARD J	Pacific Telephone
	HAWKES A L	Pacific Telephone
	JOB M	Pacific Telephone
	LEEDOM LEONA MRS	Pacific Telephone
	LEWIS S A	Pacific Telephone
	LYON G MI	Pacific Telephone
	MAC DONALD EMMA MRS	Pacific Telephone
	MACFIE M F	Pacific Telephone
	MADDERN M H	Pacific Telephone
	MATTHEW MARY A	Pacific Telephone
	MC CONAUGHEY H A	Pacific Telephone
	MC HALE C N	Pacific Telephone
	MC MURTRY G L	Pacific Telephone
	MILLER M J	Pacific Telephone
	MOODY EDITH	Pacific Telephone
	MORRISON C N	Pacific Telephone
	MORRISON F N	Pacific Telephone
	NELSON DAGMAR	Pacific Telephone
	OBERG ALFRED	Pacific Telephone
OSTERMAN VICTOR N	Pacific Telephone	
PELESON ASTRID	Pacific Telephone	
PHILLIS H	Pacific Telephone	
1970	ANDERSON NORA M	Pacific Telephone Directory
	ANDERSON RUTH M	Pacific Telephone Directory
	ANGWIN W S MRS	Pacific Telephone Directory
	AUMANN MAMIE A	Pacific Telephone Directory
	BALDWIN E W	Pacific Telephone Directory
	BARBER H G	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	BAUER KATHRYN W MRS	Pacific Telephone Directory
	BEEBEE JOHN	Pacific Telephone Directory
	BELL JESSICA MRS	Pacific Telephone Directory
	BINGHAM J H	Pacific Telephone Directory
	BLAIR G M MRS	Pacific Telephone Directory
	BREEN M M MISS	Pacific Telephone Directory
	BREWSTER B T	Pacific Telephone Directory
	BRIGGS ABBIE E	Pacific Telephone Directory
	BROWN V	Pacific Telephone Directory
	BUNNELL VESTA	Pacific Telephone Directory
	BURTON HELEN A	Pacific Telephone Directory
	CARY A E	Pacific Telephone Directory
	CHOPE CLARA E	Pacific Telephone Directory
	CHRISTIANSEN IDA MRS	Pacific Telephone Directory
	CLARK A PEARL	Pacific Telephone Directory
	CLARK B MRS	Pacific Telephone Directory
	COLE MARGARET C	Pacific Telephone Directory
	CONVERSE J ALDEN	Pacific Telephone Directory
	COOPER GRACE A	Pacific Telephone Directory
	CUSICANQUI A D	Pacific Telephone Directory
	DAVIS JANET B	Pacific Telephone Directory
	DENHAM E P MRS	Pacific Telephone Directory
	DEXTER E S	Pacific Telephone Directory
	DOTY A A MRS	Pacific Telephone Directory
	ENGLAND D C	Pacific Telephone Directory
	EVANS ENID R MRS	Pacific Telephone Directory
	EYBEL A	Pacific Telephone Directory
	GORDON GRACE E	Pacific Telephone Directory
	GORDON MARY M	Pacific Telephone Directory
	GRAND LAKE GARDENS	Pacific Telephone Directory
	HAGMAN A M	Pacific Telephone Directory
	HAHN L J	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	HALEY EMILIE S MRS	Pacific Telephone Directory
	HALL B I	Pacific Telephone Directory
	HARMON MYRTLE I	Pacific Telephone Directory
	HART HOWARD J	Pacific Telephone Directory
	HAUSS MINNA E	Pacific Telephone Directory
	HAWKES A L	Pacific Telephone Directory
	HOWDEN G L	Pacific Telephone Directory
	JOB M	Pacific Telephone Directory
	JORDAN JOHN MRS	Pacific Telephone Directory
	KEELER MARGUERITE N	Pacific Telephone Directory
	KING NELLIE	Pacific Telephone Directory
	KULPER H J	Pacific Telephone Directory
	KURTZ ETHEL F MRS	Pacific Telephone Directory
	LA TOURETTE AMELIA	Pacific Telephone Directory
	LEEDOM LEONA MRS	Pacific Telephone Directory
	LEWIS S A	Pacific Telephone Directory
	LOWE LILLIAN W	Pacific Telephone Directory
	MAC DONALD EMMA MRS	Pacific Telephone Directory
	MATTHEW MARY A	Pacific Telephone Directory
	MCCONAUGHEY H A	Pacific Telephone Directory
	MILLER M J	Pacific Telephone Directory
	MORGAN L G MRS	Pacific Telephone Directory
	MURPHY C	Pacific Telephone Directory
	NELSON DAGMAR	Pacific Telephone Directory
	NEY LORETTA M MRS	Pacific Telephone Directory
	NORTON THELMA ALAMEDA	Pacific Telephone Directory
	OSTERMAN VICTOR N	Pacific Telephone Directory
	PARRY EDNA L MRS	Pacific Telephone Directory
	PETERSON ASTRID	Pacific Telephone Directory
	PHELPS B R	Pacific Telephone Directory
	PHILLIS H	Pacific Telephone Directory
	PROSSER GRACE E	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	PROSSER J R	Pacific Telephone Directory
	RADFORD R H MRS	Pacific Telephone Directory
	REYNOLDS LUCILE W	Pacific Telephone Directory
	ROUNTREE C O MRS	Pacific Telephone Directory
	RUDOLPH ETHEL	Pacific Telephone Directory
	SCHLICHENMAIER L	Pacific Telephone Directory
	SHEDDEN HELEN	Pacific Telephone Directory
	SHEPHERD E P	Pacific Telephone Directory
	SKOVMAND ANDREW	Pacific Telephone Directory
	STANTON M L	Pacific Telephone Directory
	STAPLES ARTHUR B	Pacific Telephone Directory
	STRAUB ALBERTINA G MRS	Pacific Telephone Directory
	THEBAUT J C MRS	Pacific Telephone Directory
	THOMAS JOS I MRS	Pacific Telephone Directory
	THOMAS LEE BRECKINRIDGE MRS	Pacific Telephone Directory
	TOWLER EDW H	Pacific Telephone Directory
	WELLS JUANITA D	Pacific Telephone Directory
	WERTZ L D MRS	Pacific Telephone Directory
	WHIELDON ANTONIE B	Pacific Telephone Directory
	WHITNEY ERNEST W MRS	Pacific Telephone Directory
	WILLIAMSON AMY E MRS	Pacific Telephone Directory
	WITHROW GRACE E MRS	Pacific Telephone Directory
	WOOD CHAS M MRS	Pacific Telephone Directory
	WOOD FRED B MRS	Pacific Telephone Directory
	WOODHEAD W A	Pacific Telephone Directory
	WYMAN SPRAGUE	Pacific Telephone Directory
	ZINN E K MRS	Pacific Telephone Directory
1967	LABINE EMMA E	R. L. Polk Co.
	LOVIE LILLIAN W MRS	R. L. Polk Co.
1962	Saslow Michael	Pacific Telephone
	Taylor Ed	Pacific Telephone
1955	SMITH HAROLD V	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	TREICHLER BILL ALAMEDA	The Pacific Telephone & Telegraph Co.
1950	JONES PRESTON M R	The Pacific Telephone & Telegraph Co.
	WELCH JOHN D R	The Pacific Telephone & Telegraph Co.
1945	BROWN CHAS R R	The Pacific Telephone & Telegraph Co.
1943	Brown Chas R Millicent shipw kr h	R. L. Polk & Co.
	Kork Louis A Alice R h	R. L. Polk & Co.
1938	EULER OSCAR W R	Pacific Telephone
	KORK LOUIS A R	Pacific Telephone
1933	GOODWIN EDW (PATRICIA) PNTR H ALAMEDA	R. L. Polk & Co.
1928	Kork Louis A Alice R H	R.L. Polk and Co of California

### SANTA CLARA CT

#### 401 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	CAPLING GORDON W R ALAMEDA	The Pacific Telephone & Telegraph Co.

### SANTA CLARA WAY

#### 401 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	ALBRIGHT OLIVER (RUTH) CRMRYWKR H	R. L. Polk & Co.
1925	KORK LOUIS A R	R. L. Polk & Co. of California

## FINDINGS

### ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

#### CRES ST

##### 455 CRES ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	CRESCENT CIRCLE HOA	EDR Digital Archive

##### 466 CRES ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	LISA GENDZWILL THERAPY	EDR Digital Archive

##### 480 CRES ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	GATE CRESCENT APARTMENTS	EDR Digital Archive

##### 484 CRES ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	AQUACULTURE WITHOUT FRONTIERS	EDR Digital Archive

##### 491 CRES ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ALLISON S BRITTON CONSULTING	EDR Digital Archive
	TERRI LOEWENTHAL PHOTOGRAPHY	EDR Digital Archive

#### CRESCENT AVE

##### 451 CRESCENT AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	SODA A & SON CONTRS	The Pacific Telephone & Telegraph Co.

##### 454 CRESCENT AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	BROMNANNE R H R	The Pacific Telephone & Telegraph Co.
1933	STEPHENS CAMILLA M STEN SMITH LBR CO R	R. L. Polk & Co.

## FINDINGS

### 461 CRESCENT AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	BUTCHER JEAN R	The Pacific Telephone & Telegraph Co.
	CERRUTI EDW D R	The Pacific Telephone & Telegraph Co.
1943	Pry Hazel G asst supvr Okld Bd of Educ h	R. L. Polk & Co.

### 465 CRESCENT AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Phone Velma A R	R.L. Polk and Co of California

### 484 CRESCENT AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	WONG SAMY R	The Pacific Telephone & Telegraph Co.

### 489 CRESCENT AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1973	GEISZ WILLIAM G L	Pacific Telephone

### 491 CRESCENT AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	SMITH ROSWELL S R	The Pacific Telephone & Telegraph Co.
1938	SANFORD FRANK W R	Pacific Telephone
	WILCOX HORACE W R	Pacific Telephone

### CRESCENT CT

#### 444 CRESCENT CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	WILLIAMS CHARLES F Grace Asst Cashier American Trust Co H	R.L. Polk and Co of California

#### 448 CRESCENT CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1965	KEATES GORDON L S	R. L. Polk & Co.

#### 454 CRESCENT CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	ANDRADE ANTONIO	The Pacific Telephone & Telegraph Co.

## FINDINGS

### 455 CRESCENT CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	AH-TYE ROBT	Pacific Telephone
	ARRIAGA R A	Pacific Telephone
	BATISTE JAMIE	Pacific Telephone
	COLBY ROHT A	Pacific Telephone
	DUKE RANDY R	Pacific Telephone
	HIRSCHFIELD PETER	Pacific Telephone
	HUFFMAN D	Pacific Telephone
	JARRELL CLINT	Pacific Telephone
	JOHNSON ERROL J	Pacific Telephone
	KENCH A	Pacific Telephone
	KENNEDY JEAN	Pacific Telephone
	MATTUCCI GEO	Pacific Telephone
	MERCURIS JOANNA	Pacific Telephone
	OKEEFE GEO	Pacific Telephone
	PANCHEZ MICHAEL	Pacific Telephone

### 461 CRESCENT CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	BANISTER BERENICE	The Pacific Telephone & Telegraph Co.
	BARTLEBAUGH CARL	The Pacific Telephone & Telegraph Co.
	BERG LILA R	The Pacific Telephone & Telegraph Co.
	CHRISTIANSEN O E	The Pacific Telephone & Telegraph Co.
	GARVER BARBARA	The Pacific Telephone & Telegraph Co.
	JENKINS FRANK L	The Pacific Telephone & Telegraph Co.
	MARABELL HAROLD	The Pacific Telephone & Telegraph Co.
	SCHWARTZ MARY L	The Pacific Telephone & Telegraph Co.
	STEAD THOS	The Pacific Telephone & Telegraph Co.
1950	BUCHANAN ROLAND L R	The Pacific Telephone & Telegraph Co.
1945	CERRUTI EDW D ARCHT	The Pacific Telephone & Telegraph Co.

### 462 CRESCENT CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	VALENCIA RAUL J	The Pacific Telephone & Telegraph Co.

## FINDINGS

### 466 CRESCENT CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	ABBOTT P	Pacific Telephone
	CHAMPAGNE WOODROW	Pacific Telephone
	CHUDOBA ROGER	Pacific Telephone
	COSTELLO JOHN A SR	Pacific Telephone
	ECONOMIDES SPYROS	Pacific Telephone
	FRASER R E	Pacific Telephone
	HIRSCH DAVID	Pacific Telephone
	HJORTH JAN V	Pacific Telephone

### 468 CRESCENT CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	DUFOUR ERNEST J	The Pacific Telephone & Telegraph Co.

### 469 CRESCENT CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	PLANER EDWARD T Mabel County Tax Col lector Court House H	R.L. Polk and Co of California

### 472 CRESCENT CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	THOMAS H L MRS	The Pacific Telephone & Telegraph Co.
	TREGO STAN	The Pacific Telephone & Telegraph Co.

### 473 CRESCENT CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	FORTIN GEO W	Pacific Telephone

### 476 CRESCENT CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	KALE EDITH	The Pacific Telephone & Telegraph Co.
	STEWART WARREN A	The Pacific Telephone & Telegraph Co.

### 478 CRESCENT CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	KINTE S M	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	LACKNER CHAS W	The Pacific Telephone & Telegraph Co.

### 479 CRESCENT CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	BOPIE P	Pacific Telephone
	DE J B	Pacific Telephone
	ELLIOTT B A	Pacific Telephone
	HARRISON ALBERT J N I	Pacific Telephone
1955	ROSS LILLIAN L	The Pacific Telephone & Telegraph Co.

### 480 CRESCENT CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	ANDERSON K E	Pacific Telephone
	GIBSON K	Pacific Telephone
	GONDEN WM M	Pacific Telephone
	HANSON CHESTER R	Pacific Telephone
	HODGES V R	Pacific Telephone
	ISAAC BEATRICE	Pacific Telephone
	ISAAC DONNA M	Pacific Telephone
	JONES DOLORES S MRS	Pacific Telephone
	OTIS E P	Pacific Telephone
1955	MELLANA RAYMOND E ATTY	The Pacific Telephone & Telegraph Co.

### 491 CRESCENT CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	BETHEL M C	Pacific Telephone
	BROWN FLOYD D	Pacific Telephone
	CARTER E T MRS	Pacific Telephone
	CORDS ELMER MRS	Pacific Telephone
	DICKERSON B	Pacific Telephone
	DUNN DOROTHY	Pacific Telephone
	FISCHER S E	Pacific Telephone
	FOLCK B J	Pacific Telephone
	GILMAN THEODORE P	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	HOTCHKISS SHIRLEY S MRS	Pacific Telephone
	HURMEZIAN D	Pacific Telephone
	JOHNSON REX W	Pacific Telephone
	KUTTLER JOS	Pacific Telephone
	LANE FREDERICK W	Pacific Telephone
	LEWIS LELAND M	Pacific Telephone
	MC LAUGHLIN W I	Pacific Telephone
1955	BALL IRENE C MISS	The Pacific Telephone & Telegraph Co.
	BARKER F T MRS	The Pacific Telephone & Telegraph Co.
	EAST GRACE ADAMS	The Pacific Telephone & Telegraph Co.
	GROOGAN L F MRS	The Pacific Telephone & Telegraph Co.
	JOHNSON LAWRENCE W MRS	The Pacific Telephone & Telegraph Co.
	LEWIS GEO WESTON JR MRS	The Pacific Telephone & Telegraph Co.
	MOSER EDNA MRS	The Pacific Telephone & Telegraph Co.
	RATHBUN D C	The Pacific Telephone & Telegraph Co.
	SAUNDERS NINA M	The Pacific Telephone & Telegraph Co.
	SINCLAIR JOHN MRS	The Pacific Telephone & Telegraph Co.
	SOLLENBERGER D B CDR	The Pacific Telephone & Telegraph Co.
	STEVENS ARNOLD JAS MRS	The Pacific Telephone & Telegraph Co.
	STEVENS MARY M	The Pacific Telephone & Telegraph Co.
	SWEET THOS R MRS	The Pacific Telephone & Telegraph Co.
TIPTON W S MRS	The Pacific Telephone & Telegraph Co.	
1945	WINSTEAD JOHN S MRS	The Pacific Telephone & Telegraph Co.
	LEVY GEO M MRS R	The Pacific Telephone & Telegraph Co.
	SWEET CHAS A JR R	The Pacific Telephone & Telegraph Co.

### CRESCENT ST

#### 351 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	LARE CHRISTOPHER S TW	R. L. Polk Co.

## FINDINGS

### 439 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	CHAMBERLIN HAZEL MRS	R. L. Polk Co.

### 440 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Crawford Manford B h	R. L. Polk & Co.

### 444 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Newton Efa A Mrs slsw n HCCCo r	R. L. Polk & Co.
	Newton Glenn D Ardene H safety eng h	R. L. Polk & Co.

### 450 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	TOSHIE BABA	Cole Information
2010	TOSHIE BABA	Cole Information

### 451 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1995	OCCUPANT UNKNOWNN	Cole Information

### 453 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	DIANA JENKINS	Cole Information

### 454 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	White Caroline wid C P h	R. L. Polk & Co.

### 455 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ARIANA LING	EDR Digital Archive
	IMELDA CASTILLO	EDR Digital Archive
	DAISY COOK	EDR Digital Archive
	JANET BOWMAN	EDR Digital Archive
	RAYMOND HOLMES	EDR Digital Archive
	CHUNG YANG	EDR Digital Archive

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	JEREMY QUINN	EDR Digital Archive
	TYLER FINCANNON	EDR Digital Archive
	MORGAN YANG	EDR Digital Archive
	BELINDA LO	EDR Digital Archive
	JANICE SPIEGEL	EDR Digital Archive
	STEFANIE MAYER	EDR Digital Archive
	ALICIA LEW	EDR Digital Archive
	JANET MCAFEE	EDR Digital Archive
	TWINKLE PATEL	EDR Digital Archive
	HELEN WILLIAMSON	EDR Digital Archive
	DAVAADORJ JIDGARAV	EDR Digital Archive
	REBECCA FORTIER	EDR Digital Archive
	DENITZA HRISTOVA	EDR Digital Archive
	LESLIE ROYAL	EDR Digital Archive
	WILLIAM MONTAGUE	EDR Digital Archive
	WILLIAM GEACH	EDR Digital Archive
	RACHEL HANDWERKER	EDR Digital Archive
	SYLVIA CURRY	EDR Digital Archive
	JAMES BORDI	EDR Digital Archive
	JOCELYN MACKIN	EDR Digital Archive
	AZUCENA AFFOLTER	EDR Digital Archive
	BYRON RANTALA	EDR Digital Archive
	TEJASH PATEL	EDR Digital Archive
	CALVIN TILLERY	EDR Digital Archive
	MARCO SANCHEZ	EDR Digital Archive
	RACHEL SPALDING	EDR Digital Archive
	JOSEPH MORYCZ	EDR Digital Archive
	TIYANNA CLEMONS	EDR Digital Archive
	OI MAK	EDR Digital Archive
	LEE-ANN COLLINS	EDR Digital Archive
	SUSAN ADAME	EDR Digital Archive
	MARY MONROE	EDR Digital Archive

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	PATRICIA DOMINGUEZ	EDR Digital Archive
	CASEY KIRKRUFF	EDR Digital Archive
	RACHEL PLEDGER	EDR Digital Archive
	DONALD ARMISTEAD	EDR Digital Archive
	SHU CAI	EDR Digital Archive
	RICHARD MAHER	EDR Digital Archive
	THOMAS SWAINE	EDR Digital Archive
	KIMBERLY GUESS	EDR Digital Archive
	LISSA KAYE	EDR Digital Archive
	CHRISSY BARLOW	EDR Digital Archive
	YIHEYIS GEDLE	EDR Digital Archive
	TIYANNA BOONE	EDR Digital Archive
	ERIC JONES	EDR Digital Archive
	ANDERSEN ANDREAS	EDR Digital Archive
	NARANTUYA YADAMTSOO	EDR Digital Archive
	CARLOS CASTANO	EDR Digital Archive
	LEO POLDERVAART	EDR Digital Archive
	LEON NEWTON	EDR Digital Archive
	BRADLEY NIESS	EDR Digital Archive
	SYLVIA COBBINS	EDR Digital Archive
	JORDAN CONNER	EDR Digital Archive
	MICHAEL MARIUS	EDR Digital Archive
	ANDREA LODIGIANI	EDR Digital Archive
	DIANA TAYLOR	EDR Digital Archive
	JANE LEE	EDR Digital Archive
	ARIEL TUSCANO	EDR Digital Archive
	EDWARD WAITE	EDR Digital Archive
	RONALD YEE-LUK	EDR Digital Archive
	WINNIE CHAN	EDR Digital Archive
	OLLIE RANTALA	EDR Digital Archive
	ROOP PRABHU	EDR Digital Archive
	KYENAN BODDEN	EDR Digital Archive

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	MARK RODRIGUEZ	EDR Digital Archive
	GIOVANNI PLENOS	EDR Digital Archive
	MATTHEW BOLGER	EDR Digital Archive
	CLAIR STYVE	EDR Digital Archive
2017	RANTALA OLLI	Cole Information
	CRESCENT CIRCLE HOA	Cole Information
	IMELDA CASTILLO	Cole Information
	SHARON MCLEOD	Cole Information
	JEREMY QUINN	Cole Information
	MY DANG	Cole Information
	DIANA JENKINS	Cole Information
	CYNTHIA LONG	Cole Information
	STEFANIE MAYER	Cole Information
	HELEN WILLIAMSON	Cole Information
	ADAM CAMPBELL	Cole Information
	SYLVIA CURRY	Cole Information
	WILLIAM GEACH	Cole Information
	RACHEL HANDWERKER	Cole Information
	DENITZA HRISTOVA	Cole Information
	WILLIAM MONTAGUE	Cole Information
	DON ARMISTEAD	Cole Information
	TIA CLEMONS	Cole Information
	RACHEL SPALDING	Cole Information
	DAVID UZZELL	Cole Information
	NATHANIEL MUSSON	Cole Information
	BYRON RANTALA	Cole Information
	KILEY RUSSELL	Cole Information
	MARCO SANCHEZ	Cole Information
	SHU CAI	Cole Information
	PATRICIA DOMINGUEZ	Cole Information
KIMBERLY GUESS	Cole Information	
LISSA KAYE	Cole Information	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	TOM SWAINE	Cole Information
	RACHEL PLEDGER	Cole Information
	CALVIN PILLERY	Cole Information
	ROBERT RUSSELL	Cole Information
	CHRISSEY BARLOW	Cole Information
	RICHARD BOWMAN	Cole Information
	YIHEYIS GEDLE	Cole Information
	DARREN TAGGART	Cole Information
	OSCAR RIVERA	Cole Information
	ANDREAS ANDERSEN	Cole Information
	WILLIAM LAU	Cole Information
	EVELYN LIANG	Cole Information
	LEO POLDERVAART	Cole Information
	JOSEPH POWERS	Cole Information
	MATT BOLGER	Cole Information
	SHELA BOWDEN	Cole Information
	WINNIE CHAN	Cole Information
	CLAIR STYVE	Cole Information
	RONALD YEE-LUK	Cole Information
	GIOVANNI PLENOS	Cole Information
ROOP PRABHU	Cole Information	
MARK RODRIGUEZ	Cole Information	
2014	IMELDA CASTILLO	Cole Information
	SHARON MCLEOD	Cole Information
	IRISH SMITH	Cole Information
	EULALIA DEVELEZ	Cole Information
	DIANA JENKINS	Cole Information
	CYNTHIA LONG	Cole Information
	ALICIA LEW	Cole Information
	HELEN WILLIAMSON	Cole Information
ED WAITE	Cole Information	
DEBRA COLLINS	Cole Information	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	SYLVIA CURRY	Cole Information
	WILLIAM GEACH	Cole Information
	ABRAM JACKSON	Cole Information
	WILLIAM MONTAGUE	Cole Information
	DON ARMISTEAD	Cole Information
	T CLEMONS	Cole Information
	MARY MONROE	Cole Information
	RAHEL LEMMA	Cole Information
	BYRON RANTALA	Cole Information
	RACHEL SPALDING	Cole Information
	MARCO SANCHEZ	Cole Information
	DAVID UZZELL	Cole Information
	SHU CAI	Cole Information
	WAITE EDWARD	Cole Information
	BENEDICT GILCHRIST	Cole Information
	SONYA HARVEY	Cole Information
	CHARLES JONES	Cole Information
	LISSA KAYE	Cole Information
	ROBERT RUSSELL	Cole Information
	DIVYA SAWHNEY	Cole Information
	KAREN SPRINKEL	Cole Information
	TOM SWAINE	Cole Information
	CLAIRE VIRTUE	Cole Information
	CHRISSEY BARLOW	Cole Information
	MARIA GUERRA	Cole Information
	OSCAR RIVERA	Cole Information
	K EVANS	Cole Information
	JAY MERANI	Cole Information
	WILLIAM LAU	Cole Information
	ASHA LOUPY	Cole Information
	RENE RODRIGUEZ	Cole Information
	MIMI PHILIPS	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	LEO POLDERVAART	Cole Information
	WINNIE CHAN	Cole Information
	MRITHAA KANAMPIU	Cole Information
	KAREN MCAFEE	Cole Information
	RONALD LUK	Cole Information
	MARK RODRIGUEZ	Cole Information
	CLAIR STYVE	Cole Information
2010	SHARON MCLEOD	Cole Information
	IMELDA CASTILLO	Cole Information
	FREDRICK SMITH	Cole Information
	CURTIS HARVEY	Cole Information
	DENISE DELUCA	Cole Information
	ALICIA LEW	Cole Information
	GAYLORD LAU	Cole Information
	HELEN WILLIAMSON	Cole Information
	ED WAITE	Cole Information
	DIANA JENKINS	Cole Information
	GREGORY BARDELMAN	Cole Information
	DEBRA COLLINS	Cole Information
	WILLIAM MONTAGUE	Cole Information
	DENITZA HRISTOVA	Cole Information
	LAWRENCE EUBANKS	Cole Information
	WILLIAM GEACH	Cole Information
	MARCO SANCHEZ	Cole Information
	RACHEL SPALDING	Cole Information
	RUTH KNAPP	Cole Information
	BYRON RANTALA	Cole Information
JENNIFER TILLET	Cole Information	
JARTU DETOLES	Cole Information	
EMERY GIBBS	Cole Information	
K LOBELINDA	Cole Information	
KEVIN CUNNINGHAM	Cole Information	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2010	TOM SWAINE	Cole Information
	CAROL VERNON	Cole Information
	LISSA KAYE	Cole Information
	ALEXANDER HANNA	Cole Information
	JAMES ODOMS	Cole Information
	JOHNNIE DEMPSEY	Cole Information
	CALVIN PILLERY	Cole Information
	CHRISSEY BARLOW	Cole Information
	SANTIAGO VIDRIOS	Cole Information
	YIHEYIS GEDLE	Cole Information
	MARIA GUERRA	Cole Information
	MONICA LUN	Cole Information
	CARLOS CASTANO	Cole Information
	MICHAEL MARIUS	Cole Information
	ALFREDO RIVERA	Cole Information
	LEO POLDERVAART	Cole Information
	ANDREA MORALES	Cole Information
	CLAIR STYVE	Cole Information
	TITILOLA RANDOLPH	Cole Information
	NINA HELGERSON	Cole Information
ALLYSON EVANS	Cole Information	
THERESA BENNETT	Cole Information	
2006	CResc ENT CIRCLE	Haines Company, Inc.
	a ANDRADE Maria	Haines Company, Inc.
	BANDERA Hilda	Haines Company, Inc.
	BARLOWChrissy	Haines Company, Inc.
	BENNETTTheresa	Haines Company, Inc.
	a BINO Vincent	Haines Company, Inc.
	BORD 0 James A	Haines Company, Inc.
	a BOWDEN Gina	Haines Company, Inc.
BUCIO Ignacio	Haines Company, Inc.	
CASTILLO Imelda	Haines Company, Inc.	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	CHAPMAN Glenn	Haines Company, Inc.
	e CUNNING AM M I kah	Haines Company, Inc.
	CURRY Sy Ma	Haines Company, Inc.
	DAVAADORJ Jldgarav	Haines Company, Inc.
	DEGARMO William	Haines Company, Inc.
	a DEMPSEY Jolaunne	Haines Company, Inc.
	DETOLES Jartu	Haines Company, Inc.
	e DUARTE Sylvia	Haines Company, Inc.
	a EUBANKS Lawrence	Haines Company, Inc.
	EVANS Allyson	Haines Company, Inc.
	GUERRA Maria	Haines Company, Inc.
	HARVEY Sonya	Haines Company, Inc.
	HELGERSON NC	Haines Company, Inc.
	HERNANDEZ AI Ida	Haines Company, Inc.
	JENKINS Diana	Haines Company, Inc.
	a JOROAN Frederick	Haines Company, Inc.
	e KAYEL Issa	Haines Company, Inc.
	KINTANAR Hlyasmin	Haines Company, Inc.
	LAU William	Haines Company, Inc.
	LEW Alida	Haines Company, Inc.
	o LO Belinda	Haines Company, Inc.
	LO Pauline	Haines Company, Inc.
	LUN M R	Haines Company, Inc.
	MARIUS Michael	Haines Company, Inc.
	a MATEO Angel	Haines Company, Inc.
	MBUGUA Daniel	Haines Company, Inc.
	a MONTAGUE WC Jr	Haines Company, Inc.
	NANDI Ch Ositne	Haines Company, Inc.
	PAIGEN Nahdra	Haines Company, Inc.
	PETE Michelle	Haines Company, Inc.
	POLANCO Sanetago	Haines Company, Inc.
	RAMr ETRichard	Haines Company, Inc.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	o RANTALA	Haines Company, Inc.
	RAY James	Haines Company, Inc.
	o RIVERAAlfredo	Haines Company, Inc.
	o ROCKOWITZEd	Haines Company, Inc.
	RODRIGUEZMark B	Haines Company, Inc.
	o SMITH Irish	Haines Company, Inc.
	o SPALDING Rachel	Haines Company, Inc.
	a STYVE Clair	Haines Company, Inc.
	SUMMERS Jeremy	Haines Company, Inc.
	a SWAINE Tom	Haines Company, Inc.
	a TILLERY Calen	Haines Company, Inc.
	a UZZELL Dav Id	Haines Company, Inc.
	VIDRIOS Santago	Haines Company, Inc.
	WAITE Ed	Haines Company, Inc.
	WALKERJames	Haines Company, Inc.
	WILLIAMSON H	Haines Company, Inc.
	WOLFF Tonya	Haines Company, Inc.
	YADANTSOO	Haines Company, Inc.
	Narantuya	Haines Company, Inc.
	WOLFF Tonya	Haines Company, Inc.
	CResc ENT CRT MANOR	Haines Company, Inc.
	AWORD	Haines Company, Inc.
	PROCESSING	Haines Company, Inc.
	GROUP	Haines Company, Inc.
	ADAMSJaslyn	Haines Company, Inc.
	BARONE Anita	Haines Company, Inc.
	CAGAN Tabitha	Haines Company, Inc.
	CAPLIN Meredith	Haines Company, Inc.
	CHRISTIANJames	Haines Company, Inc.
	DANIEL WINKLER	Haines Company, Inc.
	DARNELLJoseph W	Haines Company, Inc.
	GLASSFORD Denise	Haines Company, Inc.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	HARRIS Wibur	Haines Company, Inc.
	JONES L	Haines Company, Inc.
	KIMAJyssa	Haines Company, Inc.
	KUNZMAN Charles D	Haines Company, Inc.
	LANGAARD Max	Haines Company, Inc.
	MAYO Juan	Haines Company, Inc.
	MCGEE David	Haines Company, Inc.
	PARKER Michael	Haines Company, Inc.
	POLIAKOVA Natalia	Haines Company, Inc.
	RANDEL Erica	Haines Company, Inc.
	RANTZK	Haines Company, Inc.
	SALAZAREliza	Haines Company, Inc.
	WANG David	Haines Company, Inc.
2005	SAN PABLO EUROPEAN	Cole Information
	RICHARD RAMET	Cole Information
	HANNAH ROSSI	Cole Information
	IMELDA CASTILLO	Cole Information
	CURTIS HARVEY	Cole Information
	ANNIE HO	Cole Information
	DENISE DELUCA	Cole Information
	ALICIA LEW	Cole Information
	GAYLORD LAU	Cole Information
	ED WAITE	Cole Information
	TONYA WILLIAMS	Cole Information
	GLENN CHAPMAN	Cole Information
	MICHELLE PETE	Cole Information
	LAWRENCE EUBANKS	Cole Information
	GREGORY BARDELMAN	Cole Information
	HODGES HAYWOOD	Cole Information
	JARTU DETOLES	Cole Information
CALVIN TILLERY	Cole Information	
KATRINA JACKSON	Cole Information	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	EDWARD ROCKOWITZ	Cole Information
	LAWRENCE WOLFF	Cole Information
	DEBRA MARTIN	Cole Information
	CHRISSEY BARLOW	Cole Information
	THOMAS OGUINN	Cole Information
	MARIA GUERRA	Cole Information
	MAQUEVIA LOMAX	Cole Information
	CHAK WONG	Cole Information
	MONICA LUN	Cole Information
	MAQUEVIA PIERCE	Cole Information
	ALFREDO RIVERA	Cole Information
	ALICIA HERNANDEZ	Cole Information
	WILLIAM LAU	Cole Information
	LEO POLDERVAART	Cole Information
	IGNACIO BUCIO	Cole Information
	BRANDI JOHNSON	Cole Information
	MICHAEL MARIUS	Cole Information
	ANGEL MATEO	Cole Information
	OLLI RANTALA	Cole Information
	MARK RODRIGUEZ	Cole Information
	NINA HELGERSON	Cole Information
	DAPHNE OLSZANSKI	Cole Information
	WINNIE CHAN	Cole Information
HILDA BANDERA	Cole Information	
THERESA BENNETT	Cole Information	
JAMES BURDI	Cole Information	
PHIL FAIR	Cole Information	
2000	111 RANTALA OLLI	Pacific Bell
	116 MONTAGUE W C JR	Pacific Bell
	205 HE SHAO XIA	Pacific Bell
	211 GIBNEY ED	Pacific Bell
	213 WAITE ED	Pacific Bell

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	305 SWAINE TOM	Pacific Bell
	312 BOWDEN GINA	Pacific Bell
	314 YEARWOOD EWART	Pacific Bell
	319 WONG CHAK H	Pacific Bell
	401 MOORE ANNALISA	Pacific Bell
	A MOORE	Cole Information
	JASPER KENO	Cole Information
	RICHARD RAMET	Cole Information
	IMELDA CASTILLO	Cole Information
	OPHELIA JOHNSON	Cole Information
	JANET BOWMAN	Cole Information
	WEI DENG	Cole Information
	ED WAITE	Cole Information
	ANNE MONTGOMERY	Cole Information
	L EUBANKS	Cole Information
	ED GIBNEY	Cole Information
	GINA BOWDEN	Cole Information
	SARAH BOWDEN	Cole Information
	JULIA SAMPSON	Cole Information
	RACHEL SPALDING	Cole Information
	CALVIN TILLERY	Cole Information
	JENNY LAU	Cole Information
	ALICE JONES	Cole Information
	ALFRED BELTRAN	Cole Information
	DANIEL MBUGUA	Cole Information
	W MONTAGUE	Cole Information
	ERIC SOBALVARRO	Cole Information
	TOM SWAINE	Cole Information
	LISSA KAYE	Cole Information
	SONYA HARVEY	Cole Information
	NORMAN LEVESQUE	Cole Information
	DOREEN AMARSINGH	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	CHRISSEY BARLOW	Cole Information
	MARIA GUERRA	Cole Information
	NAOMI LIRON	Cole Information
	CLAYTON WITHERSPOON	Cole Information
	CHAK WONG	Cole Information
	DEVONA CHENG	Cole Information
	MARY MASCARENHAS	Cole Information
	WILLIAM SANCHEZ	Cole Information
	ALFRED RIVERA	Cole Information
	JIN HO	Cole Information
	PING LUO	Cole Information
	JOAN LOPER	Cole Information
	EZEKIEL COPLAN	Cole Information
	CLAIR STYVE	Cole Information
	OLLI RANTALA	Cole Information
	NINA HELGERSON	Cole Information
	J DETOLES	Cole Information
	ALLYSON EVANS	Cole Information
	EWART YEARWOOD	Cole Information
	C NANDI	Cole Information
1996	103 DUNLAP L M	PACIFIC BELL DIRECTORY
	111 RANTALA OLLI	PACIFIC BELL DIRECTORY
	116 MONTAGUE W C JR	PACIFIC BELL DIRECTORY
	208 GEE TONY	PACIFIC BELL DIRECTORY
	208 GEE TONY	PACIFIC BELL DIRECTORY
	211 GIBNEY ED	PACIFIC BELL DIRECTORY
	213 WAITE ED	PACIFIC BELL DIRECTORY
	305 SWAINE TOM	PACIFIC BELL DIRECTORY
	306 LOPER J	PACIFIC BELL DIRECTORY
318 SVENSSON CHRIS	PACIFIC BELL DIRECTORY	
319 WONG CHAK H	PACIFIC BELL DIRECTORY	
1995	LOPER, J	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1995	SUEN, CECIL	Cole Information
	MONTAGUE, W C JR	Cole Information
	COLEMAN, MYRA	Cole Information
	SNYDER, M T	Cole Information
	YOUNG, CHUN T	Cole Information
	MBUGUA, DANIEL K	Cole Information
	NJENGA, E	Cole Information
	MYERS, A L	Cole Information
	CHENG, DEVONA	Cole Information
	LAU, WILLIAM C	Cole Information
	LEE, YOUNG	Cole Information
	GEE, TONY	Cole Information
	WALKER, JAMES A	Cole Information
	RANTALA, OLLI	Cole Information
	EVANS, ALLYSON R	Cole Information
	MCPHAIL, BARBARA J	Cole Information
	CASTILLO, IMELDA	Cole Information
	HARTFIELD, NANCY A	Cole Information
	SARTOR, D	Cole Information
	DUNLAP, L M	Cole Information
	NAHAS, MARK D	Cole Information
	DENG, WEI S	Cole Information
	SPALDING, RACHEL S	Cole Information
	RAYHER, WANDA M	Cole Information
	FUCHIWAKI, S	Cole Information
	FALZONE, A	Cole Information
	IWAI, MIYOKO	Cole Information
	WAITE, ED	Cole Information
	STYVE, CLAIR M	Cole Information
	RAMET, RICHARD C	Cole Information
	LUO, PING	Cole Information
	WONG, CHAK H	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1995	RIVERA, ALFRED J	Cole Information
1992	103 NORDSETH RON	PACIFIC BELL DIRECTORY
	103 DUNLAP L M	PACIFIC BELL DIRECTORY
	104 SIMON W	PACIFIC BELL DIRECTORY
	109 FUCHIWAKI S	PACIFIC BELL DIRECTORY
	111 RANTALA OLLI	PACIFIC BELL DIRECTORY
	116 MONTAGUE W C JR	PACIFIC BELL DIRECTORY
	120 EASTON E	PACIFIC BELL DIRECTORY
	202 FINK DAVID	PACIFIC BELL DIRECTORY
	208 GEE TONY R	PACIFIC BELL DIRECTORY
	208 GEE TONY R	PACIFIC BELL DIRECTORY
	210 BROWN MICHAEL	PACIFIC BELL DIRECTORY
	211 WYSINGER THEODORE	PACIFIC BELL DIRECTORY
	213 WAITE ED	PACIFIC BELL DIRECTORY
	305 SWAINE TOM	PACIFIC BELL DIRECTORY
	313 VARRELMAN MARTIN	PACIFIC BELL DIRECTORY
	401 BOOTS D W	PACIFIC BELL DIRECTORY
	402 SOBALVARRO ERIC B	PACIFIC BELL DIRECTORY
	MONTAGUE, W C JR	Cole Information
	CHENG, DEVONA	Cole Information
	BROWN, MICHAEL	Cole Information
	FINK, DAVID	Cole Information
	FUCHIWAKI, S	Cole Information
	STATEN, R J	Cole Information
	SIMON, W	Cole Information
	LOYD, R	Cole Information
	VARRELMAN, MARTIN	Cole Information
1986	Crescent Circle Homeowners Assn Club House	PACIFIC BELL WHITE PAGES
	Swaine Tom	PACIFIC BELL WHITE PAGES
1943	Brown Hugh F Lou E h	R. L. Polk & Co.

## FINDINGS

### 456 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2010	TONYA WOLFF	Cole Information
2005	TONYA WOLFF	Cole Information

### 458 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Lynch Agnes P teller ACN Bank r	R. L. Polk & Co.
	Lynch Frank V asst storekpr Grove Regulator Co r	R. L. Polk & Co.
	Lynch Isabelle L r	R. L. Polk & Co.
	Lynch Mæe J music tchr r	R. L. Polk & Co.
	Lynch Mary A wid W A h	R. L. Polk & Co.
	Lynch Noel C USCG r	R. L. Polk & Co.

### 460 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	DEHFAP ALI	EDR Digital Archive
	JACQUELINE HARDIMAN	EDR Digital Archive
	ESTELLE WOODBURY	EDR Digital Archive
	ASHLEY MATERON	EDR Digital Archive
	DAVID LIAO	EDR Digital Archive
	ALBARUDI ALGAZZALI	EDR Digital Archive
	HAZEL DOLIO	EDR Digital Archive
	CHUN CHOI	EDR Digital Archive
	GLINDER SATALAYA	EDR Digital Archive
	GINA HILL	EDR Digital Archive
	MARION LEWIS	EDR Digital Archive
	KIANA POURJANFESHAN	EDR Digital Archive
	AHIN SAEPHAN	EDR Digital Archive
	NICOLE NGUYEN	EDR Digital Archive
	EDGAR DEVAN	EDR Digital Archive
	RAUL CRUZ	EDR Digital Archive
2017	KANDACE MCDONALD	Cole Information
2014	LUISA AGREGADO	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	LIAM ALEGUIRE	Cole Information
	TERRY MARTIN	Cole Information
	ESTELL WOODBURY	Cole Information
	RICHARD NORRIS	Cole Information
	MARIA ANAYA	Cole Information
	JOHN GOETTGE	Cole Information
	BRANDON JENKINS	Cole Information
	DIANA KAMPA	Cole Information
	OLUGBOADURA OLUDE	Cole Information
	GEMMA ARGUELLES	Cole Information
	GEORGE BULLIS	Cole Information
	CLARENCE PERKINS	Cole Information
	RICHARD MOUNT	Cole Information
	SID VALLEDOR	Cole Information
	STEFAN BRUNNSCHWEILER	Cole Information
	HAZEL DOLIO	Cole Information
	KENNETH HO	Cole Information
	TATIANA MAGARA	Cole Information
	RAYMOND LEUNG	Cole Information
	LLOYD RANOLA	Cole Information
	BENJAMIN OSTER	Cole Information
	JOHN NEARY	Cole Information
	RUDI ALGAZZALI	Cole Information
	CHARLES GOODSON	Cole Information
	CARL JOHNSON	Cole Information
	GREGORY RAMIREZ	Cole Information
	ROBERT MANLEY	Cole Information
	MARIA WILSON	Cole Information
2010	LIAM ALEGUIRE	Cole Information
	BRUCE HANES	Cole Information
	ESTELL WOODBURY	Cole Information
	LUISA AGREGADO	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2010	MICHAEL PARKER	Cole Information
	RICHARD JUDSON	Cole Information
	CAREY SEIP	Cole Information
	NATALIA POLIAKOVA	Cole Information
	JILL PORTER	Cole Information
	MARIA ANAYA	Cole Information
	OLUGBOADURA OLUDE	Cole Information
	JOHN GOETTGE	Cole Information
	PETER GUMINA	Cole Information
	GEMMA ARGUELLES	Cole Information
	ALBARUDI ALGAZZALI	Cole Information
	MEHRNAZ RAISSIAN	Cole Information
	CHARLES GRIFFIS	Cole Information
	RAYMOND LEUNG	Cole Information
	LATRECE CAIN	Cole Information
	LLOYD RANOLA	Cole Information
	HAZEL DOLIO	Cole Information
	PATRICK ADORNATO	Cole Information
	GREGORY RAMIREZ	Cole Information
	ANGIE DITTER	Cole Information
CHRISTIAN LINDEROTH	Cole Information	
CARL JOHNSON	Cole Information	
ROBERT MANLEY	Cole Information	
EDGAR DEVAN	Cole Information	
MARIA WILSON	Cole Information	
NOREEN CHU	Cole Information	
2005	ELIZABETH WOLFE	Cole Information
	CHERYL BOWIE	Cole Information
	AMY BURNS	Cole Information
	MATTHEW GLICK	Cole Information
	WHITNEY RICH	Cole Information
	DANIEL WINKLER	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	NATALIA CASTEELE	Cole Information
	CHARLES GRIFFIS	Cole Information
	PATTI FINNEY	Cole Information
	NUMA TERRELL	Cole Information
	WILSON WANG	Cole Information
	LOUISE BENNER	Cole Information
	JANICE LERIT	Cole Information
	WENDY CAMPBELL	Cole Information
	KIRSTY BROWN	Cole Information
1967	ARNEY VORIE W	R. L. Polk Co.
1962	Arney V W r	Pacific Telephone
1943	Arney Vorie W Pearl H acct h	R. L. Polk & Co.

### 461 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Almason Arnold C Geraldine B h	R. L. Polk & Co.
	Bonifield Hazel J sten h	R. L. Polk & Co.
	Brockhagen Alf h	R. L. Polk & Co.
	Brockhagen Lida K soc editor Times Star Pub Co r	R. L. Polk & Co.
	Bruick Mary r	R. L. Polk & Co.
	Cerruti Edw D jr Virginia A archt h	R. L. Polk & Co.
	Crescent Street Apartments	R. L. Polk & Co.
	DAVIDSON Edw M Eliz eng h	R. L. Polk & Co.
	Dopkins W E h	R. L. Polk & Co.
	Fagan Dillard S Bertha B h	R. L. Polk & Co.
	Francel Betty A sec treas Printing Plates Inc h	R. L. Polk & Co.
	Harned Thos B Eliz M slsmn Pure Carbonic Inc h	R. L. Polk & Co.
	Harned Thos B III drftsmn GE&DDCo r	R. L. Polk & Co.
	Malimann E C Mrs h	R. L. Polk & Co.
	Miersw a Clara tchr Pub Sch h	R. L. Polk & Co.
	Mills Helen Mrs h	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Nichols D B h	R. L. Polk & Co.
	Shaw Reeves L jr Norma clk h	R. L. Polk & Co.
	TAFT Vern M Sopha L mgr Crescent Street Apts h	R. L. Polk & Co.
	Westphal John G Ruby L h	R. L. Polk & Co.

### 462 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	BERGES JOSEPH F	R. L. Polk Co.
1943	Frey Anne T wid Harry h	R. L. Polk & Co.

### 464 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	GRINDELL WM H	R. L. Polk Co.
1962	Grindell Wm H	Pacific Telephone
1943	Stokes Linville E Hazel cash WUT Co h	R. L. Polk & Co.

### 465 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	OCCUPANT UNKNOWN	Cole Information
1962	Anderson H E r	Pacific Telephone
	Branyon Bobby	Pacific Telephone
	Branyon John R	Pacific Telephone
	Wynn Frances M	Pacific Telephone
1943	ANDERSON Harbart E Cecile T electn h	R. L. Polk & Co.
	Bradley Jas chemical eng r	R. L. Polk & Co.
	Lundin Carl A shtmtlw kr r	R. L. Polk & Co.
	Platt Dolly R slsw n I Magnin & Co r	R. L. Polk & Co.
	Platt John W Dolly R r	R. L. Polk & Co.
	Wilson Fred G Helen M USA r	R. L. Polk & Co.

### 466 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	JACIA MONACO	EDR Digital Archive
	LUISA AGREGADO	EDR Digital Archive

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	LATRECE CAIN	EDR Digital Archive
	APOORVE SINGHAL	EDR Digital Archive
	CHEUK LEUNG	EDR Digital Archive
	MAHYAR MCDONALD	EDR Digital Archive
	EDUARDO ROCHA	EDR Digital Archive
	DEHFAF ALI	EDR Digital Archive
	DIAMOND POPE	EDR Digital Archive
	ELIZABETH CAFIERO	EDR Digital Archive
	CYNTHIA MCKENZIE	EDR Digital Archive
	LUIZ ROCHA	EDR Digital Archive
	BRANDON JENKINS	EDR Digital Archive
	KARALYN BUCHNER	EDR Digital Archive
	MICHAEL PARKER	EDR Digital Archive
	TOSHIE BABA	EDR Digital Archive
	LILLIAN DUERMEIER	EDR Digital Archive
	PAMELA THORNTON	EDR Digital Archive
	TOMMY GENDZWILL	EDR Digital Archive
	ADRIAN HERN	EDR Digital Archive
	PHYLLIS BOUIE	EDR Digital Archive
	WILSON CHAU	EDR Digital Archive
	DONALD PRINCE	EDR Digital Archive
	GILBERT CHEN	EDR Digital Archive
	SARA OLSHER	EDR Digital Archive
	BONNIE SETO	EDR Digital Archive
	NOREEN CHU	EDR Digital Archive
	ELIZA SALAZAR	EDR Digital Archive
	NAINI WEERAMAN	EDR Digital Archive
	NIKHIL KOWSHIK	EDR Digital Archive
	LILLIAN PRUITT	EDR Digital Archive
	JOHN GOETTGE	EDR Digital Archive
	JANET MONSANTO	EDR Digital Archive
	AMY BURNS	EDR Digital Archive

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	DARRYL MATTHEWS	EDR Digital Archive
	JEFFREY SURRATT	EDR Digital Archive
	BAO CHAU	EDR Digital Archive
	CASEY GARGIULO	EDR Digital Archive
	SUZANNA HERNANDEZ	EDR Digital Archive
	JAMES EDWARDS	EDR Digital Archive
	FOAD GHASEMIAN	EDR Digital Archive
	COLIN TAYLOR	EDR Digital Archive
	CLIFTON HODGES	EDR Digital Archive
	KATHIE RANTZ	EDR Digital Archive
	KENNETH DAVIS	EDR Digital Archive
	RAYMOND LACKLAND	EDR Digital Archive
	JEROME POPE	EDR Digital Archive
	JEFF DILLON	EDR Digital Archive
	DENISE GLASSFORD	EDR Digital Archive
	TIFFANY ADAMS	EDR Digital Archive
	JAMES KELTNER	EDR Digital Archive
	LINDA MALBREAU	EDR Digital Archive
	ALVIN CHU	EDR Digital Archive
	BETTY MATTHEWS	EDR Digital Archive
	JASON BOOTS	EDR Digital Archive
	ARTILUS HAWKINS	EDR Digital Archive
	SUFRONIA WILKINSON	EDR Digital Archive
	KENNETH HO	EDR Digital Archive
	MARY MADDEN	EDR Digital Archive
	MICHAEL JETER	EDR Digital Archive
	NUMA TERRELL	EDR Digital Archive
	OLUDE OLUGBOADURA	EDR Digital Archive
	DEBRA KANE	EDR Digital Archive
	CHARLES KUNZMAN	EDR Digital Archive
	GLINDER SATALAYA	EDR Digital Archive
	GLINDER SALAYAH	EDR Digital Archive

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	MARION LEWIS	EDR Digital Archive
	WILL FURTH	EDR Digital Archive
	JENNIFER EDWARDS	EDR Digital Archive
	RIZVAN KHAWAR	EDR Digital Archive
	LAKENYA MCFIELD	EDR Digital Archive
	OLIVIA FERNANDEZ	EDR Digital Archive
	SUSAN BERNARD	EDR Digital Archive
	CLEMINA TU MCKINNEY	EDR Digital Archive
	SID VALLEDOR	EDR Digital Archive
	DEE MILICEVICH	EDR Digital Archive
	JOE GOMES	EDR Digital Archive
	CARL JOHNSON	EDR Digital Archive
	SZUHUNG CHEN	EDR Digital Archive
	CAREY SEIP	EDR Digital Archive
	ERICA RANDEL	EDR Digital Archive
	AMIRALI KHOYI	EDR Digital Archive
	BITA GHASEMIAN	EDR Digital Archive
	KANDACE MCDONALD	EDR Digital Archive
	CONNIE BORGES	EDR Digital Archive
	TERRY MARTIN	EDR Digital Archive
2017	GEMMA ARGULES	Cole Information
	TOSHIE BABA	Cole Information
	KARALYN BUCHNER	Cole Information
	SARA OLSHER	Cole Information
	QUAY SETH	Cole Information
	DARRYL MATTHEWS	Cole Information
	REGINALD MCCARTHY	Cole Information
	DELROY ANDERSON	Cole Information
	PHYLISS BOUIE	Cole Information
	AMY BURNS	Cole Information
NICOLE NGUYEN	Cole Information	
KATHIE RANTZ	Cole Information	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	COLIN TAYLOR	Cole Information
	KENNETH DAVIS	Cole Information
	FOAD GHASEMIAN	Cole Information
	MARADY HILL	Cole Information
	SUSAN HILL	Cole Information
	STEVEN LIMBERG	Cole Information
	SUFRONIA WILKINSON	Cole Information
	ANGELA XANDERS	Cole Information
	MAYA CHAPPELL	Cole Information
	JEFF DILLON	Cole Information
	DENISE GLASSFORD	Cole Information
	ARTILUS HAWKINS	Cole Information
	DEBBIE KANE	Cole Information
	MARY MADDEN	Cole Information
	LINDA MALBREAU	Cole Information
	ABIGAIL BATIS	Cole Information
	JASON BOOTS	Cole Information
	MATTHEW SANTOS	Cole Information
	MATT COLUCCI	Cole Information
	KIMBERLY KIM	Cole Information
	CHARLES KUNZMAN	Cole Information
	MARION LEWIS	Cole Information
	TESIA BELL	Cole Information
	JAMES TOLAND	Cole Information
	WILL FURTH	Cole Information
	VICTORIA KLIGERMAN	Cole Information
	SUSAN BERNARD	Cole Information
	ERICA RANDEL	Cole Information
	RAMAN SOI	Cole Information
	CHARLES GOODSON	Cole Information
	DEE MILICEVICH	Cole Information
	CONNIE BORGES	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	JACIA MONACO	Cole Information
	ANNA NEAL	Cole Information
	DIAMOND POPE	Cole Information
	NUHAR TASHJIAN	Cole Information
	ELIZABETH CAFIERO	Cole Information
	CARLY CLARK	Cole Information
	JOHN DONOVAN	Cole Information
	EMILY EPSTEIN	Cole Information
	LUISA GABUTERO	Cole Information
	WILBUR HARRIS	Cole Information
	KIANA JANFEFHAN	Cole Information
	JENNIFER LEE	Cole Information
	GUO LI	Cole Information
	MAHYAR MCDONALD	Cole Information
	KELLY PAYNE	Cole Information
	DONALD PRINCE	Cole Information
	PAMELA THORNTON	Cole Information
	JENNIFER FLEMING	Cole Information
	TOMMY GENDZWILL	Cole Information
	MAX LANGAARD	Cole Information
2014	LATRECE CAIN	Cole Information
	CHRISTOPHER DAVIS	Cole Information
	LUISA GABUTERO	Cole Information
	WILBUR HARRIS	Cole Information
	CHEUK LEUNG	Cole Information
	DIAMOND POPE	Cole Information
	DENISE SANFORD	Cole Information
	JASLYN ADAMS	Cole Information
	GEMMA ARGULES	Cole Information
	MEREDITH CAPLIN	Cole Information
	ADRIAN HERN	Cole Information
	GINA HILL	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	NARONG PIAEKALARP	Cole Information
	DONALD PRINCE	Cole Information
	HOTILIO RUIZ	Cole Information
	PAMELA THORNTON	Cole Information
	BRANDI BISCHOF	Cole Information
	PHYLISS BOUIE	Cole Information
	AMY BURNS	Cole Information
	DARRYL MATTHEWS	Cole Information
	LEAH MONROE	Cole Information
	JAMES ROBINSON	Cole Information
	DAVID WANG	Cole Information
	FOAD GHASEMIAN	Cole Information
	LISA JOHANNINGMEIER	Cole Information
	RAYMOND LACKLAND	Cole Information
	KATHIE RANTZ	Cole Information
	SEAN SIMON	Cole Information
	COLIN TAYLOR	Cole Information
	JOSHUA ADARKWA	Cole Information
	JENNIE BASILE	Cole Information
	ALVIN CHU	Cole Information
	JOHN ENGBRECHT	Cole Information
	DENISE GLASSFORD	Cole Information
	DEBBIE KANE	Cole Information
	MARY MADDEN	Cole Information
	BENJAMIN OSTER	Cole Information
	HOMAYOON SAFA	Cole Information
	DIDEM UNAT	Cole Information
	NARONG TIAEKALARP	Cole Information
	ANGELA XANDERS	Cole Information
	TESIA BELL	Cole Information
	MATT COLUCCI	Cole Information
	MATTHEW SANTOS	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	GLINDER SATALAYA	Cole Information
	RUDI ALGAZZALI	Cole Information
	SUSAN BERNARD	Cole Information
	WILL FURTH	Cole Information
	LAFAYETTE JOHNSON	Cole Information
	VICTORIA KLIGERMAN	Cole Information
	BRANDA MOUNT	Cole Information
	EVELYN OUANO	Cole Information
	JAMES TOLAND	Cole Information
	CONNIE BORGES	Cole Information
	DIANA KAMPA	Cole Information
	WILFRED MALBREAU	Cole Information
	DEE MILICEVICH	Cole Information
	ROBERT PRUITT	Cole Information
ANTHONY ZELLER	Cole Information	
2010	WILBUR HARRIS	Cole Information
	ANGELA LAWSON	Cole Information
	DIAMOND POPE	Cole Information
	ANNE SCHLISSMANN	Cole Information
	LUISA GABUTERO	Cole Information
	TORRIA GATES	Cole Information
	ANNA NEAL	Cole Information
	ADRIAN HORVATH	Cole Information
	JOESPH DARNELL	Cole Information
	GEORGE BULLIS	Cole Information
	DARRYL MATTHEWS	Cole Information
	ELIZA SALAZAR	Cole Information
	DAVID WANG	Cole Information
	STEFANIE BRADSHAW	Cole Information
	KATHIE RANTZ	Cole Information
	JASON GOUVEIA	Cole Information
J THEODORE	Cole Information	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2010	RAMIL TAG-AT	Cole Information
	COLIN TAYLOR	Cole Information
	JAMES EDWARDS	Cole Information
	FOAD GHASEMIAN	Cole Information
	JOSHUA ADARKWA	Cole Information
	MARY MADDEN	Cole Information
	NARONG TIAEKALARP	Cole Information
	SUFRONIA WILKINSON	Cole Information
	SERGIO ORTIZ	Cole Information
	MOSE THORNTON	Cole Information
	DENISE GLASSFORD	Cole Information
	TATIANA MAGARA	Cole Information
	WHITNEY RICH	Cole Information
	MATT COLUCCI	Cole Information
	SHARON BARROWS	Cole Information
	CHARLES KUNZMAN	Cole Information
	E HUTCHENSON	Cole Information
	NUMA TERRELL	Cole Information
	CLEMINA TU MCKINNEY	Cole Information
	JOHN MULDOON	Cole Information
	MARLA WILSON	Cole Information
	TABITHA CAGAN	Cole Information
	SUSAN BERNARD	Cole Information
	VICTORIA KLIGERMAN	Cole Information
	JAMES TOLAND	Cole Information
	EVELYN OUANO	Cole Information
	KATHLEEN BROWN	Cole Information
	OLIVIA FERNANDEZ	Cole Information
	WILL FURTH	Cole Information
	WILFRED MALBREAU	Cole Information
	ERICA RANDLE	Cole Information
	MEHRNAZ RASSIAN	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2010	DAVID JENSEN	Cole Information
	ROBERT PRUITT	Cole Information
	CONNIE BORGES	Cole Information
2005	CRESCENT VILLAS DANIEL WINKLER	Cole Information
	YOUR PERFECT WORD	Cole Information
	ORIGINS	Cole Information
	WILBUR HARRIS	Cole Information
	GREGORY LAWSON	Cole Information
	LARRY CHU	Cole Information
	HILLARY DAVIS	Cole Information
	DWAYNE ROSS	Cole Information
	DENNIS DENIEGA	Cole Information
	MEREDITH CAPLIN	Cole Information
	JOESPH DARNELL	Cole Information
	STEFANIE BRADSHAW	Cole Information
	FRANCINE BROOKINS	Cole Information
	JOHN GOETTGE	Cole Information
	Y YOON	Cole Information
	KATHIE RANTZ	Cole Information
	RICKY WILLIAMS	Cole Information
	NATALIA CASTEELE	Cole Information
	JUAN MAYO	Cole Information
	KENNETH HO	Cole Information
	DENISE GLASSFORD	Cole Information
	MEHDI LOLOEE	Cole Information
	JEREMY MASSEY	Cole Information
	MONICA YERKES	Cole Information
	LEE BOOTH	Cole Information
	ROBERT MANLEY	Cole Information
	E HUTCHENSON	Cole Information
	LLOYD RANOLA	Cole Information
	EVELYN OUANO	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	OLUGBOADUR OLUDE	Cole Information
	ROBERT GLASSER	Cole Information
	TABITHA CAGAN	Cole Information
	SUSAN BERNARD	Cole Information
	STEPHANIE MATTHEWS	Cole Information
	MATTHEW COLUCCI	Cole Information
	OLIVIA FERNANDEZ	Cole Information
	LOUISE BENNER	Cole Information
	CONNIE BORGES	Cole Information
2000	JUDY CLARK	Cole Information
	TAMEIKIA BROWN	Pacific Bell
	GILL K	Pacific Bell
	2 GRAY RONALD AND LILLIE	Pacific Bell
	101 FOSTER LARRY C	Pacific Bell
	113 OUTLANDS JAMES	Pacific Bell
	114 JONES J C	Pacific Bell
	115 MITCHELL JEAN	Pacific Bell
	122 ROSS LYNN	Pacific Bell
	123 CAMPBELL S	Pacific Bell
	206 RANTZ K	Pacific Bell
	227 INGRAM L	Pacific Bell
	312 CRESCENT COURT MANOR	Pacific Bell
	315 DARNELL JOESPH W	Pacific Bell
	319 KARVI RONALD	Pacific Bell
	326 ANDREWS WILLA	Pacific Bell
	CRESCENT COURT MANOR	Cole Information
	WILLA ANDREWS	Cole Information
	JEFF BOSWORTH	Cole Information
	DEBORAH NEWTE	Cole Information
M LEE	Cole Information	
JOESPH DARNELL	Cole Information	
RONALD GRAY	Cole Information	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	JEAN MITCHELL	Cole Information
	J JONES	Cole Information
	MABLE RENFRO	Cole Information
	LARRY FOSTER	Cole Information
	KATHIE RANTZ	Cole Information
	CLIFTON HODGES	Cole Information
	JAMES EDWARDS	Cole Information
	L INGRAM	Cole Information
	F BROOKINS	Cole Information
	SONIA MANJON	Cole Information
	KELVIN VERRETT	Cole Information
	HANEY ZAYED	Cole Information
	SHARON CAMPBELL	Cole Information
	JAMES OUTLANDS	Cole Information
LYNN ROSS	Cole Information	
LYNN ROLLERSON	Cole Information	
1996	114 JONES J C	PACIFIC BELL DIRECTORY
	115 CRESCENT COURT MANOR	PACIFIC BELL DIRECTORY
	206 RANTZ K	PACIFIC BELL DIRECTORY
	318 GRASHIN PAL	PACIFIC BELL DIRECTORY
1995	MICHAEL SCOTT & ASSOC	Cole Information
	LAMBRIGHT, KATRINA	Cole Information
	CARPENTER, G	Cole Information
	WHITE, TAMERA	Cole Information
	TAYLOR, BURMA	Cole Information
	CASELLA, GENO G	Cole Information
	RANTZ, KATHIE	Cole Information
	WILLIAMS, BARBARA	Cole Information
	KENNEDY, LINDA	Cole Information
	MORGAN, MIKE	Cole Information
	GATES, LAUNI	Cole Information
CONNALLY, VENECIA	Cole Information	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1995	INGRAM, LOIS	Cole Information
	JONES, J C	Cole Information
	DANIELS, TRACY	Cole Information
	POKORNY, ANDRZEJ	Cole Information
1992	107 GATES LAUNI	PACIFIC BELL DIRECTORY
	114 JONES J C	PACIFIC BELL DIRECTORY
	121 CASELIA GENO G	PACIFIC BELL DIRECTORY
	206 RANTZ K	PACIFIC BELL DIRECTORY
	219 HANKS DAVE	PACIFIC BELL DIRECTORY
	225 LAMBRIGHT KATRINA	PACIFIC BELL DIRECTORY
	301 FRIDAY TONY	PACIFIC BELL DIRECTORY
	BEACON HILL APTS	Cole Information
	CASELLA, GENO G	Cole Information
	MCCUTCHAN, JOHN	Cole Information
	RANTZ, K	Cole Information
	JONES, J C	Cole Information
1991	American Global Trading Co	PACIFIC BELL WHITE PAGES
	American Graphics	PACIFIC BELL WHITE PAGES
1980	Scooping Station	Pacific Telephone
1967	WARD CLAYTON M	R. L. Polk Co.
1962	Ward C M & Co	Pacific Telephone
	Ward Clayton C M Ward & Co	Pacific Telephone
1943	Eichler Alf A Opal L h	R. L. Polk & Co.

### 468 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	OCCUPANT UNKNOWN	Cole Information
1962	Dufour Ernest J	Pacific Telephone
1943	JONES C Hood Rachel R mech Otis Elev Co h	R. L. Polk & Co.

### 469 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	PLANER EDWARD T Mabel County Tax Collector Court House h	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Planer Edw T USN r	R. L. Polk & Co.

### 470 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	JOHNSON & MAPE APT	R. L. Polk Co.

### 472 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1962	Thomas H L Mrs	Pacific Telephone
	Trego Stan	Pacific Telephone
1943	Thomson Chester M Rose F restr h	R. L. Polk & Co.
	Thomson Judson E r	R. L. Polk & Co.

### 473 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	CHRISTINA VANSANDWIJK	EDR Digital Archive
2017	CHRISTINA VANSANDWIJK	Cole Information
2014	CHRISTINA VANSANDWIJK	Cole Information
2010	CHRISTINA VANSANDWIJK	Cole Information
2006	a VANSANDWUK	Haines Company, Inc.
	Christina	Haines Company, Inc.
2000	OCCUPANT UNKNOWN	Cole Information
1995	OCCUPANT UNKNOWNN	Cole Information
1967	FORTIN GEO W	R. L. Polk Co.
1962	Fortin Geo W	Pacific Telephone
1943	Fortin Geo W mech r	R. L. Polk & Co.
	Fortin Octave V Lillie B brklyr h	R. L. Polk & Co.

### 476 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	PHUONG TRAN	EDR Digital Archive
	MARCIA LAM	EDR Digital Archive
2017	RUI LI	Cole Information
	PETER LAM	Cole Information
2014	OCCUPANT UNKNOWN	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2010	MARCIA LAM	Cole Information
	OCCUPANT UNKNOWN	Cole Information
2006	LAM Maria	Haines Company, Inc.
2005	MARCIA LAM	Cole Information
	OCCUPANT UNKNOWN	Cole Information
2000	PHILIP HINES	Cole Information
1996	A FRIEDKIN NATHAN	PACIFIC BELL DIRECTORY
1995	FRIEDKIN, NATHAN	Cole Information
	HINES, PHILIP R	Cole Information
1992	B BOYD A	PACIFIC BELL DIRECTORY
	BOYD, A	Cole Information
1967	MARTINEZ RUEBEN	R. L. Polk Co.
1962	Johnson Richard F H	Pacific Telephone
	Kale Ruth	Pacific Telephone
1943	Farris Chester L Veneva C shipydw kr r	R. L. Polk & Co.
	VAIL Gladys wid G Melev opr h	R. L. Polk & Co.

### 478 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	PETER LAM	EDR Digital Archive
2014	GREG LAM	Cole Information
2010	PETER LAM	Cole Information
2006	LAM Peter	Haines Company, Inc.
2005	MARCIA LAM	Cole Information
2000	BRANHAM PHILIP	Pacific Bell
	BRANHAM PHILIP	Cole Information
	OCCUPANT UNKNOWN	Cole Information
1996	BRANHAM PHILIP	PACIFIC BELL DIRECTORY
1995	OCCUPANT UNKNOWNNN	Cole Information
1992	BRANHAM PHILIP	PACIFIC BELL DIRECTORY
1967	MAZZEI RODGER M	R. L. Polk Co.
1962	Montibeller Louis	Pacific Telephone
1943	Montibeller Helen J nurse r	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Montibeller Louis Mary restr h	R. L. Polk & Co.

### 479 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	EDWARD WAGNER	EDR Digital Archive
	DONNA RAMIREZ	EDR Digital Archive
	KARMINA GARCIA	EDR Digital Archive
2017	MARTIN BRYANT	Cole Information
	EDWARD WAGNER	Cole Information
	DIOCOLMATA NEUKIRCHEN	Cole Information
	DONNA RAMIREZ	Cole Information
	HENCE WILLIAMS	Cole Information
	KARMINA GARCIA	Cole Information
	DENISE DELUCA	Cole Information
	JAMES THAIRU	Cole Information
	RENEE PRESTON	Cole Information
	TYLER FRIDDLE	Cole Information
	LATORA SLYDELL	Cole Information
2014	JULIE WILLIAMS	Cole Information
	JOHN JOHNS	Cole Information
	DONNA RAMIREZ	Cole Information
	DEAN ATHERTON	Cole Information
	ADRIANA GARCIA	Cole Information
	DENISE DELUCA	Cole Information
	ALFONSO HERNANDEZ	Cole Information
	BLAIR BENSON	Cole Information
	ANDREA GLASPER	Cole Information
	RENEE PRESTON	Cole Information
	REGINALD RANSAW	Cole Information
	OMAR MCCULLOUGH	Cole Information
2010	ELLA STEPHEN	Cole Information
	RICKY WILLIAMS	Cole Information
	FELTON WATTS	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2010	KENNETH WILLIAMS	Cole Information
	JOHN JOHNS	Cole Information
	KARMINA GARCIA	Cole Information
	XIAOCHENG SONG	Cole Information
	JESUS GUTIERREZ	Cole Information
	YONG CHEN	Cole Information
	BIANCA BESS	Cole Information
	KELLY HACKMAN	Cole Information
	RENEE PRESTON	Cole Information
2006	AMAHA GESSESE	Cole Information
	CHENYong	Haines Company, Inc.
	LENHJohnnie	Haines Company, Inc.
	SONGJiaochteg	Haines Company, Inc.
2005	YUHUAWu	Haines Company, Inc.
	ANDREAS	Cole Information
	LIONEL PERRY	Cole Information
	JACOB CORDOVA	Cole Information
	WU YUHUA	Cole Information
	CHEN YAN	Cole Information
	YUKAI WONG	Cole Information
	JAMES THAIRU	Cole Information
	CRYSTAL DORSEY	Cole Information
	WILLIAM JACKSON	Cole Information
	JULIE WILLIAMS	Cole Information
	YIREN FANG	Cole Information
	GHEBREL TSEHAYE	Cole Information
	EDWARD NKANSEH	Cole Information
2000	12 VILLAFLOR GILBERT J	Pacific Bell
	17 RAHMAAN ANJAIL	Pacific Bell
	22 WEISNER WILLIAM	Pacific Bell
	23 STEPHEN ELLA	Pacific Bell
	30 KIM KEE YOUNG	Pacific Bell

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	ELLA STEPHEN	Cole Information
	JESSICA ABDULRAHMAN	Cole Information
	ANJAIL RAHMAAN	Cole Information
	TASHANA HOLSONBACK	Cole Information
	GILBERT VILLAFLOR	Cole Information
	KEE KIM	Cole Information
	S MACASIEB	Cole Information
	JAMIE LMYER	Cole Information
	TAMI WASSON	Cole Information
	JAMES THAIRU	Cole Information
	PAMELA NELSON	Cole Information
	V JOHNS	Cole Information
	JAMIE MYER	Cole Information
1996	10 POZZI ROGER	PACIFIC BELL DIRECTORY
	23 STEPHEN ELLA	PACIFIC BELL DIRECTORY
1995	ADAMS, WILMA	Cole Information
1992	23 JIANG ZHE	PACIFIC BELL DIRECTORY
	24 ALI FATIMA	PACIFIC BELL DIRECTORY
	ALI, FATIMA	Cole Information
1967	APARTMENTS	R. L. Polk Co.
	POWER T E	R. L. Polk Co.
	BEASLEY PAUL	R. L. Polk Co.
	SANDYS HOWARD	R. L. Polk Co.
	BIGELOW WM P	R. L. Polk Co.
	ESPEJO PAUL	R. L. Polk Co.
	SOREIDE ARTH J	R. L. Polk Co.
	WORDEN W R	R. L. Polk Co.
	WATSON WILEY W	R. L. Polk Co.
1962	Ross Lillian L	Pacific Telephone
1943	Bishoff Freida Mrs r	R. L. Polk & Co.
	Busby Eva Mrs r	R. L. Polk & Co.
	Guy Arminta wid O H r	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Lewis Minnie r	R. L. Polk & Co.
	Macanny Simon Judith h	R. L. Polk & Co.
	Young Jessie C Mrs r	R. L. Polk & Co.

### 480 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	JOHN WARBRITTON	EDR Digital Archive
	EDDIE WASHINGTON	EDR Digital Archive
	PETER WOO	EDR Digital Archive
	CHONG LEE	EDR Digital Archive
	RAIN DECASTRO	EDR Digital Archive
	SARAH HOUGHTON	EDR Digital Archive
	CYNTHIA DECASTRO	EDR Digital Archive
	MARLA BILL	EDR Digital Archive
	SHAN PIAO	EDR Digital Archive
	DESSII BILL	EDR Digital Archive
	KEVIN SEID	EDR Digital Archive
	DORIS WASHINGTON	EDR Digital Archive
2017	GATE CRESCENT APARTMENTS	Cole Information
	PETER WOO	Cole Information
	RAIN DECASTRO	Cole Information
	CHAKRIKA WINGER	Cole Information
	ANGELITA GARRISON	Cole Information
	MICHELLE PROUTY	Cole Information
	GARY REYNOLDS	Cole Information
	DONYA DRUMMOND	Cole Information
	GARY BILL	Cole Information
	JENEVIEVE FRANCISCO	Cole Information
	PATRICK MITCHELL	Cole Information
	JANELL PENHA	Cole Information
	KEVIN SEID	Cole Information
	OWEN SMITHYMAN	Cole Information
2014	SAMANTHA EPSTEIN	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	LAUREN SULKIS	Cole Information
	PETER WOO	Cole Information
	RAIN DECASTRO	Cole Information
	DAWN RAGER	Cole Information
	ANGELITA GARRISON	Cole Information
	VICTORIA MASSIE	Cole Information
	TERRENCE PACK	Cole Information
	MICHELLE PROUTY	Cole Information
	GARY REYNOLDS	Cole Information
	JUSTIN SMITH	Cole Information
	ALLYSON WINGER	Cole Information
	GARY BILL	Cole Information
	ELIZABETH DERIAS	Cole Information
	PATRICK MITCHELL	Cole Information
JOSE DIAZ	Cole Information	
KEVIN SEID	Cole Information	
2010	LARRY RAIL	Cole Information
	ISABEL DECASTRO	Cole Information
	PETER WOO	Cole Information
	ANGELITA GARRISON	Cole Information
	TERRENCE PACK	Cole Information
	JOSH BRASLOW	Cole Information
	SHAN PIAO	Cole Information
	DONYA DRUMMOND	Cole Information
	PATRICK MITCHELL	Cole Information
	GARY BILL	Cole Information
	GI SHIN	Cole Information
	KATHERINE LAMBE	Cole Information
	EDWARD HANSEN	Cole Information
	H SUNG	Cole Information
	KIOAK PAIK	Cole Information
	BYOUNG KIM	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2010	MAXWELL REYNOLDS	Cole Information
2006	BILL Gry	Haines Company, Inc.
	BRYNERY un I	Haines Company, Inc.
	COLMAN Juan Lazne	Haines Company, Inc.
	KIMJu	Haines Company, Inc.
	MITCHELL Pa Irick G	Haines Company, Inc.
	PACKTL	Haines Company, Inc.
	RAILLarty	Haines Company, Inc.
2005	PA TALLEY	Cole Information
	KARIM BERRECHID	Cole Information
	A GARRISON	Cole Information
	JUAN COLMAN	Cole Information
	TERRENCE PACK	Cole Information
	LAVANTE DAVIS	Cole Information
	GARY BIGGERS	Cole Information
	AMY DACKER	Cole Information
	MAURICE BYRD	Cole Information
	LUIS RAMOS	Cole Information
	EDWARD HANSEN	Cole Information
	W LEE	Cole Information
	YUNI BRYNER	Cole Information
	AMANDA LLOYD	Cole Information
	TED TALBOT	Cole Information
2000	102 JOHNSON DEBBIE M	Pacific Bell
	104 YANOWITZ MASON M	Pacific Bell
	105 WANT MARIA	Pacific Bell
	108 ROBERTS RODNEY	Pacific Bell
	201 MCCORMICK CHANTE	Pacific Bell
	205 ASMERON YANA THON	Pacific Bell
	302 SHEKHTER SUSAN	Pacific Bell
	305 AISSA DONALD P	Pacific Bell
401 MITCHELL PATRICK G	Pacific Bell	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	DEBBIE PAYTON	Cole Information
	BRENT SAPAUGH	Cole Information
	M YANOWITZ	Cole Information
	BOLOTA ASMEROM	Cole Information
	MARLA WANT	Cole Information
	TABITA MCKINNON	Cole Information
	SUSAN SHEKHTER	Cole Information
	DEBBIE JOHNSON	Cole Information
	CHANTE MCCORMICK	Cole Information
	LULA GREENE	Cole Information
	ASMEROM BOLOTA	Cole Information
	PATRICK MITCHELL	Cole Information
	DONALD AISSA	Cole Information
	MASON YANOWITZ	Cole Information
T PACK	Cole Information	
1996	201 DONOVAN P	PACIFIC BELL DIRECTORY
	209 ALLEN R TIMOTHY	PACIFIC BELL DIRECTORY
	302 VYAS BHARAT	PACIFIC BELL DIRECTORY
	401 MITCHELL PATRICK G	PACIFIC BELL DIRECTORY
1995	MITCHELL, PATRICK G	Cole Information
	WIEDER, JUNE	Cole Information
	VYAS, BHARAT	Cole Information
	PACK, T L	Cole Information
1992	103 LEANO ANA ROSA	PACIFIC BELL DIRECTORY
	304 RUNCO S A	PACIFIC BELL DIRECTORY
	307 LANDY MITCHELL	PACIFIC BELL DIRECTORY
	401 MITCHELL PATRICK G	PACIFIC BELL DIRECTORY
	ZADEH, F	Cole Information
	LANDY, M	Cole Information
	RUNCO, S A	Cole Information
1967	APARTMENTS	R. L. Polk Co.
	VACANT	R. L. Polk Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	BONAIUTO DAVID W	R. L. Polk Co.
	HERNDNDEZ RUTH M	R. L. Polk Co.
	BRIDGES WALTER	R. L. Polk Co.
	KIKES BETTY	R. L. Polk Co.
	MC NEILL MARY E MRS	R. L. Polk Co.
	SPANN STANISLAUS	R. L. Polk Co.
	HARKNESS ERNA MRS	R. L. Polk Co.
	RASO ROLAND	R. L. Polk Co.
	OBRIEN RAYMOND P	R. L. Polk Co.
	GRIFFIN JOYCE	R. L. Polk Co.
	BUELL RETHA	R. L. Polk Co.
	OPPENHEIMER JOYCE	R. L. Polk Co.
	LOWE SARAH	R. L. Polk Co.
	HANSON CHESTER R	R. L. Polk Co.
	THOMPSON MORRIS	R. L. Polk Co.
	BVRNEO J W	R. L. Polk Co.
	OTIS EMILY P	R. L. Polk Co.
	GRAHAM MERVIN L	R. L. Polk Co.
	LADERMAN FRED	R. L. Polk Co.
	HEDLUND DELPHIE	R. L. Polk Co.
	BARTELS EMMETT	R. L. Polk Co.
	FISCHER LORRAINE MRS	R. L. Polk Co.
	VACANT	R. L. Polk Co.
	SENSE ROY E	R. L. Polk Co.
	SWITZER DALE H	R. L. Polk Co.
	PENTHOUSE COFFEY FRANK J	R. L. Polk Co.
1943	House Bertie Mrs h	R. L. Polk & Co.

### 483 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	PETER PROWS	Cole Information
2014	PETER PROWS	Cole Information
2010	PETER PROWS	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	GREAVES James	Haines Company, Inc.
2005	TIGER PAINTS GRAPHIC DESIGN	Cole Information
2000	JAMES GREAVES	Cole Information
1995	GREAVES, JAMES F	Cole Information
1967	CHIN FRANK C	R. L. Polk Co.
1962	Chin Frank	Pacific Telephone
1943	Tranmal Enoch Ebba S h	R. L. Polk & Co.
	Tranmal Jean M clk r	R. L. Polk & Co.

### 484 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	CAMILLE LEGENDRE	EDR Digital Archive
	POLLY LEDGENDRE	EDR Digital Archive
	MANON LEGENDRE	EDR Digital Archive
	GRAEME ROWLANDS	EDR Digital Archive
2017	POLLY LEGENDRE	Cole Information
2014	POLLY LEGENDRE	Cole Information
2010	POLLY LEGENDRE	Cole Information
2006	&SLOCUM Sara	Haines Company, Inc.
	SOLCUM Sara	Haines Company, Inc.
2000	OKADA ERIK	Pacific Bell
	ERIK OKADA	Cole Information
1996	OKADA ERIK	PACIFIC BELL DIRECTORY
1995	OCCUPANT UNKNOWNN	Cole Information
1967	WONG SAM Y	R. L. Polk Co.
1962	Wong Sam Y	Pacific Telephone
1943	Oneill Barbara C r	R. L. Polk & Co.
	Oneill Hugh S Anna L law yer h	R. L. Polk & Co.

### 488 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ALEXANDRA KERL	EDR Digital Archive
	ERIC GEYER	EDR Digital Archive
	PAULA MANILDI	EDR Digital Archive

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	ERIC GEYER	Cole Information
2014	ERIC GEYER	Cole Information
2010	ERIC GEYER	Cole Information
2006	a GEYEREdo	Haines Company, Inc.
	MANILDI Paula	Haines Company, Inc.
2005	PAULA MANILDI	Cole Information
2000	OCCUPANT UNKNOWN	Cole Information
1995	TECHNICAL WIZARDRY	Cole Information
	OCCUPANT UNKNOWNN	Cole Information
1967	VANDERBERG ADRIAN E	R. L. Polk Co.
1962	Van den Berg Adriaan E	Pacific Telephone
1943	Foote Henry G Nettie P h	R. L. Polk & Co.

### 491 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ARTEMIS PETERS	EDR Digital Archive
	JANE BROWN	EDR Digital Archive
	AMANDA FREUND	EDR Digital Archive
	CONNIE FOX	EDR Digital Archive
	BARBARA SEIBERT	EDR Digital Archive
	HUGH LIVINGSTON	EDR Digital Archive
	BRETT MACFADDEN	EDR Digital Archive
	LEIGH MENDENHALL	EDR Digital Archive
	ALISON BRITTON	EDR Digital Archive
	LOUIS POLLACK	EDR Digital Archive
	SUZAN GOODMAN	EDR Digital Archive
	LEIGH MACFADDEN	EDR Digital Archive
2017	ROSALYN GOLD-ONWUDE	Cole Information
	KATHLEEN SLOAN	Cole Information
	ISABELLE SMEALL	Cole Information
	HILLARY WHITE	Cole Information
	CONNIE FOX	Cole Information
	AMANDA FREUND	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	JUDITH JOB	Cole Information
	DELWAYNE KOFFLER	Cole Information
	BARBARA SEIBERT	Cole Information
	KEVIN LYONS	Cole Information
	FRANK SHAWL	Cole Information
	ROSE KELLY	Cole Information
	HUGH LIVINGSTON	Cole Information
	DAVID UNRUH	Cole Information
	LOUIS POLLACK	Cole Information
	JESSICA SNIPES	Cole Information
	JULES BIANCHI	Cole Information
	DANICA HOBZA	Cole Information
	CARMEN PITTENGER	Cole Information
2014	BRITTON ALISON S CONSULTING DESIGN S	Cole Information
	JOHN ARCH	Cole Information
	CLAY EICHNER	Cole Information
	STEPHANIE HEROLD	Cole Information
	KATHLEEN SLOAN	Cole Information
	AMANDA FREUND	Cole Information
	CYNTHIA RHODES	Cole Information
	JUDITH JOB	Cole Information
	BARBARA SEIBERT	Cole Information
	FRANK SHAWL	Cole Information
	ROSE KELLY	Cole Information
	CRAIG ROGERS	Cole Information
	TIMOTHY TERRY	Cole Information
	KAI MORRISON	Cole Information
	HUGH LIVINGSTON	Cole Information
	DAVID UNRUH	Cole Information
	ALISON BRITTON	Cole Information
JULIE TOMLIN	Cole Information	
JULES BIANCHI	Cole Information	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	SCOTT JANECEK	Cole Information
	CARMEN PITTENGER	Cole Information
2010	TERRI LOEWENTHAL PHOTOGRAPHY	Cole Information
	ALLISON S BRITTON CONSULTING	Cole Information
	JOHN ARCH	Cole Information
	JESSICA KENT	Cole Information
	BARBARA SEIBERT	Cole Information
	JONATHAN SWEIBEL	Cole Information
	ELEANOR GLADSTONE	Cole Information
	GERMAN ARELLANO	Cole Information
	ANGELA RHODES	Cole Information
	KEVIN MANUEL	Cole Information
	JULIANE TOMLIN	Cole Information
	JULIET BIANCHI	Cole Information
	NICHOLAS REISFELT	Cole Information
	HUGH LIVINGSTON	Cole Information
	HEATHER RASTOVAC	Cole Information
	STEVEN SHORES	Cole Information
	SUZAN GOODMAN	Cole Information
SCOTT JANECEK	Cole Information	
2006	APARTMENTS	Haines Company, Inc.
	ARCH John	Haines Company, Inc.
	BRITTON ALISON	Haines Company, Inc.
	S CNSLTNG DSGN	Haines Company, Inc.
	CASTELLO Melissa	Haines Company, Inc.
	CHEUNG Deborah D	Haines Company, Inc.
	FALK Bret	Haines Company, Inc.
	GORDON Rioka	Haines Company, Inc.
	JANECEKScntt	Haines Company, Inc.
	KELLYROSE	Haines Company, Inc.
ADAMS	Haines Company, Inc.	
LIVINGSTON Hugh	Haines Company, Inc.	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	LOEWENTHAL Terri	Haines Company, Inc.
	VANNOPPEN Donnell	Haines Company, Inc.
2005	KELLY ROSE ADAMS	Cole Information
	BLADE KARREN	Cole Information
	JESSICA LIBRESCO	Cole Information
	DEBORAH CHEUNG	Cole Information
	BEVERLY CHOATE	Cole Information
	JENIFER PARKINSON	Cole Information
	RUBI DANIELLE	Cole Information
	SAM WEISSMAN	Cole Information
	TERRI LOEWENTHAL	Cole Information
	CARLA ROLEY	Cole Information
	HUGH LMINGSTON	Cole Information
	GIOVANNA GUERRERO	Cole Information
	MAGGIE BRITTON	Cole Information
	BRET FAULK	Cole Information
2000	16 BRITTON ALISON S CONSULTING- DESIGN SERVICES	Pacific Bell
	106 RANDAG M T	Pacific Bell
	201 ZUKAS W	Pacific Bell
	208 BOCK ROBERT A	Pacific Bell
	307 MCKENNA J	Pacific Bell
	BRITTON ALISON S CONSULTING DESIGN SERVICES	Cole Information
	KELLY ROSE ADAMS	Cole Information
	CHARLES BUSKEY	Cole Information
	M RANDAG	Cole Information
	JANE MCKENNA	Cole Information
	ROBERT BOCK	Cole Information
	MATT MCLEAN	Cole Information
	CARI CADWELL	Cole Information
	MARK NEFF	Cole Information
	JUDITH POWER	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	WENDY ZUKAS	Cole Information
1996	16 BRITTON ALISON S CONSULTING- DESIGN SERVICES	PACIFIC BELL DIRECTORY
	101 SMITH SHIRLEY C MRS	PACIFIC BELL DIRECTORY
	201 ZUKAS W	PACIFIC BELL DIRECTORY
	208 NORHEIM JOHN	PACIFIC BELL DIRECTORY
	303 ZIGMOND DANIEL J	PACIFIC BELL DIRECTORY
1995	ALLISON S BRITTON CONSULTING	Cole Information
	ZUKAS, WENDY	Cole Information
	SMITH, SHIRLEY C	Cole Information
	KOHL S, DAVID E	Cole Information
	ODERMATT, KYLE	Cole Information
	NAJM, TAMIM J	Cole Information
	HUSTON, MATTHEW	Cole Information
1992	16 BRITTON ALISON	PACIFIC BELL DIRECTORY
	101 SMITH SHIRLEY C MRS	PACIFIC BELL DIRECTORY
	201 ZUKAS W	PACIFIC BELL DIRECTORY
	203 SOMERS DAVID A	PACIFIC BELL DIRECTORY
	207 HOVER THOMAS	PACIFIC BELL DIRECTORY
	208 COLE DENNIS	PACIFIC BELL DIRECTORY
	302 STAROSKY MICHELLE	PACIFIC BELL DIRECTORY
	304 GONZALES AGNES	PACIFIC BELL DIRECTORY
	306 SAVANNAH K	PACIFIC BELL DIRECTORY
	404 FINDER DAVID	PACIFIC BELL DIRECTORY
	GONZALES, AGNES	Cole Information
	ZUKAS, W	Cole Information
	HOVER, THOMAS	Cole Information
1967	APARTMENTS	R. L. Polk Co.
	SMITH SHIRLEY C MRS	R. L. Polk Co.
	MAWILI SANDY G	R. L. Polk Co.
	VACANT	R. L. Polk Co.
	VACANT	R. L. Polk Co.
	STEVENS ARNOLD J	R. L. Polk Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	BERGSTROM BUDD E	R. L. Polk Co.
	MAINS EULA 8 MRS	R. L. Polk Co.
	BROWN FLOYD D	R. L. Polk Co.
	BELL DAVID	R. L. Polk Co.
	BAILEY CHARLES F	R. L. Polk Co.
	NO RETURN	R. L. Polk Co.
	VACANT	R. L. Polk Co.
	LEITER CLEARANCE E	R. L. Polk Co.
	SAUNDERS NINA MRS	R. L. Polk Co.
	KUTTLER JOSEPH	R. L. Polk Co.
	WEISEROD BIRDIE E	R. L. Polk Co.
	ADAMS CHARLES C	R. L. Polk Co.
	SWEET RUTH P MRS	R. L. Polk Co.
	MC ENEANY GRACE MRS	R. L. Polk Co.
	CORDS CORNELIA M	R. L. Polk Co.
	NO RETURN	R. L. Polk Co.
	BARKER MABEL B MRS GEI 0610	R. L. Polk Co.
	JOHNSON NELL W MRS H	R. L. Polk Co.
	KERGAN ANNA H MRS	R. L. Polk Co.
	LEWIS G W JR	R. L. Polk Co.
1962	Adams Chas C Lions Club of Oakland Leamington Hotel Residence	Pacific Telephone
	Bailey Chas F	Pacific Telephone
	Barker F T Mrs	Pacific Telephone
	Bell David A	Pacific Telephone
	Bergstrom Budd	Pacific Telephone
	Brown Chas H Mrs	Pacific Telephone
	Brown Floyd D	Pacific Telephone
	Carter E T Mrs	Pacific Telephone
	Cords Elmer Mrs	Pacific Telephone
	Dyson Henry B Mrs	Pacific Telephone
	East Grace Adams	Pacific Telephone
	Herrick Estelle Mrs r	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1962	Johnson Lawrence W Mrs	Pacific Telephone
	Kergan Anna Mrs	Pacific Telephone
	Lewis Geo Weston Jr Mrs	Pacific Telephone
	Lewis Leland M	Pacific Telephone
	Mains C E	Pacific Telephone
	Mastick Geo H Mrs r	Pacific Telephone
	Maw III S	Pacific Telephone
	Mierswa Clara Miss r	Pacific Telephone
	Rathbun D C	Pacific Telephone
	Rupp Meta M Mrs	Pacific Telephone
	Saunders Nina M	Pacific Telephone
	Sollenberger D B Cdr	Pacific Telephone
	Stevens Arnold Jas Mrs	Pacific Telephone
	Stevens Mary M	Pacific Telephone
	Sweet Thos R Mrs	Pacific Telephone
Weisbrod A Jr	Pacific Telephone	
1943	ALLEN Robt L jr Judy USA h	R. L. Polk & Co.
	Backeberg Floyd H Doris aviator h	R. L. Polk & Co.
	Bickel Paul C h	R. L. Polk & Co.
	Borin Hal Alyce dept mgr HCC Co h	R. L. Polk & Co.
	Czizek Jay A jr Grace A h	R. L. Polk & Co.
	Dart A Edw Margt M phys h	R. L. Polk & Co.
	El Mirador Apartments	R. L. Polk & Co.
	FRIEDMAN M H acct h	R. L. Polk & Co.
	GOULD Harold G asst signal supv SP Co h	R. L. Polk & Co.
	Hemsing Fred C h	R. L. Polk & Co.
	Hunt Grace M Mrs psychologist Co Hosp h	R. L. Polk & Co.
	Levy Geo M Adele K & L Drug Co h	R. L. Polk & Co.
	Lewis Geo W jr Evelyn M mgr El Mirador Apts h	R. L. Polk & Co.
	McINTIRE Walter E Genevieve inspr Okld Street Dept h	R. L. Polk & Co.
	Miller Harold F h	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Naylor Harold B Milcent Ferro Enameling Co and pres Hammer Bray Co Ltd h	R. L. Polk & Co.
	Ninnis Fredk C h	R. L. Polk & Co.
	Omingo Floro jan h	R. L. Polk & Co.
	ORR Norma D Mrs sten D D Dickson h	R. L. Polk & Co.
	Randle Alice C Mrs sten U S Treasury Dept of War Saving Staff r	R. L. Polk & Co.
	RANDLE Edw W Alice C h	R. L. Polk & Co.
	Rupp Ward H h	R. L. Polk & Co.
	Santallier Felix Mrs h	R. L. Polk & Co.
	Shiverts Abr W Leah mgr Rocsil's Shoe Co h	R. L. Polk & Co.
	Stromberg Fred W h	R. L. Polk & Co.
	Sweet Thos R Ruth P dentist h	R. L. Polk & Co.
	Weisbrod A J h	R. L. Polk & Co.
	Weisbrod Birdie E sten UC r	R. L. Polk & Co.

### 492 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	OCCUPANT UNKNOWN	Cole Information

### 503 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	DE FREMERY LEON	R. L. Polk Co.

### 504 CRESCENT ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	VACANT	R. L. Polk Co.

### CRESCENT ST # 118

#### 460 CRESCENT ST # 118

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	REBECCA ALVAREZ	EDR Digital Archive

## FINDINGS

### **CRESCENT ST # 2244**

#### **466 CRESCENT ST # 2244**

<b><u>Year</u></b>	<b><u>Uses</u></b>	<b><u>Source</u></b>
2020	KATHLEEN KANG	EDR Digital Archive
	BRYAN KANG	EDR Digital Archive

### **CRESCENT ST # 401**

#### **466 CRESCENT ST # 401**

<b><u>Year</u></b>	<b><u>Uses</u></b>	<b><u>Source</u></b>
2020	MARADY HILL	EDR Digital Archive

### **CRESCENT ST # 403**

#### **466 CRESCENT ST # 403**

<b><u>Year</u></b>	<b><u>Uses</u></b>	<b><u>Source</u></b>
2020	YARDEN HOREV	EDR Digital Archive

### **CRESCENT TER**

#### **402 CRESCENT TER**

<b><u>Year</u></b>	<b><u>Uses</u></b>	<b><u>Source</u></b>
1928	Ridgew ay Percy P asst dir phys education OPS R	R.L. Polk and Co of California

#### **436 CRESCENT TER**

<b><u>Year</u></b>	<b><u>Uses</u></b>	<b><u>Source</u></b>
1925	ASHLEY PHYLLIDA R	R. L. Polk & Co. of California
	EVERINGHAM DR S R	R. L. Polk & Co. of California
1920	BLACKBURN GEO A R	R. L. Polk & Co. of California

#### **440 CRESCENT TER**

<b><u>Year</u></b>	<b><u>Uses</u></b>	<b><u>Source</u></b>
1955	BILES ADELE A R	The Pacific Telephone & Telegraph Co.
1945	CRAWFORD MANFORD B R	The Pacific Telephone & Telegraph Co.
1938	TRUMAN GORDON MACKINTOSH R	Pacific Telephone
1933	HOWARD JAS H (DORIS) H	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	HAMLIN MRS E A R	R. L. Polk & Co. of California
1920	WESTDORF V H R	R. L. Polk & Co. of California

### 444 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	NEWTON GLENN R	The Pacific Telephone & Telegraph Co.
1950	NEWTON G D JR R	The Pacific Telephone & Telegraph Co.
	NEWTON GLENN R	The Pacific Telephone & Telegraph Co.
1945	NEWTON GLENN R	The Pacific Telephone & Telegraph Co.
1938	NEWTON GLENN R	Pacific Telephone
1933	WILLIAMS CHAS F (GRACE) H	R. L. Polk & Co.
1925	SAMPLE S M R	R. L. Polk & Co. of California
1920	KAISER MRS E B R	R. L. Polk & Co. of California

### 451 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	SODA A & SON CONTRS	The Pacific Telephone & Telegraph Co.

### 454 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	SOLANO INEZ L R	The Pacific Telephone & Telegraph Co.
1945	BRADY RALPH E R	The Pacific Telephone & Telegraph Co.
	SOLARO INEZ L R	The Pacific Telephone & Telegraph Co.
1938	CARSON GEO C R	Pacific Telephone
1933	LUDWIG ALEX (CLEMENTINE) MUSICIAN H	R. L. Polk & Co.
	LUDWIG CLEMENTINE MUSICIAN R	R. L. Polk & Co.
1928	H	R.L. Polk and Co of California
	Green Alex Clementina music tch R	R.L. Polk and Co of California
1925	EHRENPFORT MRS G W R	R. L. Polk & Co. of California
1920	BINGAMAN J W R	R. L. Polk & Co. of California

### 455 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	FOSS MARGARET	Pacific Telephone
	LUND ROGER A	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	PASSADORE JULIE ANN	Pacific Telephone
	PHILLIPS VICTOR	Pacific Telephone
1970	AVILE CATHERINE	Pacific Telephone Directory
	BAILEY DONALD L	Pacific Telephone Directory
	BAUER JAS	Pacific Telephone Directory
	BERTASSO LILLIAN	Pacific Telephone Directory
	BOYCE JAS A	Pacific Telephone Directory
	BUDROVICH T L	Pacific Telephone Directory
	CHEN ALEXANDER N	Pacific Telephone Directory
	CRANFIELD EARL	Pacific Telephone Directory
	DIETERICH WM	Pacific Telephone Directory
	FUNG V	Pacific Telephone Directory
	GREENFELDT CARLOTTA A	Pacific Telephone Directory
	GREENFELDT MARK W	Pacific Telephone Directory
	HARRINGTON J M	Pacific Telephone Directory
	HUTCHINSON CLINTON	Pacific Telephone Directory
	JENSEN J C M	Pacific Telephone Directory
	JURASIN MARK	Pacific Telephone Directory
	KADUBEC PHILIP J	Pacific Telephone Directory
	KEIST P	Pacific Telephone Directory
	KNIGHT MARGARET L	Pacific Telephone Directory
	KOHLER P M	Pacific Telephone Directory
	LOCKREM J R	Pacific Telephone Directory
	MAJUMDAR KARTIK	Pacific Telephone Directory
	MATTUCCI GEO	Pacific Telephone Directory
	MIGUEL C L	Pacific Telephone Directory
	MORGAN DENNIS	Pacific Telephone Directory
	NEILL B	Pacific Telephone Directory
	O KEEFE GEO J	Pacific Telephone Directory
	PANCHEZ MICHAEL	Pacific Telephone Directory
	PITFIELD RALPH N	Pacific Telephone Directory
	ROBERTSON K L	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	ROSSI ARMANDO A	Pacific Telephone Directory
	SHELSTAD CONNIE L	Pacific Telephone Directory
	SHONE RAYMOND JR	Pacific Telephone Directory
	SIMONI O I	Pacific Telephone Directory
	SMITH JAS E	Pacific Telephone Directory
	STRACK DON	Pacific Telephone Directory
	THOMPSON JOHN	Pacific Telephone Directory
	VARMA B	Pacific Telephone Directory
	WARREN STEVEN J	Pacific Telephone Directory
	WENDT MAR LE	Pacific Telephone Directory
	ZATKIN HERMAN	Pacific Telephone Directory
1955	BROWN HUGH F R	The Pacific Telephone & Telegraph Co.
1950	BROWN HUGLN F R	The Pacific Telephone & Telegraph Co.
1945	BROWN HUGH F R	The Pacific Telephone & Telegraph Co.
1938	BROWN HUGH F R	Pacific Telephone
1933	BROWN HUGH F (LOU) H	R. L. Polk & Co.
1928	H Hugh F Lou E welder H	R.L. Polk and Co of California
	dolph Edw G R	R.L. Polk and Co of California
1925	BROWN H F R	R. L. Polk & Co. of California
1920	BROWN H F R	R. L. Polk & Co. of California

### 458 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	LYNCH MAE J R	The Pacific Telephone & Telegraph Co.
1950	M W R	The Pacific Telephone & Telegraph Co.
1945	LYNCH MAO J R	The Pacific Telephone & Telegraph Co.
1938	LYNCH MAE J R	Pacific Telephone
	LYNCH W A R	Pacific Telephone
1933	LYNCH AGNES STEN R	R. L. Polk & Co.
	LYNCH FRANK R	R. L. Polk & Co.
	LYNCH ISABELLE L STEN R	R. L. Polk & Co.
	LYNCH MAY J MUSIC TCHR	R. L. Polk & Co.
	LYNCH WM L (MARY A) SLSMN H	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Lynch Agnes sten Sierra Nevada Life & Casualty Co R	R.L. Polk and Co of California
	19th Isabelle sten R	R.L. Polk and Co of California
	Hearst May J music tchr R	R.L. Polk and Co of California
	h Wm A Mary A H	R.L. Polk and Co of California
1925	LYNCH MAY J R	R. L. Polk & Co. of California
	LYNCH W A R	R. L. Polk & Co. of California
1920	DOWNING G J R	R. L. Polk & Co. of California
	ROBINSON MERRILL E R	R. L. Polk & Co. of California

### 460 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	ARNEY V W R	The Pacific Telephone & Telegraph Co.
1950	ARNEY V W R	The Pacific Telephone & Telegraph Co.
1945	ARNEY V W R	The Pacific Telephone & Telegraph Co.
1938	ARNEY V W R	Pacific Telephone
1933	KRUSI LESLIE M MRS H	R. L. Polk & Co.
1928	of Leslie M Mrs H	R.L. Polk and Co of California
1925	PETRAY DR H C R	R. L. Polk & Co. of California

### 461 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	BUCHANAN ROLAND L R	The Pacific Telephone & Telegraph Co.
	COMBER BERNARD R	The Pacific Telephone & Telegraph Co.
	FAGAN DILLARD S R	The Pacific Telephone & Telegraph Co.
	MATHEWS WINIFRED P R	The Pacific Telephone & Telegraph Co.
	WATERS LESLIE R	The Pacific Telephone & Telegraph Co.
1950	ALMASON ARNOLD R	The Pacific Telephone & Telegraph Co.
	BERZEL BERNARD R	The Pacific Telephone & Telegraph Co.
	COMIBE BERNARD R	The Pacific Telephone & Telegraph Co.
	DROTT ANN R	The Pacific Telephone & Telegraph Co.
	FAGAN DILLARD S R	The Pacific Telephone & Telegraph Co.
	LONG KENNETH R	The Pacific Telephone & Telegraph Co.
	MALLMANN E MRS R	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	MURPHLY HELEN E R	The Pacific Telephone & Telegraph Co.
	MURPHY ROBT H R	The Pacific Telephone & Telegraph Co.
	SMITH ELIZABETH FORREST R	The Pacific Telephone & Telegraph Co.
	STONE FRANK H R	The Pacific Telephone & Telegraph Co.
1945	ALMASON ARNOLD R	The Pacific Telephone & Telegraph Co.
	BUCHANAN ROLAND L R	The Pacific Telephone & Telegraph Co.
	BUTCHER JEAN R	The Pacific Telephone & Telegraph Co.
	DAVIDSON E M R	The Pacific Telephone & Telegraph Co.
	FAGAN DILLARD S R	The Pacific Telephone & Telegraph Co.
	GROOM NATE R	The Pacific Telephone & Telegraph Co.
	GUPPY RUSSELL E R	The Pacific Telephone & Telegraph Co.
	HARNED T B JR R	The Pacific Telephone & Telegraph Co.
	KITCHEL MILTON P R	The Pacific Telephone & Telegraph Co.
	LINEHAN F L R	The Pacific Telephone & Telegraph Co.
	MALEK LEONARD R	The Pacific Telephone & Telegraph Co.
	MALLMANN E MRS R	The Pacific Telephone & Telegraph Co.
	MILLS HELEN R	The Pacific Telephone & Telegraph Co.
	PAUL C E R	The Pacific Telephone & Telegraph Co.
	WESTPHAL JOHN R	The Pacific Telephone & Telegraph Co.
1933	EDWARDS GEO P (EMILY L) PUBLR H	R. L. Polk & Co.
1928	11306 Marie B sten R	R.L. Polk and Co of California
	Edw Irene A slsw mn R	R.L. Polk and Co of California
	Edw Kath Mrs H	R.L. Polk and Co of California
	Dana Geo P Emily H	R.L. Polk and Co of California
1925	EDWARDS G P R	R. L. Polk & Co. of California
1920	ANDERSON W W R	R. L. Polk & Co. of California

### 462 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	FREY ANNA (WID HARRY) H	R. L. Polk & Co.
	MANGINI JOHN R	R. L. Polk & Co.
	RENNERT ROLAND R (LEONE) DEPT MGR HAGSTROM S FOOD STORES R	R. L. Polk & Co.
	RONEY EDW A H	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	SKINNER MARY (WID R E) WAITER R	R. L. Polk & Co.
	VANDERHOFF WILDEY (WID J H) H	R. L. Polk & Co.
	VANIER HECTOR (ISABEL) H	R. L. Polk & Co.
	WHITE HARRY H	R. L. Polk & Co.
	WHITE MANUEL E R	R. L. Polk & Co.
1928	Kistemann Franz Malvina chem eng H	R.L. Polk and Co of California
	Locey Percy p Floy 5 asst supt Okld Playgrounds Dept H	R.L. Polk and Co of California
	Mang Lini Ann wid Harry R	R.L. Polk and Co of California
	Mang John E glassw kr H	R.L. Polk and Co of California
	h Mary Mrs waiter R	R.L. Polk and Co of California
	Vandorhof T Steall W wid J H H	R.L. Polk and Co of California
1925	LEVERORI MRS C R	R. L. Polk & Co. of California
1920	HENNAGAN L L R	R. L. Polk & Co. of California

### 464 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	STOKES LINVILLE E R	The Pacific Telephone & Telegraph Co.
1950	STOKES LINVILLE E R	The Pacific Telephone & Telegraph Co.
1945	STOKES LINVILLE E R	The Pacific Telephone & Telegraph Co.
1938	STOKES LINVILLE E R	Pacific Telephone
1933	SCHRADER HERBT J (FRANCES) H	R. L. Polk & Co.
1928	A Jos E Grace cabtmkr H	R.L. Polk and Co of California
1925	ANDERSON MRS J E R	R. L. Polk & Co. of California
1920	ANDERSON MRS J E R	R. L. Polk & Co. of California

### 465 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	ANDERSON H E R	The Pacific Telephone & Telegraph Co.
1950	ANDERSON H E R	The Pacific Telephone & Telegraph Co.
1945	ANDERSON H E R	The Pacific Telephone & Telegraph Co.
	BRADLEY JAMES C R	The Pacific Telephone & Telegraph Co.
1933	TESIO LOUIS J H	R. L. Polk & Co.
	TESIO PHYLLIS R	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	R Esther A stdt R	R.L. Polk and Co of California
1925	TESIO LOUIS J R	R. L. Polk & Co. of California
1920	TESIO LOUIS J R	R. L. Polk & Co. of California

### 466 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	BAILEY B	Pacific Telephone
	BAR-LTTA WMA	Pacific Telephone
	BROWN D	Pacific Telephone
	BROWN P A	Pacific Telephone
	CARDENAS M	Pacific Telephone
	DUFFEY D L	Pacific Telephone
	FESSLER JH	Pacific Telephone
	FOX C	Pacific Telephone
	HELMICK CHAS	Pacific Telephone
1955	VANIER V P R	The Pacific Telephone & Telegraph Co.
1950	VANIER V P R	The Pacific Telephone & Telegraph Co.
1945	EICHLER A A R	The Pacific Telephone & Telegraph Co.
1938	EICHLER A A R	Pacific Telephone
1933	EICHLER ALF A (OPAL L) GARAGE	R. L. Polk & Co.
1928	cent Low ell A stdt R	R.L. Polk and Co of California
1925	EICHLER A A R	R. L. Polk & Co. of California
1920	EICHLER A A R	R. L. Polk & Co. of California

### 468 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	TINISLEY LAWVRENCE A R	The Pacific Telephone & Telegraph Co.
1945	JONES C HOOD R	The Pacific Telephone & Telegraph Co.
1938	JONES C HOOD R	Pacific Telephone
1933	DUNAWAY DONALD R	R. L. Polk & Co.
	JONES C HOOD (RACHEL) AUTO MECH H	R. L. Polk & Co.
1928	MacIntyre B Stuart Iy I genl cont R	R.L. Polk and Co of California
1925	CASTERLINE MRS E D R	R. L. Polk & Co. of California
1920	CASTERLINE MRS E D R	R. L. Polk & Co. of California

## FINDINGS

### 469 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	PLANER MABEL MRS R	The Pacific Telephone & Telegraph Co.
1950	PLANER EDWARD T R	The Pacific Telephone & Telegraph Co.
1945	PLANER EDWARD T R	The Pacific Telephone & Telegraph Co.
1938	PLANER EDWARD T R	Pacific Telephone
1933	PLANER EDWARD T (MABEL) COUNTY TAX COLLECTOR	R. L. Polk & Co.
1925	FARWELL MRS SARAH J R	R. L. Polk & Co. of California
1920	FARWELL F M R	R. L. Polk & Co. of California

### 472 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	THOMSON C M R	The Pacific Telephone & Telegraph Co.
1945	THOMSON C M R	The Pacific Telephone & Telegraph Co.
1938	THOMSON C M R	Pacific Telephone
1933	THOMSON CHESTER M (ROSE F) ROOFER H	R. L. Polk & Co.
	TREGO STANLEY BELLMN R	R. L. Polk & Co.
1928	ange Chester M Rose F H	R.L. Polk and Co of California
	Trego Stanley clk Hotel Colt R	R.L. Polk and Co of California
1925	THOMSON C M R	R. L. Polk & Co. of California
1920	THOMSON C M R	R. L. Polk & Co. of California

### 473 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	FORTIN GEO W	Pacific Telephone Directory
1955	FORTIN O V R	The Pacific Telephone & Telegraph Co.
1945	FORTIN O V R	The Pacific Telephone & Telegraph Co.
1938	FORTIN O V R	Pacific Telephone
1933	FORTIN EDW V ASST BUYER WHITTHORNE & SWAN R	R. L. Polk & Co.
	FORTIN OCTAVE V (LILLIE B) H	R. L. Polk & Co.
1928	Fruitvale Octave V Lllie B brick contr H	R.L. Polk and Co of California

## FINDINGS

### 476 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	LARSON BRUCE	Pacific Telephone Directory
	ROMNEY REBECCA	Pacific Telephone Directory
1950	WOHLGEMUTH JOS R	The Pacific Telephone & Telegraph Co.
1938	ROHAN F D R	Pacific Telephone
1933	ROHAN FRANCIS D (VIRGINIA) ACCT H	R. L. Polk & Co.
1928	H Frances D Virginia v pres Glen Ro Rug Mfg Co H	R.L. Polk and Co of California
1920	HUGHES E J R	R. L. Polk & Co. of California

### 478 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	KINTZ S M	Pacific Telephone Directory
1945	MONTIBELLER LOUIS R	The Pacific Telephone & Telegraph Co.
1938	PRESTON FRANK E R	Pacific Telephone
1928	A Harry Eva H	R.L. Polk and Co of California
1925	LEVINSON H R	R. L. Polk & Co. of California
1920	O NEILL H S R	R. L. Polk & Co. of California

### 479 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	CHEW JENNIFER	Pacific Telephone
	MORTON BOOKER T	Pacific Telephone
	MARTON JERRY A	Pacific Telephone
1970	ABENDROTH W L	Pacific Telephone Directory
	AUNES NILS	Pacific Telephone Directory
	BEASLEY PAUL	Pacific Telephone Directory
	BELKNAP JACK	Pacific Telephone Directory
	BHATTACHARYYA ASIT K	Pacific Telephone Directory
	BIGELOW WM P	Pacific Telephone Directory
	CARSON W H JR	Pacific Telephone Directory
	DIGNEIT L	Pacific Telephone Directory
	GALE L B	Pacific Telephone Directory
	GOLDSTEIN MYER N	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	JONES MARY FRANCES	Pacific Telephone Directory
	KASARJIAN MARK	Pacific Telephone Directory
	NOONE PETER K	Pacific Telephone Directory
1950	MC CLUNG R ALAN R	The Pacific Telephone & Telegraph Co.
1945	ROSS LILIAN L R	The Pacific Telephone & Telegraph Co.
1938	ROSS WILBUR A CAPT R	Pacific Telephone
1933	ROSS WILBUR A (LILLIAN) MARINER H	R. L. Polk & Co.
1928	Serv Sarah J wid Fredk M H	R.L. Polk and Co of California

### 480 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	DONOVAN S	Pacific Telephone
1970	ADDINGTON HOWARD R	Pacific Telephone Directory
	ADDISON CHAS	Pacific Telephone Directory
	ADHAM ISAM F	Pacific Telephone Directory
	BARTELS EMMETT N	Pacific Telephone Directory
	BOARDMAN ROBT B	Pacific Telephone Directory
	DELAUDER C J	Pacific Telephone Directory
	GRIFFIN J C	Pacific Telephone Directory
	HANSON CHESTER R	Pacific Telephone Directory
	HELM DAVID P	Pacific Telephone Directory
	HOVER LUCILLE	Pacific Telephone Directory
	HUMMEL JOE	Pacific Telephone Directory
	JONES DOLORES S MRS	Pacific Telephone Directory
	LAVERSJA JOS	Pacific Telephone Directory
	MILES ROBT L	Pacific Telephone Directory
	OTIS E P	Pacific Telephone Directory
	RADOCHA JOYCE	Pacific Telephone Directory
	RAESSLER F M	Pacific Telephone Directory
	ROBE R M	Pacific Telephone Directory
	SPAAN S B	Pacific Telephone Directory
	UBBEN NED	Pacific Telephone Directory
	WITTY M L	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	WOERNER DON	Pacific Telephone Directory
1950	MELLANA RAYMOND E R	The Pacific Telephone & Telegraph Co.
1945	HOUSE BIRDIE R	The Pacific Telephone & Telegraph Co.
1938	GRAVES WILLIAM E R	Pacific Telephone
1933	GIAMBRUNO EVELYN MRS TELEG OPR R	R. L. Polk & Co.
	GRAVES WM E (CATH M) CARP H	R. L. Polk & Co.
1928	Eckhoff Evelyn telg opr WUTel R	R.L. Polk and Co of California
	Pied Wm E Oath M carp H	R.L. Polk and Co of California
	Meier Jos T Lillian V carrier Oldd PO R	R.L. Polk and Co of California

### 483 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	BOGANTES TONY	Pacific Telephone Directory
	STOKES TIM	Pacific Telephone Directory
1955	LIVINGSTON ROBT J R	The Pacific Telephone & Telegraph Co.
1950	LIVINGSTON ROBT J R	The Pacific Telephone & Telegraph Co.
1945	TRANMAL E R	The Pacific Telephone & Telegraph Co.
1938	TRANMAL E R	Pacific Telephone
1933	TRANMAL ENOCH (EBBA) BLDG CONTR	R. L. Polk & Co.
1925	TRANMAL E R	R. L. Polk & Co. of California

### 484 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	WONG SAM Y	Pacific Telephone Directory
1955	WONG SAM Y R	The Pacific Telephone & Telegraph Co.
1945	WONG SAM Y R	The Pacific Telephone & Telegraph Co.
1938	O NEILL HUGH S R	Pacific Telephone
1933	O NEILL HUGH S (ANNE) ATTY CENTRAL NATL BANK H	R. L. Polk & Co.
1928	Webster Hugh S Anna L law yer Central Natl Bank H	R.L. Polk and Co of California
1925	O NEILL H S R	R. L. Polk & Co. of California
1920	BIRR MRS H T R	R. L. Polk & Co. of California

## FINDINGS

### 488 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	LEFEBRE CHAS F	Pacific Telephone Directory
1955	FOOTE H G R	The Pacific Telephone & Telegraph Co.
1945	FOOTE H G R	The Pacific Telephone & Telegraph Co.
1938	FOOTE H G R	Pacific Telephone
1933	FOOTE HENRY G H	R. L. Polk & Co.
	FOOTE MILLIE E R	R. L. Polk & Co.
1928	56th Henry G Vera M clk H	R.L. Polk and Co of California
	Sarah K w id G H R	R.L. Polk and Co of California
1925	FOOTE H G R	R. L. Polk & Co. of California
1920	FOOTE H G R	R. L. Polk & Co. of California

### 491 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	KENNEDY L M	Pacific Telephone
	NICKELS THOS T MRS	Pacific Telephone
1970	BROWN FLOYD D	Pacific Telephone Directory
	CARTER E T MRS	Pacific Telephone Directory
	CORDS ELMER MRS	Pacific Telephone Directory
	DAHLMAN HOMER	Pacific Telephone Directory
	DE FREMERY LEON	Pacific Telephone Directory
	DICKERSON B	Pacific Telephone Directory
	EAST G ADAMS	Pacific Telephone Directory
	FISCHER GEO A MRS	Pacific Telephone Directory
	GILMAN THEODORE P	Pacific Telephone Directory
	HOTCHKISS SHIRLEY S MRS	Pacific Telephone Directory
	JOHNSON REX W	Pacific Telephone Directory
	KUTTLER JOS	Pacific Telephone Directory
	LEITER CLARENCE E MRS	Pacific Telephone Directory
	LEWIS GEO WESTON JR MRS	Pacific Telephone Directory
	LEWIS LELAND M	Pacific Telephone Directory
	MAINS C E	Pacific Telephone Directory
	MAWILI S	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	NICKELS THOS T	Pacific Telephone Directory
	ROMPELMAN V L	Pacific Telephone Directory
	SAUNDERS NINA M	Pacific Telephone Directory
	SMITH SHIRLEY C MRS	Pacific Telephone Directory
	STEVENS ARNOLD JAS MRS	Pacific Telephone Directory
	SWEET THOS R MRS	Pacific Telephone Directory
	THOMPSON S J	Pacific Telephone Directory
	WEISBROD A J	Pacific Telephone Directory
1955	BROWN CHAS H R	The Pacific Telephone & Telegraph Co.
	CARTER E T MRS R	The Pacific Telephone & Telegraph Co.
	CZIZEK J A R	The Pacific Telephone & Telegraph Co.
	HERRICK ESTELLE MRS R	The Pacific Telephone & Telegraph Co.
	HUNT GRACE M R	The Pacific Telephone & Telegraph Co.
	MASTICK GEO H MRS R	The Pacific Telephone & Telegraph Co.
	MIERSWA CLARA MISS R	The Pacific Telephone & Telegraph Co.
	RUPP WARD H MRS R	The Pacific Telephone & Telegraph Co.
	SMITH ALICE HALEY R	The Pacific Telephone & Telegraph Co.
	WEISBROD A J R	The Pacific Telephone & Telegraph Co.
1950	WILSON LUCILE N MRS R	The Pacific Telephone & Telegraph Co.
1950	BROWN CHAS H R	The Pacific Telephone & Telegraph Co.
	CARTER E T MRS R	The Pacific Telephone & Telegraph Co.
	ELLIOTT JOHN L R	The Pacific Telephone & Telegraph Co.
	GOULD HAROLD C MAI R	The Pacific Telephone & Telegraph Co.
	HERRICK ESTELLE MRS R	The Pacific Telephone & Telegraph Co.
	HILL C C R	The Pacific Telephone & Telegraph Co.
	HINIG H C R	The Pacific Telephone & Telegraph Co.
	LEWIS GEORGE WESTON JR R	The Pacific Telephone & Telegraph Co.
	MCLNTIRE W E R	The Pacific Telephone & Telegraph Co.
	MIERSWA CLARA MISS R	The Pacific Telephone & Telegraph Co.
	NINNIS FRED C R	The Pacific Telephone & Telegraph Co.
	PRESHER RALPH BAYLISS R	The Pacific Telephone & Telegraph Co.
	ROBERTS MARY L MRS R	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	RUPP WARD H MRS R	The Pacific Telephone & Telegraph Co.
	SANTALLIER FELIX MRS R	The Pacific Telephone & Telegraph Co.
	SHIERTS A W MRS R	The Pacific Telephone & Telegraph Co.
	STROMBERG FRED W R	The Pacific Telephone & Telegraph Co.
	SWEET THOS R DR	The Pacific Telephone & Telegraph Co.
	TRASK PARKER D R	The Pacific Telephone & Telegraph Co.
	WEISBROD A J R	The Pacific Telephone & Telegraph Co.
	WILSON LUCILE N MRSR	The Pacific Telephone & Telegraph Co.
1945	BONIFIELD H J R	The Pacific Telephone & Telegraph Co.
	BROWN CHAS H R	The Pacific Telephone & Telegraph Co.
	CZIZEK J A R	The Pacific Telephone & Telegraph Co.
	DART A EDWARD MRS R	The Pacific Telephone & Telegraph Co.
	EDWARDS WM F MRS R	The Pacific Telephone & Telegraph Co.
	FRIEDMAN M H R	The Pacific Telephone & Telegraph Co.
	GOULD HAROLD G R	The Pacific Telephone & Telegraph Co.
	HAYES CORNELIUS J R	The Pacific Telephone & Telegraph Co.
	HERRICK ESTELLE MRS R	The Pacific Telephone & Telegraph Co.
	HUNT GRACE M R	The Pacific Telephone & Telegraph Co.
	LEWIS GEORGE WESTON JR R	The Pacific Telephone & Telegraph Co.
	MCINTIRE W E R	The Pacific Telephone & Telegraph Co.
	MIERSWA CLARA MISS R	The Pacific Telephone & Telegraph Co.
	NAYLOR HAROLD B R	The Pacific Telephone & Telegraph Co.
	NEVIUS FRED P MD R	The Pacific Telephone & Telegraph Co.
	NINNIS FRED C R	The Pacific Telephone & Telegraph Co.
	RUPP WARD H MRS R	The Pacific Telephone & Telegraph Co.
	SANTALLIER FELIX MRS R	The Pacific Telephone & Telegraph Co.
	SHIVERTS A W MRS R	The Pacific Telephone & Telegraph Co.
	SMITH ROSWELL S R	The Pacific Telephone & Telegraph Co.
STROMBERG FRED W R	The Pacific Telephone & Telegraph Co.	
SWEET THOS R DR R	The Pacific Telephone & Telegraph Co.	
WEISBROD A J R	The Pacific Telephone & Telegraph Co.	
1938	AREY H ELLING MRS R	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	ATWATER C E R	Pacific Telephone
	BAILEY CHARLES FINDING R	Pacific Telephone
	BORIN HAL R	Pacific Telephone
	CLARK HENRY R MRS R	Pacific Telephone
	CZIZEK J A R	Pacific Telephone
	DE AVILA LOUIS B R	Pacific Telephone
	EL MIRADOR	Pacific Telephone
	FURTH E H R	Pacific Telephone
	HUNT ATLEE F R	Pacific Telephone
	JAMES ANN M MRS R	Pacific Telephone
	MATHESON A E R	Pacific Telephone
	NELSON J P R	Pacific Telephone
	NEVILLE E B JR R	Pacific Telephone
	PARKER R C R	Pacific Telephone
	SANTALLIER FELIX MRS R	Pacific Telephone
	SHIVERTS A W MRS R	Pacific Telephone
	STROMBERG FRED W R	Pacific Telephone
	WEISBROD A J R	Pacific Telephone
1933	BAGBY EARL L (GEORGIA) SLSMN H	R. L. Polk & Co.
	DAVIS DAVID Z SLSMN GRAFTON EBBERT R	R. L. Polk & Co.
	DAVIS DORA (WID HYMAN) H	R. L. Polk & Co.
	DAVIS LILLIAN R	R. L. Polk & Co.
	EGGLESTON H H GENL MGR I MAGNIN & CO R	R. L. Polk & Co.
	EL MIRADOR APARTMENTS	R. L. Polk & Co.
	FOX NAT M (LOUISE C) PRES FOX-CROSS CANDY CO H	R. L. Polk & Co.
	HARGROVE JOS R AIR TRANSPORTATION ALAMEDA	R. L. Polk & Co.
	HARTZ LINDA L MRS NURSE H	R. L. Polk & Co.
	HERRLEIN PHILLIP G (ETTA) PRES AM BRASS & COPPER SUPP CO H	R. L. Polk & Co.
	HILDRETH JACKSON P (AZELEA) H	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	KLEIN SIGMUND (ZADE) DEPT MGR GOLDMAN S H	R. L. Polk & Co.
	LENCIONI MELBA R	R. L. Polk & Co.
	LEWIS FRANK (BERTHA) TRUNKS	R. L. Polk & Co.
	MARSTON ROBT L (INEZ C) SLSMN H	R. L. Polk & Co.
	ROTHE PAUL E (GEORGIA L) SLS PROM MGR BUICK OLDS PONTIAC SLS CO R	R. L. Polk & Co.
	ROTTGER HENRY (ROSA) JAN H	R. L. Polk & Co.
	SEDGLEY WALTER F (MARCELLA) DIST MGR OWL DRUG CO H	R. L. Polk & Co.
	SPRINGER FRANKIE (WID G H) R	R. L. Polk & Co.
	SPRINGER ROLAND R MFRS AGT H	R. L. Polk & Co.
	SUMMERHAYS BENJ J H	R. L. Polk & Co.
	THOMPSON JANET MRS BEAUTY SHOP	R. L. Polk & Co.
	THOMPSON LESTER E H	R. L. Polk & Co.
	WEISBROD ABR J (GOLDIE) CLK H	R. L. Polk & Co.
	WEISBROD BIRDIE STEN U C R	R. L. Polk & Co.
	WILLIAMS DAVID A (LUCILE) INS AGT H	R. L. Polk & Co.
	YOUNG DWAYNE G TCHR BKLY PUB SCH H	R. L. Polk & Co.
	YOUNG JAS V (VIOLET H) CLK R	R. L. Polk & Co.
	YOUNG VAL MGR EL MIRADOR APTS H	R. L. Polk & Co.

### 498 CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	H Ulysses G Carrie M H	R.L. Polk and Co of California

### 462B CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	SITOMER SONYA R	Pacific Telephone

### 462C CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	BLADO W F R	The Pacific Telephone & Telegraph Co.
1938	GREGG S P R	Pacific Telephone

## FINDINGS

### 462E CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	GIMBAL L M R	R. L. Polk & Co. of California

### 462F CRESCENT TER

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	BYER BRUCE A R	The Pacific Telephone & Telegraph Co.

### CRESCENT WAY

#### 455 CRESCENT WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1991	i Brown Michael	PACIFIC BELL WHITE PAGES
	Bryant Tilton W	PACIFIC BELL WHITE PAGES
	Bryant W Aqis	PACIFIC BELL WHITE PAGES
	unlap L M	PACIFIC BELL WHITE PAGES
	unlap Leslie	PACIFIC BELL WHITE PAGES
	Easton E	PACIFIC BELL WHITE PAGES
	Easton Erma	PACIFIC BELL WHITE PAGES
	Fink David	PACIFIC BELL WHITE PAGES
	Gee Tony R	PACIFIC BELL WHITE PAGES
	Mendez Melisa	PACIFIC BELL WHITE PAGES
	Montague W C Jr	PACIFIC BELL WHITE PAGES
	Nordseth Ron	PACIFIC BELL WHITE PAGES
	Rantala Olli	PACIFIC BELL WHITE PAGES
	p Rantapaa Aaron	PACIFIC BELL WHITE PAGES
	Swaine Tom	PACIFIC BELL WHITE PAGES
	Waite Ed	PACIFIC BELL WHITE PAGES
	Wilson J E	PACIFIC BELL WHITE PAGES
	Yeung Pui Foo	PACIFIC BELL WHITE PAGES
	Yeung Richard	PACIFIC BELL WHITE PAGES
1986	Barton Beverly	PACIFIC BELL WHITE PAGES
	Barton C	PACIFIC BELL WHITE PAGES
	Barton C J	PACIFIC BELL WHITE PAGES
	Barton Carl G	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Bibb Wm E	PACIFIC BELL WHITE PAGES
	Boyd Peter B	PACIFIC BELL WHITE PAGES
	Brown P	PACIFIC BELL WHITE PAGES
	Canfield R	PACIFIC BELL WHITE PAGES
	Dunlap L M	PACIFIC BELL WHITE PAGES
	Gumbs Alice	PACIFIC BELL WHITE PAGES
	Harris Walter	PACIFIC BELL WHITE PAGES
	Harris Walter J III	PACIFIC BELL WHITE PAGES
	Lee K	PACIFIC BELL WHITE PAGES
	Liker Otakar	PACIFIC BELL WHITE PAGES
	Likes H	PACIFIC BELL WHITE PAGES
	Likas H	PACIFIC BELL WHITE PAGES
	Likee Sam G	PACIFIC BELL WHITE PAGES
	Likewise Productions PO Box 5447 Brk	PACIFIC BELL WHITE PAGES
	Matthews Harry III	PACIFIC BELL WHITE PAGES
	McAfee J	PACIFIC BELL WHITE PAGES
	Moore Timothy R	PACIFIC BELL WHITE PAGES
	Moore Tina M	PACIFIC BELL WHITE PAGES
	Murray Harold	PACIFIC BELL WHITE PAGES
	Rantala Olli	PACIFIC BELL WHITE PAGES
	Rigard Eric M	PACIFIC BELL WHITE PAGES
	Spandorf Mark	PACIFIC BELL WHITE PAGES
	Spaner M	PACIFIC BELL WHITE PAGES
	Spanfelner Albert	PACIFIC BELL WHITE PAGES
	Taterka Ron M	PACIFIC BELL WHITE PAGES
	Tates C	PACIFIC BELL WHITE PAGES
	Tatia T	PACIFIC BELL WHITE PAGES
Ussery Wilfred	PACIFIC BELL WHITE PAGES	
Vazquez Luis R	PACIFIC BELL WHITE PAGES	
1980	Alcala J P	Pacific Telephone
	Alexander G	Pacific Telephone
	Armeli Thos F	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Canfield R	Pacific Telephone
	Cordes Ronald D	Pacific Telephone
	Crescent Circle Homeow ners Assn Club House	Pacific Telephone
	Dunlap L M	Pacific Telephone
	Gonsalves Steve	Pacific Telephone
	Hendee S	Pacific Telephone
	Herzog Delores & Richard	Pacific Telephone
	Herzog Richard	Pacific Telephone
	Hill Jake	Pacific Telephone
	Johnson Larry E	Pacific Telephone
	Lundgren S E	Pacific Telephone
	Mc Cranie T K	Pacific Telephone
	Miller Doyle & Linda	Pacific Telephone
	Moore Timothy R	Pacific Telephone
	Nishio D	Pacific Telephone
	Nock J David	Pacific Telephone
	Papelbaum Wm	Pacific Telephone
	Perry Wm C	Pacific Telephone
	Poehner L	Pacific Telephone
	Pow ers Rick	Pacific Telephone
	Price Jim	Pacific Telephone
	Rehor Frank & Linda	Pacific Telephone
	Scrignoli Steven A	Pacific Telephone
	Shields B S	Pacific Telephone
	Smith Irv	Pacific Telephone
	Stone Chuck	Pacific Telephone
	Taterka Ron M	Pacific Telephone
	Tom S	Pacific Telephone
	Ussery Wilfred	Pacific Telephone
	Wong W Wynn	Pacific Telephone

## FINDINGS

### 466 CRESCENT WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1991	Alexander Jodi M	PACIFIC BELL WHITE PAGES
	Alliger Michael	PACIFIC BELL WHITE PAGES
	Bailey C C	PACIFIC BELL WHITE PAGES
	Casella Geno G	PACIFIC BELL WHITE PAGES
	Friday Tony	PACIFIC BELL WHITE PAGES
	Gates Launi	PACIFIC BELL WHITE PAGES
	Gates Lawrence	PACIFIC BELL WHITE PAGES
	Hanks Dave	PACIFIC BELL WHITE PAGES
	Hanks J	PACIFIC BELL WHITE PAGES
	Jones J C	PACIFIC BELL WHITE PAGES
	Lambright Katrina	PACIFIC BELL WHITE PAGES
	L Rantz K	PACIFIC BELL WHITE PAGES
	Scott Sandra D	PACIFIC BELL WHITE PAGES
	Scott Sean	PACIFIC BELL WHITE PAGES
	Scott Shauna	PACIFIC BELL WHITE PAGES
	Sills Harold E	PACIFIC BELL WHITE PAGES
	Sills J	PACIFIC BELL WHITE PAGES
	Sills James W	PACIFIC BELL WHITE PAGES
1986	Andersen Scott T	PACIFIC BELL WHITE PAGES
	Andersen Steve J	PACIFIC BELL WHITE PAGES
	Bailey CC	PACIFIC BELL WHITE PAGES
	Batori Thos	PACIFIC BELL WHITE PAGES
	Batoy Dimanlig C	PACIFIC BELL WHITE PAGES
	Batra Chickoo & Romi	PACIFIC BELL WHITE PAGES
	Bellini Thos	PACIFIC BELL WHITE PAGES
	Burris D L	PACIFIC BELL WHITE PAGES
	Burris Dana	PACIFIC BELL WHITE PAGES
	Casella Geno G	PACIFIC BELL WHITE PAGES
	Cavizo Jaime	PACIFIC BELL WHITE PAGES
	Cavizo Pedro A Jr	PACIFIC BELL WHITE PAGES
	Cavness Cleve	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Coffel Jerry	PACIFIC BELL WHITE PAGES
	Cohen Sidney	PACIFIC BELL WHITE PAGES
	Davis Bob	PACIFIC BELL WHITE PAGES
	Doyle Richard J	PACIFIC BELL WHITE PAGES
	Forsberg Michael H	PACIFIC BELL WHITE PAGES
	Friday Tony	PACIFIC BELL WHITE PAGES
	Grassi Linda L	PACIFIC BELL WHITE PAGES
	Green Rebecca	PACIFIC BELL WHITE PAGES
	Gregoire John P	PACIFIC BELL WHITE PAGES
	Gregoire Warren	PACIFIC BELL WHITE PAGES
	Gregoli Carl K	PACIFIC BELL WHITE PAGES
	Gurtovoy Leonid	PACIFIC BELL WHITE PAGES
	Jones J C	PACIFIC BELL WHITE PAGES
	Jones V	PACIFIC BELL WHITE PAGES
	Klezmer Harry	PACIFIC BELL WHITE PAGES
	Leavitt Ray	PACIFIC BELL WHITE PAGES
	Leavitt Richard Golden Gate Fields Alby	PACIFIC BELL WHITE PAGES
	Pennella Louise	PACIFIC BELL WHITE PAGES
	Peterson Douglas	PACIFIC BELL WHITE PAGES
	Pupo Ralph D	PACIFIC BELL WHITE PAGES
	Rantz K	PACIFIC BELL WHITE PAGES
	Schroder N	PACIFIC BELL WHITE PAGES
	Schwartz John C Jr	PACIFIC BELL WHITE PAGES
	Shimazaki Junji	PACIFIC BELL WHITE PAGES
	Sills Harold E	PACIFIC BELL WHITE PAGES
	Sills John	PACIFIC BELL WHITE PAGES
	Simpson Stanley C Jr	PACIFIC BELL WHITE PAGES
	Simpson Sterling T	PACIFIC BELL WHITE PAGES
	Stading M	PACIFIC BELL WHITE PAGES
	Turley Steven	PACIFIC BELL WHITE PAGES
	Vargas Jorge	PACIFIC BELL WHITE PAGES
	Young William	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Adkins D	Pacific Telephone
	Anderson Geo M	Pacific Telephone
	Anderson Lorrie A	Pacific Telephone
	Azarbajani Majid	Pacific Telephone
	Bailey C C	Pacific Telephone
	Becker Nancy & Carl	Pacific Telephone
	Bennett A	Pacific Telephone
	Bernard Martha	Pacific Telephone
	Burris Dew aine	Pacific Telephone
	Cannon A	Pacific Telephone
	Cannon Marshall W	Pacific Telephone
	Charles K J	Pacific Telephone
	Cohen Sidney	Pacific Telephone
	Coordinated Financial Services	Pacific Telephone
	Edw ards Pierre M	Pacific Telephone
	Fox C	Pacific Telephone
	Gonzalez Manuel D	Pacific Telephone
	Gregoire John P Jr	Pacific Telephone
	Gregoire Michele A	Pacific Telephone
	Haight L	Pacific Telephone
	Harkins Devon	Pacific Telephone
	Harris Wilford P	Pacific Telephone
	Holmes F L	Pacific Telephone
	Jarrell D T	Pacific Telephone
	Ketterling S J	Pacific Telephone
	King Leon P	Pacific Telephone
	Klezmer Harry	Pacific Telephone
	Klutch Joel	Pacific Telephone
	Larsen Don L	Pacific Telephone
	Leavitt Ray	Pacific Telephone
	Martin David	Pacific Telephone
	Martin Willie	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Mc Cutchan John	Pacific Telephone
	Obradovic R	Pacific Telephone
	Ogden Joel E	Pacific Telephone
	Pupo Ralph D	Pacific Telephone
	Samaras Jos	Pacific Telephone
	Schwartz John C Jr	Pacific Telephone
	Scott Michael	Pacific Telephone
	Sills Harold E	Pacific Telephone
	Simpson Stanley C Jr	Pacific Telephone
	Sogotis J	Pacific Telephone
	Stading M	Pacific Telephone
	Takaue Patricia S	Pacific Telephone
	Torney Richard	Pacific Telephone
	Tuckman Robt S	Pacific Telephone
	Volpe V	Pacific Telephone
	Wheelwright Scott	Pacific Telephone

### 473 CRESCENT WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Cosmic Muffin	PACIFIC BELL WHITE PAGES
1980	Cosmic Muffin	Pacific Telephone

### 476 CRESCENT WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1991	Lee S	PACIFIC BELL WHITE PAGES
1986	Shomaker Kent	PACIFIC BELL WHITE PAGES
1980	Atkinson Sara	Pacific Telephone
	Waterman Thos T Jr	Pacific Telephone

### 478 CRESCENT WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1991	Branham Philp	PACIFIC BELL WHITE PAGES
1986	Branham Philp	PACIFIC BELL WHITE PAGES
1980	Kintz S M	Pacific Telephone

## FINDINGS

### 479 CRESCENT WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1991	Ali Fatima	PACIFIC BELL WHITE PAGES
	All Harun	PACIFIC BELL WHITE PAGES
	Jiang Zhe	PACIFIC BELL WHITE PAGES
	Jichaku Patrick A	PACIFIC BELL WHITE PAGES
	Jiffi wash Inc No Charge To Calling Party	PACIFIC BELL WHITE PAGES
	Waller Veronica	PACIFIC BELL WHITE PAGES
1986	Hodges Willie	PACIFIC BELL WHITE PAGES
	Hodgesheryl	PACIFIC BELL WHITE PAGES
	Karvelis Mark	PACIFIC BELL WHITE PAGES
	Karver S	PACIFIC BELL WHITE PAGES
	Karwita Tjendra	PACIFIC BELL WHITE PAGES
	Morris Dexter	PACIFIC BELL WHITE PAGES
	Morris Dianne	PACIFIC BELL WHITE PAGES
	Person David	PACIFIC BELL WHITE PAGES
	Schwartz Lori Keen	PACIFIC BELL WHITE PAGES
	Schwartz M	PACIFIC BELL WHITE PAGES
	Schwartz M	PACIFIC BELL WHITE PAGES
	Schwartz Marion	PACIFIC BELL WHITE PAGES
	Schwartz Marion Brk	PACIFIC BELL WHITE PAGES
	Schwartz Mariorie LCS W	PACIFIC BELL WHITE PAGES
	Smith John R	PACIFIC BELL WHITE PAGES
	Wiggins Herbert	PACIFIC BELL WHITE PAGES
Wiggins JG	PACIFIC BELL WHITE PAGES	
Wiggins Jas K	PACIFIC BELL WHITE PAGES	
1980	Carmen C	Pacific Telephone
	Hawkins L C	Pacific Telephone
	Jolivette V	Pacific Telephone
	Mc Carvel Thos C	Pacific Telephone
	Pelan Laura	Pacific Telephone
	Sullivan Ray J	Pacific Telephone

## FINDINGS

### 480 CRESCENT WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1991	Chakkos Anastasios	PACIFIC BELL WHITE PAGES	
	Mitchell Patrick G	PACIFIC BELL WHITE PAGES	
	Roman Rob	PACIFIC BELL WHITE PAGES	
	Roman Robert	PACIFIC BELL WHITE PAGES	
	Roman Robert A	PACIFIC BELL WHITE PAGES	
	Romanak Paul	PACIFIC BELL WHITE PAGES	
	Runco S A	PACIFIC BELL WHITE PAGES	
	Vorasaph Mandy P	PACIFIC BELL WHITE PAGES	
	Vorasky M A	PACIFIC BELL WHITE PAGES	
1986	Anderson K E	PACIFIC BELL WHITE PAGES	
	Anderson K F	PACIFIC BELL WHITE PAGES	
	Anderson KJ	PACIFIC BELL WHITE PAGES	
	Anderson K L	PACIFIC BELL WHITE PAGES	
	Crescent Street Apartments	PACIFIC BELL WHITE PAGES	
	Hanson Chester R	PACIFIC BELL WHITE PAGES	
	Hanson Chris	PACIFIC BELL WHITE PAGES	
	Jones Dolores S Mrs	PACIFIC BELL WHITE PAGES	
	Legesse Zew du	PACIFIC BELL WHITE PAGES	
	Legette Roy M	PACIFIC BELL WHITE PAGES	
	Mitchell Patrick G	PACIFIC BELL WHITE PAGES	
	Otis E P	PACIFIC BELL WHITE PAGES	
	Runco S A	PACIFIC BELL WHITE PAGES	
	Segura Tina	PACIFIC BELL WHITE PAGES	
	1980	Anderson K E	Pacific Telephone
		Arias Ricardo	Pacific Telephone
Daly Jerry		Pacific Telephone	
Farmer Janet L		Pacific Telephone	
Fernandez Juan		Pacific Telephone	
Hanson Chester R		Pacific Telephone	
Jones Dolores S Mrs		Pacific Telephone	
Lea Sara C		Pacific Telephone	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Legesse Zew du	Pacific Telephone
	Mitchell Patrick G	Pacific Telephone
	Otis EP	Pacific Telephone
	Runco S A	Pacific Telephone
	Shifa Zeheria	Pacific Telephone
	Strauss J A	Pacific Telephone
	Witty ML	Pacific Telephone

### 483 CRESCENT WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Keenan Thos P	Pacific Telephone

### 484 CRESCENT WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Wong Sam Y	Pacific Telephone

### 488 CRESCENT WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1991	Jones Suzanna	PACIFIC BELL WHITE PAGES

### 491 CRESCENT WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1991	Bastani Raana	PACIFIC BELL WHITE PAGES
	Basten Andrys	PACIFIC BELL WHITE PAGES
	Britton Alison	PACIFIC BELL WHITE PAGES
	Britton Alison	PACIFIC BELL WHITE PAGES
	Britton BR	PACIFIC BELL WHITE PAGES
	Cole Dennis	PACIFIC BELL WHITE PAGES
	Jordan R	PACIFIC BELL WHITE PAGES
	Kaw amoto A	PACIFIC BELL WHITE PAGES
	Kaw amoto E	PACIFIC BELL WHITE PAGES
	Key Rose Adams	PACIFIC BELL WHITE PAGES
	Savannah K	PACIFIC BELL WHITE PAGES
	Smith Shirley C Mrs	PACIFIC BELL WHITE PAGES
	Somers David A	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Crofts Cedric	PACIFIC BELL WHITE PAGES
	Fischer S E	PACIFIC BELL WHITE PAGES
	Gilman Theodore P	PACIFIC BELL WHITE PAGES
	Gilman V	PACIFIC BELL WHITE PAGES
	Heath Chas M	PACIFIC BELL WHITE PAGES
	Heath D	PACIFIC BELL WHITE PAGES
	Heath David	PACIFIC BELL WHITE PAGES
	Hurmezian D	PACIFIC BELL WHITE PAGES
	Hursh John G	PACIFIC BELL WHITE PAGES
	Hursh P	PACIFIC BELL WHITE PAGES
	Jordan R	PACIFIC BELL WHITE PAGES
	Lane Frederick W	PACIFIC BELL WHITE PAGES
	Lane G	PACIFIC BELL WHITE PAGES
	Lane Gary Michael & Sandra B	PACIFIC BELL WHITE PAGES
	Lane Greg	PACIFIC BELL WHITE PAGES
	Lewis Leland M	PACIFIC BELL WHITE PAGES
	Smith Shirley C Mrs	PACIFIC BELL WHITE PAGES
Somers David A	PACIFIC BELL WHITE PAGES	
1980	Blythe Jean	Pacific Telephone
	Carter E T Mrs	Pacific Telephone
	de Fremery Leon	Pacific Telephone
	Desilva Della	Pacific Telephone
	Drago J E	Pacific Telephone
	Dunn Dorothy	Pacific Telephone
	Fischer S E	Pacific Telephone
	Gilman Theodore P	Pacific Telephone
	Heath Chas M	Pacific Telephone
	Hurmezian D	Pacific Telephone
	Kennedy L M	Pacific Telephone
	Lane Frederick W	Pacific Telephone
	Lewis Leland M	Pacific Telephone
Smith Shirley C Mrs	Pacific Telephone	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Sweet Thos R Mrs	Pacific Telephone
	Taylor E E	Pacific Telephone
	Weisbrod A J	Pacific Telephone

### ELWOOD AVE

#### 401 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	LAWANA STEELE	EDR Digital Archive
2017	LAWANA STEELE	Cole Information
2014	LAWANA STEELE	Cole Information
1995	STEELE, LAWANA	Cole Information

#### 403 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	BAY SMALL MOVES	EDR Digital Archive
	MINDI MARCUS	EDR Digital Archive
2017	MINDI MARCUS	Cole Information
2014	OCCUPANT UNKNOWN	Cole Information
2010	CLIFTON JONES	Cole Information
2005	CLIFTON JONES	Cole Information
2000	DARREN PATTON	Cole Information
1995	HARDY, TERESA A	Cole Information

#### 407 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	TRACIE SIMMONS	EDR Digital Archive
	THOMAS SIMMONS	EDR Digital Archive
2017	THOMAS SIMMONS	Cole Information
2014	THOMAS SIMMONS	Cole Information
2010	THOMAS SIMMONS	Cole Information
2006	JONESTrade	Haines Company, Inc.
	SIMMONS Thomas	Haines Company, Inc.
2000	KEVIN SMITH	Cole Information
1996	ADAMS JACK M JR	PACIFIC BELL DIRECTORY

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1995	OCCUPANT UNKNOWN	Cole Information
1992	ADAMS JACK M JR	PACIFIC BELL DIRECTORY
	ADAMS, JACK M JR	Cole Information
1991	Adams Jack M Jr	PACIFIC BELL WHITE PAGES
	Adams Jacob A	PACIFIC BELL WHITE PAGES
1986	Adams Jack M Jr	PACIFIC BELL WHITE PAGES
1980	Adams Jack M Jr	Pacific Telephone
1975	ADAMS JACK M JR	Pacific Telephone
1970	ADAMS JACK M JR	Pacific Telephone Directory
1943	Firpo Ignatius J Jessie M h	R. L. Polk & Co.
	Firpo Mary w id J B h	R. L. Polk & Co.
	Madden Mary r	R. L. Polk & Co.
1938	FIRPO THELMA MISS R	Pacific Telephone
1933	FIRPO IGNATIUS R	R. L. Polk & Co.
	FIRPO MADELINE D CLK R	R. L. Polk & Co.
	FIRPO MARY (WID JOHN) H	R. L. Polk & Co.
	WRIGHT GLADYS MRS CLK R	R. L. Polk & Co.
1928	Ignatius R	R.L. Polk and Co of California

### 419 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ROBERT MILLER	EDR Digital Archive
	CHRISTA HULSE	EDR Digital Archive
2017	CHRISTA HULSE	Cole Information
2014	ROBERT MILLER	Cole Information
2010	CHRISTA HULSE	Cole Information
2006	HULSEChrista 00 a	Haines Company, Inc.
2000	OCCUPANT UNKNOWN	Cole Information
1995	HOWELL, GLENN E	Cole Information
1986	Raffe Sydelle	PACIFIC BELL WHITE PAGES
	Raffel Richard A	PACIFIC BELL WHITE PAGES
	Ward David	PACIFIC BELL WHITE PAGES
1980	Henrikson Kenneth A	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	HENDRICKSON KENNETH A	Pacific Telephone Directory
	HENRIKSON KENNETH A	Pacific Telephone Directory
1962	Henrikson Kenneth A	Pacific Telephone
1955	HENRIKSON KENNETH A	The Pacific Telephone & Telegraph Co.
1950	HENDRICKSON IKENNETH A R	The Pacific Telephone & Telegraph Co.
1943	Plunkett Jas A Frances J dentist h	R. L. Polk & Co.
1938	PLUNKETT J A DR R	Pacific Telephone
1933	PLUNKETT JAS A (FRANCES) DENTIST	R. L. Polk & Co.
1928	Plunkalt Elen w id J C R	R.L. Polk and Co of California
1920	PLUNKETT DR J A R	R. L. Polk & Co. of California

### 420 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	DANIEL MIKOLAVICH	EDR Digital Archive
	EMA FISCHER-MIKOLAV	EDR Digital Archive
2017	DANIEL MIKOLAVICH	Cole Information
2014	DANIEL MIKOLAVICH	Cole Information
2010	DANIEL MIKOLAVICH	Cole Information
2006	MIKOLAVICH Daniel	Haines Company, Inc.
2000	DANIEL MIKOLAVICH	Cole Information
1995	MIKOLAVICH, DANIEL K	Cole Information
1992	BENSON S	PACIFIC BELL DIRECTORY
	BENSON, SUSAN	Cole Information
	JANNER, MIKLANE	Cole Information
1991	Benson S	PACIFIC BELL WHITE PAGES
	Janner Miklane	PACIFIC BELL WHITE PAGES
	Janney David R CPA	PACIFIC BELL WHITE PAGES
1986	Benson S	PACIFIC BELL WHITE PAGES
	Benson S L	PACIFIC BELL WHITE PAGES
	Janner Miklane	PACIFIC BELL WHITE PAGES
	Janney James C	PACIFIC BELL WHITE PAGES
1980	Vierra L A	Pacific Telephone
1970	VIERRA L A	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	VIERRA L A R	The Pacific Telephone & Telegraph Co.
1943	Vierra Louis A Erma E h	R. L. Polk & Co.
1938	VIERRA L A R	Pacific Telephone
1933	TAUFER C THEO (HATTIE) H	R. L. Polk & Co.
	TAUFER DEWEY H (NOLA) AUTO ELECTN H	R. L. Polk & Co.
1928	Bronson Edw D Mabel K H	R.L. Polk and Co of California
	Sons Richd P stdt R	R.L. Polk and Co of California
1920	BAXTER HAROLD K R	R. L. Polk & Co. of California

### 423 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	GRANT DAVIDSON	EDR Digital Archive
	P DAVIDSON	EDR Digital Archive
	DEBORAH SPITZ	EDR Digital Archive
2017	PHILIP DAVIDSON	Cole Information
2014	PHILIP DAVIDSON	Cole Information
2010	DEBORAH SPITZ	Cole Information
2006	SPITZ Deborah	Haines Company, Inc.
2005	MOLD TESTING REMOVAL & REMEDIATION	Cole Information
2000	DEBORAH SPITZ	Cole Information
1995	LANG, LOUISE	Cole Information
1980	Max	Pacific Telephone
1975	PALMER WM C	Pacific Telephone
1962	Flynn Wm F	Pacific Telephone
	Roberts E B	Pacific Telephone
1955	LOCKE MARY C	The Pacific Telephone & Telegraph Co.
1950	FRIEND CTAIRE THE WM NAT FRIEND FLORAL CO	The Pacific Telephone & Telegraph Co.
	FRIEND WM MAT FLORAL CO THE	The Pacific Telephone & Telegraph Co.
1943	Hill Will R Neva A Chapelle Piedmont Hill & Kammerer h	R. L. Polk & Co.
1938	CORBIN HAROLD N R	Pacific Telephone
1933	BAERRESEN VIGGO E R	R. L. Polk & Co.
	WEISS JULIUS E (MARTHA B) PHARM H	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1920	STEEN MISS HAZEL R	R. L. Polk & Co. of California
	STEEN MRS S R	R. L. Polk & Co. of California
	WAHRHAFTIG MATT R	R. L. Polk & Co. of California

### 425 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	NATHALIE COELLER	EDR Digital Archive
	RODNEY COELLER	EDR Digital Archive
2017	RODNEY COELLER	Cole Information
2014	NATHALIE COELLER	Cole Information
2010	CHRISTOPHER AMEN-KROEGER	Cole Information
2006	AMEN KROEGER	Haines Company, Inc.
	Christopher	Haines Company, Inc.
	KROEGER Laura	Haines Company, Inc.
2005	LAURA KROEGER	Cole Information
2000	OCCUPANT UNKNOWN	Cole Information
1995	OCCUPANT UNKNOWNN	Cole Information
1992	SMITH, JULIE	Cole Information
1986	Fediuc Elena & Sorin	PACIFIC BELL WHITE PAGES
	Lippert Cristiana S	PACIFIC BELL WHITE PAGES
	Lippert Jonathan	PACIFIC BELL WHITE PAGES
1980	Caldarera A	Pacific Telephone
1970	FULMER LEO D	Pacific Telephone Directory
1962	Fulmer Leo D	Pacific Telephone
1955	BAKER FRED A	The Pacific Telephone & Telegraph Co.
1950	MADISON F H R	The Pacific Telephone & Telegraph Co.
1945	ROBIE IRA W R	The Pacific Telephone & Telegraph Co.
1943	Fitzsimmons Homer H Edelle v pres Compco Publications h	R. L. Polk & Co.
1938	BENING HAZEL K MRS R	Pacific Telephone
	MCNEIL MARION R	Pacific Telephone
1933	FINDLAY ELIZ (WID JAS) H	R. L. Polk & Co.
1928	Mc Marion sten R	R.L. Polk and Co of California
	Mc May W Mrs H	R.L. Polk and Co of California

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1920	CRASE MRS JAS C R	R. L. Polk & Co. of California

### 429 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	MARK AIKELE	EDR Digital Archive
2017	MARK AIKELE	Cole Information
2014	MARK AIKELE	Cole Information
2010	MARK AIKELE	Cole Information
2006	AIKELE Mari	Haines Company, Inc.
2000	AIKELE MARK	Pacific Bell
	MARK AIKELE	Cole Information
1996	AIKELE MARK	PACIFIC BELL DIRECTORY
1995	TOUSEY, JOHN W	Cole Information
	AIKELE, MARK	Cole Information
1992	AIKELE MARK	PACIFIC BELL DIRECTORY
	AIKELE MARK	PACIFIC BELL DIRECTORY
	TOUSEY, JOHN W	Cole Information
	AIKELE, MARK	Cole Information
1991	Alkele Mark	PACIFIC BELL WHITE PAGES
	Alkele Mark	PACIFIC BELL WHITE PAGES
	Aiken Ben Jr Aiken Kramer & Cummings	PACIFIC BELL WHITE PAGES
	Tousey John W	PACIFIC BELL WHITE PAGES
	Tousley Arthur H	PACIFIC BELL WHITE PAGES
	Toussaint PA	PACIFIC BELL WHITE PAGES
	Toussaint PA	PACIFIC BELL WHITE PAGES
	Toussant Deidra	PACIFIC BELL WHITE PAGES
	Toussi Maj Id	PACIFIC BELL WHITE PAGES
	Tout ian Elizabeth Love	PACIFIC BELL WHITE PAGES
1986	Aikele Mark	PACIFIC BELL WHITE PAGES
	Aikele Mark	PACIFIC BELL WHITE PAGES
	Aiken Ben Jr Aiken Kramer & Cummings Incorporated	PACIFIC BELL WHITE PAGES
	Tousey John W	PACIFIC BELL WHITE PAGES
	Tousey W M	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Tousley Art G	PACIFIC BELL WHITE PAGES
	Tousley Arthur H	PACIFIC BELL WHITE PAGES
	Toussaint PA	PACIFIC BELL WHITE PAGES
1980	Tang H F	Pacific Telephone
1970	TANG H F	Pacific Telephone Directory
1950	ROTH BEN R	The Pacific Telephone & Telegraph Co.
1943	Roth Benj Jeanette H slsmn h	R. L. Polk & Co.
1938	ROTH BEN R	Pacific Telephone
1933	COVELL FRED E (PEARL) H	R. L. Polk & Co.
	COVELL RICHD R	R. L. Polk & Co.
1928	Both Benj A Jeanette H tailor H	R.L. Polk and Co of California
1920	GADSDEN C E R	R. L. Polk & Co. of California

### 430 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	SHELLY LIEBERMAN	EDR Digital Archive
	STEPHEN BRADSHAW	EDR Digital Archive
2017	SHELLY LIEBERMAN	Cole Information
2014	SHELLY LIEBERMAN	Cole Information
2010	SHELLY LIEBERMAN	Cole Information
2006	CHEN Joyce	Haines Company, Inc.
2000	MCGEE SUSAN	Pacific Bell
	SUSAN MCGEE	Cole Information
1996	MCGEE SUSAN	PACIFIC BELL DIRECTORY
1995	MEGEE, SARA	Cole Information
1970	SMITH BELLE	Pacific Telephone Directory
1962	Smith Belle r	Pacific Telephone
1955	SMITH BELLE R	The Pacific Telephone & Telegraph Co.
1950	SMITH BELLE R	The Pacific Telephone & Telegraph Co.
1945	RISKIN BELLE R	The Pacific Telephone & Telegraph Co.
1938	RISKIN BELLE R	Pacific Telephone

## FINDINGS

### 433 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	HAVA LIBERMAN	EDR Digital Archive
2017	ANDREW ENGLISH	Cole Information
2014	HAVA LIBERMAN	Cole Information
2006	DEROSIA Geo E	Haines Company, Inc.
2005	GEORGE DEROSIA	Cole Information
2000	DE ROSIA GEO E	Pacific Bell
	GEORGE DEROSIA	Cole Information
1996	DE ROSIA GEO E	PACIFIC BELL DIRECTORY
1995	DEROSIA, GEORGE E	Cole Information
1992	DE ROSIA GEO E	PACIFIC BELL DIRECTORY
	DEROSIA, GEORGE E	Cole Information
1991	De Rosia Geo E	PACIFIC BELL WHITE PAGES
1986	De Rosia Geo E	PACIFIC BELL WHITE PAGES
1980	De Rosia Geo E	Pacific Telephone
1970	DE ROSIA GEO E	Pacific Telephone Directory
1962	De Rosia Geo E	Pacific Telephone
1955	WILSON C H	The Pacific Telephone & Telegraph Co.
1943	Robinson Jos H Grace inspr OPD h	R. L. Polk & Co.
1938	ROBINSON GRACE MRS R	Pacific Telephone
1928	venue Seth R carp R	R.L. Polk and Co of California
	venue Seth W Olive slsmn H	R.L. Polk and Co of California
	h Chas G acct J W Bingaman R	R.L. Polk and Co of California
1920	CUSHMAN OLIVE REED R	R. L. Polk & Co. of California
	CUSHMAN SETH W R	R. L. Polk & Co. of California
	REED CHAS G R	R. L. Polk & Co. of California

### 437 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	DEBORAH BROWN	EDR Digital Archive
	ANDREW BROWN	EDR Digital Archive
	MATTHEW HAMILTON	EDR Digital Archive
	HOLDEN HUME	EDR Digital Archive

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	HOLDEN HUME	Cole Information
2014	MARGARET FRANTZ	Cole Information
2010	MARGARET FRANTZ	Cole Information
2006	BROWN Andrew R	Haines Company, Inc.
2005	ANDREW BROWN	Cole Information
2000	HOWARD ELLEN	Pacific Bell
	MCCARTHY P	Pacific Bell
	PATRICK MCCARTHY	Cole Information
	ELLEN HOWARD	Cole Information
1996	HOWARD ELLEN	PACIFIC BELL DIRECTORY
	MCCARTHY P	PACIFIC BELL DIRECTORY
1995	MCCARTHY, PATRICK	Cole Information
	HOWARD, ELLEN	Cole Information
1992	HOWARD ELLEN	PACIFIC BELL DIRECTORY
	MCCARTHY P	PACIFIC BELL DIRECTORY
	MCCARTHY, P	Cole Information
	HOWARD, ELLEN	Cole Information
1991	How ard Elen	PACIFIC BELL WHITE PAGES
	Nc Carthy P	PACIFIC BELL WHITE PAGES
1975	GRUNDMAN F	Pacific Telephone
1970	GRUNDMAN F	Pacific Telephone Directory
1962	Grundman Frances Isabel	Pacific Telephone
1955	GRUNDMAN FRANCES ISABEL R	The Pacific Telephone & Telegraph Co.
1950	GRUNDIAN FRANCES ISABEL R	The Pacific Telephone & Telegraph Co.
1945	GRUNDMAN FRANCES ISABEL R	The Pacific Telephone & Telegraph Co.
1943	Grundman F Isabel librn Okld Pub Libry r	R. L. Polk & Co.
	Grundman Rosetta wid F J h	R. L. Polk & Co.
	Grundman Saml B r	R. L. Polk & Co.
1938	GRUNDMAN FRANCES ISABEL R	Pacific Telephone
1933	BAKER A WOODLY (MARY M) DENTIST	R. L. Polk & Co.
1928	28th A Woodyly Mary M dentist	R.L. Polk and Co of California
	H	R.L. Polk and Co of California

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1920	BAKER DR A WOODLY R	R. L. Polk & Co. of California

### 438 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ARTHUR WEIL	EDR Digital Archive
	JOYCE IRVINE	EDR Digital Archive
2017	CHARLES GRESHER	Cole Information
2014	CHARLES GRESHER	Cole Information
2010	OCCUPANT UNKNOWN	Cole Information
2006	MCCONNELLKelh	Haines Company, Inc.
1995	SOMES, DOROTHY	Cole Information
1986	Lew is Janet E	PACIFIC BELL WHITE PAGES
	Lew is Jeanett	PACIFIC BELL WHITE PAGES
1980	Adler J	Pacific Telephone
	Cardy Wendy	Pacific Telephone
	Fairbrook Susan	Pacific Telephone
1970	STANSBURY JOHN MRS	Pacific Telephone Directory
1950	TARRE G M R	The Pacific Telephone & Telegraph Co.
1943	Giove M Torre Jessie L h	R. L. Polk & Co.
1938	TORRE G M R	Pacific Telephone
1933	TORRE GIOVE M (JESSIE L) H	R. L. Polk & Co.
1928	Bella Peter elk R	R.L. Polk and Co of California
	Bay Giovanni M Joeslo L w hse formm H	R.L. Polk and Co of California

### 441 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	HARDY INSURANCE CONSULTANTS	EDR Digital Archive
	JANA HARDY	EDR Digital Archive
2017	HARDY INSURANCE CONSULTANTS	Cole Information
	CALNON HARDY	Cole Information
2014	HARDY INSURANCE CONSULTANTS	Cole Information
	JANA HARDY	Cole Information
2010	HARDY INSURANCE CONSULTANTS	Cole Information
	JANA HARDY	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	No Current Listing	Haines Company, Inc.
2005	HARDY INSURANCE CONSULTANTS	Cole Information
	OCCUPANT UNKNOWN	Cole Information
2000	JANA HARDY	Cole Information
1995	HARDY, JANA M	Cole Information
1980	Hamann Ingrid	Pacific Telephone
	Nazaroff Bill	Pacific Telephone
1970	PORTSCHE HAROLD A	Pacific Telephone Directory
1962	Walker P H	Pacific Telephone
1955	WALKER P H	The Pacific Telephone & Telegraph Co.
1945	PILLSBURY O C R	The Pacific Telephone & Telegraph Co.
1943	Pillsbury Oliver C Mary E slsmn ZPCo h	R. L. Polk & Co.
	SMITH Matilda r	R. L. Polk & Co.
1938	REID E V R	Pacific Telephone
1933	REID EARL V (EMILY E) ENG H	R. L. Polk & Co.
1928	San Earl V Emily loco eng H	R.L. Polk and Co of California
1920	EHRENBERG MRS M R	R. L. Polk & Co. of California

### 444 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	OUALID AISSABENHADDAD	Cole Information
2006	No Current Listing	Haines Company, Inc.
2005	MARK WILLIAMS	Cole Information
	NEAL BLOCH	Cole Information
1995	OCCUPANT UNKNOWNN	Cole Information
1992	OW MITCHELL	PACIFIC BELL DIRECTORY
	OW, M	Cole Information
1991	Ow Mitchell	PACIFIC BELL WHITE PAGES
1980	Rubino Jerry	Pacific Telephone
1962	Vogler Margaret	Pacific Telephone
1943	MURRAY Fred G Edith C electn h	R. L. Polk & Co.
1938	MURRAY FRED G R	Pacific Telephone
1933	MURRAY FRED G (EDYTHE) CBTMKR H	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	11519 Fredk G slsmn Oakland Lndy Co Inc H	R.L. Polk and Co of California

### 445 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	SANDRA DENHART	EDR Digital Archive
2017	SANDRA DENHART	Cole Information
2014	SANDRA DENHART	Cole Information
2010	SANDRA DENHART	Cole Information
2006	No Current Listing	Haines Company, Inc.
2005	SANDRA DENHART	Cole Information
2000	DOTSON THOMAS	Pacific Bell
	THOMAS DOTSON	Cole Information
1995	OCCUPANT UNKNOWNN	Cole Information
1991	Fulmer Gary L	PACIFIC BELL WHITE PAGES
	Fulmer Joanne	PACIFIC BELL WHITE PAGES
1980	Fulmer Gary L	Pacific Telephone
1970	FULMER GARY L	Pacific Telephone Directory
1943	Halibaugh Edw D h	R. L. Polk & Co.
	Halibaugh Margt L Mrs h	R. L. Polk & Co.
	Halibaugh Ralph L electn r	R. L. Polk & Co.
1938	HALIBAUGH EDWARD D R	Pacific Telephone
1933	GRAY RAPHAEL M CLK RY M S R	R. L. Polk & Co.
	HALIBAUGH EDW D RY MS H	R. L. Polk & Co.
	HALIBAUGH MARGT L MRS R	R. L. Polk & Co.
1928	Halibaugh Edw D clk R	R.L. Polk and Co of California
	Halibaugh Margt L w id C W H	R.L. Polk and Co of California

### 446 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	CLAUDINE BACH	Cole Information
2014	CLAUDINE BACH	Cole Information
2010	CLAUDINE BACH	Cole Information
2006	BACH C	Haines Company, Inc.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	CLAUDINE BACH	Cole Information
2000	BACH C	Pacific Bell
	C BACH	Cole Information
1996	BACH C	PACIFIC BELL DIRECTORY
1995	BACH, C	Cole Information
1992	BACH C	PACIFIC BELL DIRECTORY
	BACH, C	Cole Information
1991	Bach C	PACIFIC BELL WHITE PAGES
1980	Murray Fred G	Pacific Telephone
1975	MURRAY FRED G	Pacific Telephone
1970	MURRAY FRED G	Pacific Telephone Directory
1955	CRESSWELL MABEL E R	The Pacific Telephone & Telegraph Co.
1950	CRESSWELL MABEL E R	The Pacific Telephone & Telegraph Co.
1945	CRESSWELL M E R	The Pacific Telephone & Telegraph Co.
1943	Rackestraw L Mrs h	R. L. Polk & Co.
1938	BERNSTEIN LOUIS R	Pacific Telephone
1933	BERNSTEIN LOUIS (ROSABELLE) ART GDS	R. L. Polk & Co.
1928	av Louis Rosabelle mgr Mc Dow ell & Harding Inc H	R.L. Polk and Co of California

### 448 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	KEITH SENNETTE	EDR Digital Archive
2017	KEITH SENNETTE	Cole Information
2010	OCCUPANT UNKNOWN	Cole Information
2006	FERRIS Alltson	Haines Company, Inc.
2005	FERRIS ENTERPRISES	Cole Information
	OCCUPANT UNKNOWN	Cole Information
2000	T YOUNG	Cole Information
1995	OCCUPANT UNKNOWNN	Cole Information
1986	Andreason Dan L	PACIFIC BELL WHITE PAGES
	Andreatta Martin M 8	PACIFIC BELL WHITE PAGES
1980	Huang S Y	Pacific Telephone
1975	HUANG S Y	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	BROWN G R	Pacific Telephone Directory
1962	Hagen Herbert A	Pacific Telephone
	Hagen Rose	Pacific Telephone
1955	ARMEN EDW	The Pacific Telephone & Telegraph Co.
1943	Bacon W R h	R. L. Polk & Co.
1938	CONGER JOHN O R	Pacific Telephone
1933	MAUSSHARDT MILTON R (MARGUERITE) ASST SLSMGR ELEC PRODUCTS CORP H	R. L. Polk & Co.

### 451 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	JIMMY LAU	EDR Digital Archive
	CHEU HUIE	EDR Digital Archive
	BRIAN HUIE	EDR Digital Archive
2017	PAUL RHYU	Cole Information
2014	OCCUPANT UNKNOWN	Cole Information
2010	OCCUPANT UNKNOWN	Cole Information
2006	o LAU Jimmy	Haines Company, Inc.
2005	JIMMY LAU	Cole Information
2000	BOSSERT TARA A	Pacific Bell
	BELL SUMMER	Pacific Bell
	M KNOX	Cole Information
	SUMMER BELL	Cole Information
1995	JOHNSTON, JIM	Cole Information
1992	BELL EDWARD	PACIFIC BELL DIRECTORY
	BELL, EDWARD	Cole Information
1991	Beltl Edw ard	PACIFIC BELL WHITE PAGES
1986	Briskin Alan	PACIFIC BELL WHITE PAGES
	Johnson Paul	PACIFIC BELL WHITE PAGES
	Regan K	PACIFIC BELL WHITE PAGES
1975	LENGYEL E	Pacific Telephone
1970	GROSS LEE N	Pacific Telephone Directory
1943	ROLAND Eug W Bessie B law yer h	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	ROLAND EUG W (BESSIE B) LAWYER R1002	R. L. Polk & Co.
	SLAYBACK SHERMAN PAGE OKLD LIBRARY DEPT R	R. L. Polk & Co.
1928	H	R.L. Polk and Co of California
	av B Eus W Bessie B law ye R	R.L. Polk and Co of California
1920	ROLAND EUGENE W R	R. L. Polk & Co. of California

### 452 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	FLORENCE TRENT	EDR Digital Archive
	LYNNE TILSEN	EDR Digital Archive
2017	KELLIE BENTZ	Cole Information
	SUSAN JENNINGS	Cole Information
	JULIANA FINDLAY	Cole Information
	MICHAEL WORDEN	Cole Information
2014	SUSAN JENNINGS	Cole Information
	NAGRAJ ADHITYA	Cole Information
	ANTHONY BOLACH	Cole Information
2010	SHUNMEI WU	Cole Information
	SHARI KIRKLAND	Cole Information
	ANTHONY BOLACH	Cole Information
2006	No Current Listing	Haines Company, Inc.
2005	SHUNMEI WU	Cole Information
	JESSICA JONES	Cole Information
	THOMAS PEELE	Cole Information
2000	J RANDLE	Cole Information
	BRUCE DALZIEL	Cole Information
	KENNETH LIEN	Cole Information
1995	OCCUPANT UNKNOWNN	Cole Information
1991	Chavez G	PACIFIC BELL WHITE PAGES
	Murray Michael	PACIFIC BELL WHITE PAGES
1986	Goldmacher S	PACIFIC BELL WHITE PAGES
	Wannamaker H C	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Catalanello Patricia	Pacific Telephone
	Jones Michael C	Pacific Telephone
	Wannamaker H C	Pacific Telephone
1975	HONKOMP KEVIN R	Pacific Telephone
	LOVERIDGE M R	Pacific Telephone
1970	DALLAS A M	Pacific Telephone Directory
	MOORE GREGORY A	Pacific Telephone Directory
	VOLTMER ANN E	Pacific Telephone Directory
	WANNAMAKER H C	Pacific Telephone Directory
1962	Daggett Ann Irene	Pacific Telephone
	Kartozian George Ann	Pacific Telephone
	Quayle Marolyn M	Pacific Telephone
	Wannamaker H C	Pacific Telephone
1955	WANNAMAKER H C	The Pacific Telephone & Telegraph Co.
1950	HODAPP FRANK A R	The Pacific Telephone & Telegraph Co.
1943	Brown Blanche wid E E r	R. L. Polk & Co.
	Hodapp Cullom S r	R. L. Polk & Co.
	Hodapp Frank A Beulah C h	R. L. Polk & Co.
1938	HODAPP FRANK A R	Pacific Telephone
1933	HODAPP CULLOM R	R. L. Polk & Co.
	HODAPP FRANK A (BEULAH) H	R. L. Polk & Co.
	HODAPP FRANK A JR INS	R. L. Polk & Co.
1928	BROWN Blanche V Mrs R	R.L. Polk and Co of California
	Butter Susan wid W B R	R.L. Polk and Co of California
	Hodapp Cullom S R	R.L. Polk and Co of California
	Hodapp Frank A Buelah C orchardist H	R.L. Polk and Co of California
	Hodapp Frank A jr slsmn R	R.L. Polk and Co of California
1920	HODAPP FRANK A R	R. L. Polk & Co. of California

### 460 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	SHEDD A E REPR SHOP	The Pacific Telephone & Telegraph Co.
1945	SHEDD A E REPR SHOP	The Pacific Telephone & Telegraph Co.

## FINDINGS

### 462 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	HERRERO TONIA N	EDR Digital Archive
	PURPOSE THERAPY OAKLAND	EDR Digital Archive
	H R MANAGEMENT CORP INC	EDR Digital Archive
	WIL ASH CPA	EDR Digital Archive
	CAMPS IN COMMON	EDR Digital Archive
	BOLDENTAX	EDR Digital Archive
	DUSTYS' FISHING WELL	EDR Digital Archive
	KNOWLEDGE I LANGUAGE CTR LLC	EDR Digital Archive
	ASH WIL CPA	EDR Digital Archive
	GRAND SLAM BUSINESS SOLUTIONS	EDR Digital Archive
2017	H R MANAGEMANT CORP INC	Cole Information
	H R MANAGEMENT CORP INC	Cole Information
	ASH WIL CPA	Cole Information
	CAMPS IN COMMON	Cole Information
2014	H R MANAGEMENT CORP INC	Cole Information
	WIL ASH CPA	Cole Information
	CAMPS IN COMMON	Cole Information
2010	DANIELS TONI MD	Cole Information
	WIL ASH & ASSOC	Cole Information
	TEACH RESEARCH INSTITUTE	Cole Information
	H R MANAGEMANT CORP	Cole Information
2006	ASHWIL&	Haines Company, Inc.
	ASSOCIATES	Haines Company, Inc.
	GRAVES Matthew	Haines Company, Inc.
	HR MANAGEMENT	Haines Company, Inc.
	CORP INC	Haines Company, Inc.
	MURCURY Miron	Haines Company, Inc.
	TEACH LEARNING	Haines Company, Inc.
	ACADEMY	Haines Company, Inc.
2005	DIVISION LIMOUSINE	Cole Information
	TEACH RESEARCH INSTITUTE	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	BUCKNER & ASSOCIATES	Cole Information
	ASH WIL & ASSOCIATES	Cole Information
	SLF INC	Cole Information
	SPORTSVISIONS	Cole Information
2000	4 ASH WIL & ASSOCIATES	Pacific Bell
	9 FRIAR JACK	Pacific Bell
	ASH WIL & ASSOCIATES	Cole Information
1996	1 FRANK MARKETING	PACIFIC BELL DIRECTORY
	4 ASH WIL & ASSOCIATES	PACIFIC BELL DIRECTORY
	7 ENGEL PETER ARCHITECT	PACIFIC BELL DIRECTORY
1995	STEVE THORNE DESIGN	Cole Information
	W PERRY BAKER	Cole Information
	WIL ASH & ASSOC	Cole Information
	THORNE, B D	Cole Information
1992	BAKER W PERRY	PACIFIC BELL DIRECTORY
	4 ASH WIL & ASSOCIATES	PACIFIC BELL DIRECTORY
	7 STEVE THORNE DESIGN	PACIFIC BELL DIRECTORY
	STEVE THORNE DESIGN	Cole Information
	ASH WILL&ASSOCIATES	Cole Information
1991	Steve Thorne Design	PACIFIC BELL WHITE PAGES
	S TE VE DORIN G S E RVICE S OF AME RICA OAKLAN D	PACIFIC BELL WHITE PAGES
1986	Baker W Perry consltng engnr	PACIFIC BELL WHITE PAGES
	Blackw ell Herch & Herch Law Offices Of	PACIFIC BELL WHITE PAGES
	Herch Frank Alan atty	PACIFIC BELL WHITE PAGES
	Herch Ruth	PACIFIC BELL WHITE PAGES
	Herch Ruth Blackw ell atty	PACIFIC BELL WHITE PAGES
1980	Baker W Perry consltng engnr	Pacific Telephone
	Christian In Depth Fellow ship	Pacific Telephone
	Terrill T E archt	Pacific Telephone
1975	BAKER W PERRY CONSLTNG ENGNR	Pacific Telephone
	CHRISTIANS IN-DEPTH FELLOWSHIP CENTER	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	BAKER W PERRY CONSLTNG ENGNR	Pacific Telephone Directory
	TAYLOR ROBT Z CONSLTNG ENGNR	Pacific Telephone Directory
1962	Freytag Chas L Dr	Pacific Telephone
1955	CHILD EVANGELISM FELLOWSHIP STATE OFC	The Pacific Telephone & Telegraph Co.
	P C L MFG CO	The Pacific Telephone & Telegraph Co.
1950	PERCY WILLARD W DC	The Pacific Telephone & Telegraph Co.
1945	DOGAN KEN ACCT	The Pacific Telephone & Telegraph Co.
1943	Percival Willard W Edna R chiropractor	R. L. Polk & Co.
1938	ANTHONY JOHN B ARCHT	Pacific Telephone
	GARCIA CELIA BEAUTICIAN	Pacific Telephone
	PERCY WILLARD W DR	Pacific Telephone
1933	CHILDERS ANTHONY D (ELSIE E) PHYS	R. L. Polk & Co.
1928	h Building	R.L. Polk and Co of California
	Euclid Rohi H Zoe R dentist	R.L. Polk and Co of California

### 465 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	MIND BODY AWARENESS PROJECT	EDR Digital Archive
	DAVID BAEHREND	EDR Digital Archive
	KAREN VANDERBURG	EDR Digital Archive
	MARCUS ALVAREZ	EDR Digital Archive
2017	LAUREN SANDBERG	Cole Information
	MICAH ANDERSON	Cole Information
2014	DAVID BAEHREND	Cole Information
	KRISTIN SMITH	Cole Information
	KELLY PRETZER	Cole Information
	MARCUS ALVAREZ	Cole Information
2010	CHRISTOPHER MURPHREE	Cole Information
	ESFANDIAR AKBARIAN	Cole Information
2006	No Current Listing	Haines Company, Inc.
2005	TRIPLE SPORTS TRIATHLON CO	Cole Information
	VICTOR RIVERA	Cole Information
	JINA HUNN	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	OCCUPANT UNKNOWN	Cole Information
1995	GONZALES, ALBERTO	Cole Information
	HORN, KATHRYN L	Cole Information
	BENAVIDES, F	Cole Information
1992	2 GONZALES ALBERTO	PACIFIC BELL DIRECTORY
1991	Gonzales Alberto	PACIFIC BELL WHITE PAGES
	Gonzales Alfred	PACIFIC BELL WHITE PAGES
	Horn K L	PACIFIC BELL WHITE PAGES
	Horn KW	PACIFIC BELL WHITE PAGES
	Horn L	PACIFIC BELL WHITE PAGES
	Horn LH	PACIFIC BELL WHITE PAGES
	Horn M	PACIFIC BELL WHITE PAGES
1986	Gonzales Alberto	PACIFIC BELL WHITE PAGES
	Horn K L	PACIFIC BELL WHITE PAGES
	Horn L	PACIFIC BELL WHITE PAGES
	Horn L H	PACIFIC BELL WHITE PAGES
1980	Jastram J	Pacific Telephone
	Kirby Robt	Pacific Telephone
	Selland Stuart D	Pacific Telephone
1975	KARSTEN ELIZABETH L MRS	Pacific Telephone
1970	DAHLIN VIENNA	Pacific Telephone Directory
	HAMMOND NEIL	Pacific Telephone Directory
	KARSTEN ELIZABETH L MRS	Pacific Telephone Directory
1962	Furth Marianne	Pacific Telephone
	Karsten Elizabeth L Mrs	Pacific Telephone
	Mitchell Leon W	Pacific Telephone
	Rollins Diane E	Pacific Telephone
	Rollins Wm H	Pacific Telephone
1955	FURTH MARIANNE	The Pacific Telephone & Telegraph Co.
	SMITH BEN	The Pacific Telephone & Telegraph Co.
	WALPOLE ADDIE	The Pacific Telephone & Telegraph Co.
1950	LANKENAU ELMER R	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	STROMBERG A P R	The Pacific Telephone & Telegraph Co.
	WESTERGAARD MABEL MRS R	The Pacific Telephone & Telegraph Co.
1945	BENNETTI JOSEPH F R	The Pacific Telephone & Telegraph Co.
	KENNEDY ROY H R	The Pacific Telephone & Telegraph Co.
1943	Grutman Jos Libby G h	R. L. Polk & Co.
	KELLEY Dorothy M biller r	R. L. Polk & Co.
	Lackanall Elmer Ruth h	R. L. Polk & Co.
	Striplin Ethel W wid Carl restr h	R. L. Polk & Co.
1938	APPLEBAUM SHIRLEY MRS R	Pacific Telephone
	LODGE JULIAN H R	Pacific Telephone
	SOMMERS CHARLOTTE R	Pacific Telephone
1933	GOLDENHAR R HARRY (REBECCA) PRES BARNEY S LOAN OFFICE H	R. L. Polk & Co.
1928	Co Ray P Ruth B ins art H	R.L. Polk and Co of California
	2400 Claude D Muriel H	R.L. Polk and Co of California
	N Simon Esther mgr Barneys Loan Office H	R.L. Polk and Co of California

### 485 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	CLAUDIA HARTLEY	EDR Digital Archive
2017	TERESA HOOVER	Cole Information
2014	TERESA HOOVER	Cole Information
2010	J RICE	Cole Information
2006	HARTLEY Claudia	Haines Company, Inc.
	HOOVERTESS EA	Haines Company, Inc.
	OEHRIE Claudia	Haines Company, Inc.
	RICE J	Haines Company, Inc.
2005	TESS HOOVER	Cole Information
	CLAUDIA HARTLEY	Cole Information
2000	HOOVER TESS	Pacific Bell
	LINDQUIST KIRSTIN LAC	Pacific Bell
	HOOVER TESS EA	Cole Information
	LINDQUIST KIRSTIN LAC	Cole Information
	CLAUDIA OEHRIE	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	MICHAEL MURPHY	Cole Information
	CLAUDIA HARTLEY	Cole Information
1996	HOOVER TESS	PACIFIC BELL DIRECTORY
	LINDQUIST KIRSTIN LAC	PACIFIC BELL DIRECTORY
1995	HARTLEY, CLAUDIA	Cole Information
1992	DONALDSON MICHAEL R	PACIFIC BELL DIRECTORY
	DONALDSON, MICHAEL R	Cole Information
1991	Donaldson Michael R	PACIFIC BELL WHITE PAGES
1980	Mc Lean M	Pacific Telephone
1975	MC LEAN CHAS MRS	Pacific Telephone
1970	MCLEAN CHAS MRS	Pacific Telephone Directory
1962	Sherrill Lawrence	Pacific Telephone
1955	SHERRILL LAWRENCE	The Pacific Telephone & Telegraph Co.
1950	NODDIN HELENE I MRS R	The Pacific Telephone & Telegraph Co.
1943	Bell Gordon L Barbara W geologist r	R. L. Polk & Co.
	Rittenhouse Marinda J w id G W r	R. L. Polk & Co.
	Wright Harry L Georgia R clk h	R. L. Polk & Co.
1938	WRIGHT HARRIE L R	Pacific Telephone
1933	WRIGHT HARRY L (GEORGIA) H	R. L. Polk & Co.
1928	H Marinda J w id G W R	R.L. Polk and Co of California
1920	WRIGHT HARRIE LYNWOOD R	R. L. Polk & Co. of California

### 495 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	WILLIAM DELANY	EDR Digital Archive
2017	24 HOUR LOCKSMITH	Cole Information
	LAURA PILNICK MFCC	Cole Information
	RAYTIS MAUREEN LAC	Cole Information
	WILLIAM DELANY	Cole Information
	DOV POLLACK	Cole Information
	CHRISTOPHER BESSETTE	Cole Information
	XAVIER CALLAHAN	Cole Information
	LAURA PILNICK	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	PILNICK LAURA MFCC	Cole Information
	RAYTIS MAUREEN LAC	Cole Information
	AARONS LOCKSMITH	Cole Information
	WILLIAM DELANY	Cole Information
	YASMIN SPENCER	Cole Information
	DOV POLLACK	Cole Information
	XAVIER CALLAHAN	Cole Information
	LAURA PILNICK	Cole Information
2010	RAYTIS MAUREEN	Cole Information
	PILNICK LAURA	Cole Information
	TREE OF LIFE ACUPUNCTURE INC	Cole Information
	WILLIAM DELANY	Cole Information
	DARCI ANDRESEN	Cole Information
	XAVIER CALLAHAN	Cole Information
	JESSICA HANDCOCK	Cole Information
	LAURA PILNICK	Cole Information
2006	MAUREEN RAYTIS	Cole Information
	ADVANTAGE REAL	Haines Company, Inc.
	ESTATE SERVICES	Haines Company, Inc.
	BACK IN BALANCE	Haines Company, Inc.
	BARHAM Damon	Haines Company, Inc.
	CALLAHANX	Haines Company, Inc.
	DELANY William	Haines Company, Inc.
	KLEIN LAURIE DC	Haines Company, Inc.
2005	PILNICK LAURA	Haines Company, Inc.
	ADVANTAGE BUSINESS SERVICES	Cole Information
	KLEIN LAURIE DC CMT	Cole Information
	PILNICK LAURA MFCC	Cole Information
	WILLIAM DELANY	Cole Information
	LAURA PILNICK	Cole Information
	CLIFTON RAYNOR	Cole Information
	DAMON BARHAM	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	1 WANG & LI	Pacific Bell
	2 BACK IN BALANCE	Pacific Bell
	4 PILNICK LAURA MFCC	Pacific Bell
	5 DELANY WILLIAM	Pacific Bell
	KLEIN LAURIE DC CMT	Cole Information
	WANG & LI	Cole Information
	BACK IN BALANCE	Cole Information
	PILNICK LAURA MFCC	Cole Information
	WILLIAM DELANY	Cole Information
1996	2 WANG & LI	PACIFIC BELL DIRECTORY
	4 PILNICK LAURA MFCC	PACIFIC BELL DIRECTORY
	5 LAFLER STEVE	PACIFIC BELL DIRECTORY
	6 TORSIELLO PETER	PACIFIC BELL DIRECTORY
1995	LAURA PILNICK	Cole Information
	LASER GRAPHICS	Cole Information
	TORSIELLO GALLERY	Cole Information
	MAKOFSKY, SERENA	Cole Information
	TORSIELLO, PETER	Cole Information
	JONES, LESLIE M	Cole Information
1992	1 TORSIELLO GALLERY	PACIFIC BELL DIRECTORY
	2 COFFEE CORP	PACIFIC BELL DIRECTORY
	4 PILNICK LAURA MFCC	PACIFIC BELL DIRECTORY
	6 TORSIELLO PETER	PACIFIC BELL DIRECTORY
	COFFEE CORP	Cole Information
	PILNICK LAURA MFCC	Cole Information
	TORSIELLO GALLERY	Cole Information
1991	Coffee Corp	PACIFIC BELL WHITE PAGES
	Torsllo Gallery	PACIFIC BELL WHITE PAGES
	Torsiello Peter	PACIFIC BELL WHITE PAGES
1986	Agnew B	PACIFIC BELL WHITE PAGES
	Ritterband E	PACIFIC BELL WHITE PAGES
	Ritterband L	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Torsietilo Peter	PACIFIC BELL WHITE PAGES
1980	Agnew B	Pacific Telephone
	Bridgeman E Roberta	Pacific Telephone
	Harrison J L	Pacific Telephone
	Ritterband E	Pacific Telephone
	Wright M K	Pacific Telephone
1975	AGNEW B	Pacific Telephone
	BRIDGEMAN E ROBERTA	Pacific Telephone
	MC CANN W C	Pacific Telephone
1970	BRIDGEMAN E ROBERTA	Pacific Telephone Directory
	FROST MAUDE G	Pacific Telephone Directory
	JOHNSON HENRY	Pacific Telephone Directory
	MCCANN W C	Pacific Telephone Directory
	ROBERTS MAXINE E	Pacific Telephone Directory
	SCHMID A M	Pacific Telephone Directory
	SIMPKINS MARY E	Pacific Telephone Directory
	VINCENT NORMA G	Pacific Telephone Directory
1962	Bechtel Alice F	Pacific Telephone
	Bettencourt Geraldine Mrs	Pacific Telephone
	Frost Maude G	Pacific Telephone
	Grisdale Florence	Pacific Telephone
	Lewis Helen L	Pacific Telephone
	Roberts Maxine E	Pacific Telephone
	Schmid A M	Pacific Telephone
	Simpkins Mary E	Pacific Telephone
	Vankat Ellen L	Pacific Telephone
1955	BETTENCOURT GERALDINE MRS R	The Pacific Telephone & Telegraph Co.
	GRAHAM JAS R R	The Pacific Telephone & Telegraph Co.
	GRISDALE FLORENCE	The Pacific Telephone & Telegraph Co.
	LEWIS HELEN L	The Pacific Telephone & Telegraph Co.
	SCHMID A M	The Pacific Telephone & Telegraph Co.
	VANKAT ELLEN L	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	BECK ALFRED R R	The Pacific Telephone & Telegraph Co.
	BETTENCOURT GERALDINE MRS R	The Pacific Telephone & Telegraph Co.
	GEDDES WILMINA SUCHLAND R	The Pacific Telephone & Telegraph Co.
	GRAHAM JAS R R	The Pacific Telephone & Telegraph Co.
	JOHNSON HENRY R	The Pacific Telephone & Telegraph Co.
	KELLY J KI S R	The Pacific Telephone & Telegraph Co.
	SHERMAN I THOS R	The Pacific Telephone & Telegraph Co.
1945	BETTENCOURT GERALDINE MRS R	The Pacific Telephone & Telegraph Co.
	DAWLEY G S MRS R	The Pacific Telephone & Telegraph Co.
	KELLY J MRS R	The Pacific Telephone & Telegraph Co.
	MCMECHAN M C MRS R	The Pacific Telephone & Telegraph Co.
	SCHWARTZ H R	The Pacific Telephone & Telegraph Co.
1943	Bettencourt Anthony W Geraldine C millmn h	R. L. Polk & Co.
	BROWN Frank J Edna T h	R. L. Polk & Co.
	Daw ley Geo S Mary A h	R. L. Polk & Co.
	Elw ood Grand Apartments	R. L. Polk & Co.
	Kelly J Mrs h	R. L. Polk & Co.
	Markey Fred G Dorothea E h	R. L. Polk & Co.
	Reud Wm R phys h	R. L. Polk & Co.
	Schw artz Hyman E Nellie h	R. L. Polk & Co.
	Steppeler Hazel Mrs Ace Upholstering Co h	R. L. Polk & Co.
	Steppeler Martin Hazel Ace Upholstering Co h	R. L. Polk & Co.
1938	BAUGHMAN N H R	Pacific Telephone
	BETTENCOURT GERALDINE MRS R	Pacific Telephone
	BROWN FRANK J R	Pacific Telephone
	KAYSER E S R	Pacific Telephone
	LEE JANE MRS R	Pacific Telephone
	OPPIE J W R	Pacific Telephone
	REUD WM ROBT DR R	Pacific Telephone
	SEWELL MAY E R	Pacific Telephone
1933	BUTCHER ETHEL M MRS H	R. L. Polk & Co.
	DELL ROBT V REAL EST	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	DOBROWSKY ERNEST (REGINA) JWLR	R. L. Polk & Co.
	DOBROWSKY HOWARD WTCHMKR ERNEST DOBROWSKY R	R. L. Polk & Co.
	ELWOOD GRAND APARTMENTS	R. L. Polk & Co.
	FRAHM HENRY T (PEARL) DELICATESSEN	R. L. Polk & Co.
	HABERSHAM ELLEN STEN R	R. L. Polk & Co.
	HABERSHAM MAUD MRS H	R. L. Polk & Co.
	HOEFS ELIZ (WID JOHN) R	R. L. Polk & Co.
	HOEFS FAYE A STEN PG & E CO H	R. L. Polk & Co.
	SECKEL HARRY (ELMA) H	R. L. Polk & Co.
	SHIELDS MARIE E MRS CLK H	R. L. Polk & Co.
	TARLTON ALLEN WHSMN R	R. L. Polk & Co.
	TARLTON WALLACE H	R. L. Polk & Co.
	TREBBIN CHARLOTTE MRS HSKPR ELWOOD GRAND APTS R	R. L. Polk & Co.
	TREBBIN PAUL A (CHARLOTTE) AUTO MACH R	R. L. Polk & Co.
1928	B Wm B Ruby G slsmn H	R.L. Polk and Co of California
	Dell Robt V real est	R.L. Polk and Co of California
	H	R.L. Polk and Co of California
	h Grand Apartments	R.L. Polk and Co of California
	J K Mrs R	R.L. Polk and Co of California
	Hellman Jeannette Mrs H	R.L. Polk and Co of California
	Hershey Oscar H H	R.L. Polk and Co of California
	Ingels Oscar L May H	R.L. Polk and Co of California
	H Clifford L clk H	R.L. Polk and Co of California

### 438A ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	ADLER HERMANN	Pacific Telephone Directory

## FINDINGS

### **ELWOOD RD**

#### **407 ELWOOD RD**

<b><u>Year</u></b>	<b><u>Uses</u></b>	<b><u>Source</u></b>
1955	FIRPO THELMA MISS R	The Pacific Telephone & Telegraph Co.
1945	FIRPO THELMA MISS R	The Pacific Telephone & Telegraph Co.

#### **419 ELWOOD RD**

<b><u>Year</u></b>	<b><u>Uses</u></b>	<b><u>Source</u></b>
1955	HENDRICKSON KENNETH A R	The Pacific Telephone & Telegraph Co.
1945	PLUNKETT J A DR R	The Pacific Telephone & Telegraph Co.
1925	PLUNKETT DR J A R	R. L. Polk & Co. of California

#### **420 ELWOOD RD**

<b><u>Year</u></b>	<b><u>Uses</u></b>	<b><u>Source</u></b>
1955	VIERRA L A R	The Pacific Telephone & Telegraph Co.
1945	VIERRA L A R	The Pacific Telephone & Telegraph Co.
1925	SMITH VINTON R	R. L. Polk & Co. of California

#### **423 ELWOOD RD**

<b><u>Year</u></b>	<b><u>Uses</u></b>	<b><u>Source</u></b>
1945	HILL WILL R R	The Pacific Telephone & Telegraph Co.
1928	Shenkel Stanley E Beryl U slsmn H	R.L. Polk and Co of California
1925	SHENKEL S E R	R. L. Polk & Co. of California

#### **425 ELWOOD RD**

<b><u>Year</u></b>	<b><u>Uses</u></b>	<b><u>Source</u></b>
1925	ABBOTT TREVA M R	R. L. Polk & Co. of California
	MCNEIL MAY W R	R. L. Polk & Co. of California

#### **429 ELWOOD RD**

<b><u>Year</u></b>	<b><u>Uses</u></b>	<b><u>Source</u></b>
1955	ROTH BEN R	The Pacific Telephone & Telegraph Co.
1945	ROTH BEN R	The Pacific Telephone & Telegraph Co.
1925	ROTH B R	R. L. Polk & Co. of California

## FINDINGS

### 433 ELWOOD RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	LUCAS ELEANOR R	The Pacific Telephone & Telegraph Co.
	ROBINSON GRACE MRS R	The Pacific Telephone & Telegraph Co.
1925	CUSHMAN OLIVE REED R	R. L. Polk & Co. of California
	CUSHMAN SETH W R	R. L. Polk & Co. of California
	REED CHAS G R	R. L. Polk & Co. of California

### 437 ELWOOD RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	BAKER DR A WOODLY R	R. L. Polk & Co. of California

### 438 ELWOOD RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	TORRE G M R	The Pacific Telephone & Telegraph Co.
1945	TORRE G M R	The Pacific Telephone & Telegraph Co.
1925	MCREYNOLDS LOLA D R	R. L. Polk & Co. of California

### 441 ELWOOD RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	MYERS WARREN F R	R. L. Polk & Co. of California

### 444 ELWOOD RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	MURRAY FRED G R	The Pacific Telephone & Telegraph Co.
1945	MURRAY FRED G R	The Pacific Telephone & Telegraph Co.

### 445 ELWOOD RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	HALIBAUGH EDWARD D R	The Pacific Telephone & Telegraph Co.
1945	HALIBAUGH EDWARD D R	The Pacific Telephone & Telegraph Co.
1925	EDWARDS FORREST MCM R	R. L. Polk & Co. of California

### 446 ELWOOD RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	MILLER MRS P B R	R. L. Polk & Co. of California

## FINDINGS

### 448 ELWOOD RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	SPICKER GLADYS B R	R. L. Polk & Co. of California

### 451 ELWOOD RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	ROLAND EUGENE W R	R. L. Polk & Co. of California

### 452 ELWOOD RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	HODAPP FRANK A R	The Pacific Telephone & Telegraph Co.

### 462 ELWOOD RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	PERCY WILLARD W DC	The Pacific Telephone & Telegraph Co.
1945	PERCY WILLARD W DC	The Pacific Telephone & Telegraph Co.

### 465 ELWOOD RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	LANKENAU ELMER R	The Pacific Telephone & Telegraph Co.
1945	SINGREY CECILA MRS R	The Pacific Telephone & Telegraph Co.
1925	COX RAY P R	R. L. Polk & Co. of California
	CURTISS W G R	R. L. Polk & Co. of California
	DAVIS I R	R. L. Polk & Co. of California
	YOUNG MRS I A B NURSE	R. L. Polk & Co. of California

### 485 ELWOOD RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	WRIGHT HARRIE LYNWOOD R	R. L. Polk & Co. of California

### 495 ELWOOD RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	GEDDES WILMINA SUCHLAND R	The Pacific Telephone & Telegraph Co.
	JOHNSON HENRY R	The Pacific Telephone & Telegraph Co.
1945	BROWN FRANK J MRS R	The Pacific Telephone & Telegraph Co.
	REUD WM ROBT DR R	The Pacific Telephone & Telegraph Co.
1928	H	R.L. Polk and Co of California

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	est Wilbert F dentist	R.L. Polk and Co of California
1925	CARLEN MRS A R	R. L. Polk & Co. of California
	EDWARDS J R	R. L. Polk & Co. of California
	FISHER RALPH W R	R. L. Polk & Co. of California
	GOULD E L R	R. L. Polk & Co. of California
	GRACEY A D R	R. L. Polk & Co. of California
	MOLIERE W R R	R. L. Polk & Co. of California
	PERKINS LEE R	R. L. Polk & Co. of California
	RHOADES S M R	R. L. Polk & Co. of California

### **ELWOOO AVE**

#### **407 ELWOOO AVE**

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	ADAMS JACK M JR	R. L. Polk Co.

#### **419 ELWOOO AVE**

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	HENRIKSON KENNETH A	R. L. Polk Co.

#### **420 ELWOOO AVE**

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	VIERRA LOUIS A	R. L. Polk Co.

#### **423 ELWOOO AVE**

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	WELCH JAMES T	R. L. Polk Co.

#### **425 ELWOOO AVE**

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	FULMER LEO	R. L. Polk Co.

#### **429 ELWOOO AVE**

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	TANG HSI FEN	R. L. Polk Co.

## FINDINGS

### 430 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	SMITH MORRIS	R. L. Polk Co.

### 433 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	DE ROSIA GEO E	R. L. Polk Co.

### 437 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	GRUNDMAN FRANCES I	R. L. Polk Co.

### 438 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	LEE ROBT S	R. L. Polk Co.
	A ADLER HERMANN	R. L. Polk Co.

### 441 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	PARTSCHE HAROLD A	R. L. Polk Co.

### 444 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	HARDEMAN THOS V	R. L. Polk Co.

### 445 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	HOLCAUGH LLOYD	R. L. Polk Co.

### 446 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	MURRAY FRED G	R. L. Polk Co.

### 448 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	HAGEN HERBERT	R. L. Polk Co.

## FINDINGS

### 452 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	APARTMENTS	R. L. Polk Co.
	SMT WANNAMAKER HARRY C	R. L. Polk Co.

### 462 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	BAKER PERRY CONSULTING	R. L. Polk Co.
	ENGINEERS	R. L. Polk Co.
	BENTLEY CONSULTING ENGINEERS	R. L. Polk Co.
	TAYLOR ROBT Z CONSULTING	R. L. Polk Co.
	ENGINEERS	R. L. Polk Co.

### 465 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	APARTMENTS	R. L. Polk Co.
	I VALLEJO MARY	R. L. Polk Co.
	MONEFELOT JESS	R. L. Polk Co.
	ERNST BILLIE MRS	R. L. Polk Co.
	KARSTEN ELIZ L MRS	R. L. Polk Co.

### 485 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	MC LEAN MYRA E MRS S	R. L. Polk Co.

### 495 ELWOOD AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	APARTMENTS	R. L. Polk Co.
	I JOHNSON HENRY TE	R. L. Polk Co.
	SPROSTON ANNE	R. L. Polk Co.
	BECHTEL ALICE F MRS	R. L. Polk Co.
	SIMPKINS MARY E MRS GL	R. L. Polk Co.
	ROBERTS HUGHENA MRS GL	R. L. Polk Co.
	FANNING F	R. L. Polk Co.
	FROST MAUD G MRS	R. L. Polk Co.
	GRISDALE FLORENCE W MRS	R. L. Polk Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	SCHMID AUDREY M	R. L. Polk Co.

### GRANADA AVE

#### 3213 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Denk Alt 0 Johanna bakery	R.L. Polk and Co of California

#### 3214 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	h Osw ald N Irene L drugs	R.L. Polk and Co of California

#### 3220 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Oxford Lucien Q Ora mens furngs	R.L. Polk and Co of California

#### 3222 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	ACKER Edgar C Natalie shoes	R.L. Polk and Co of California

#### 3225 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Rodosy Albt D Ruth pool	R.L. Polk and Co of California

#### 3226 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Saba & Micholi J 0 Beconclnl Anguelo Michnclli irunts	R.L. Polk and Co of California

#### 3229 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	17th fr Fredk W Margt E cigars	R.L. Polk and Co of California

#### 3233 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	B Jos 0 Grace conl R	R.L. Polk and Co of California

## FINDINGS

### 3234 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Louise Gift and Art Shop R Louise nad M Louise Hardy	R.L. Polk and Co of California

### 3235 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	A Clara R Mrs garments	R.L. Polk and Co of California

### 3241 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Pucci Jos Rose fish	R.L. Polk and Co of California
	S Wm F Emily H meats	R.L. Polk and Co of California

### 3242 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	GRAND AV BRANCH L P Dodson Mgr	R.L. Polk and Co of California
	AMERICAN TRUST CO Main Bank San Francisco Broadway Office	R.L. Polk and Co of California

### 3244 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Dell & Gill J E Dell Wm and Thos Gill tailors	R.L. Polk and Co of California

### 3245 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Martorana Jos Lena Jos Martorana & 00 H	R.L. Polk and Co of California
	h Jos & Co Jos Martorana Chris Merlino Antonio Montiloni Jos Cinalli Antonio Catalano fruits	R.L. Polk and Co of California

### 3247 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Pennie Philo dentist	R.L. Polk and Co of California

### 3250 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Food Shop The G W Boadway	R.L. Polk and Co of California

## FINDINGS

### 3251 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Harrison Gilbert M May hdw	R.L. Polk and Co of California

### 3253 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Ritensbacher Frances M Mrs beauty shop	R.L. Polk and Co of California

### 3254 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Perfection Nuts Inc Sherwood Bird pres S L Dinwoodey v pres Helen Mauvals sec nutdlrs	R.L. Polk and Co of California

### 3255 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Riddle Parley A Emma H	R.L. Polk and Co of California

### 3256 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Wicks Maud C baby shop	R.L. Polk and Co of California

### 3258 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	De Vorn Fannie Mrs gow ns	R.L. Polk and Co of California
	La Merite Shop	R.L. Polk and Co of California

### 3260 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Wm & Hutton Mary Bettencourt Winifred Hutton mlrs	R.L. Polk and Co of California

### 3261 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	rr Alt G Marie shoe repr	R.L. Polk and Co of California

### 3264 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Steckmest Henry Anna confy	R.L. Polk and Co of California

## FINDINGS

### 3267 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Knickerbocker Frank J Helma I barbe R	R.L. Polk and Co of California

### 3272 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Kontos Andw rest R	R.L. Polk and Co of California

### 3300 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Quon Thos Y rest R	R.L. Polk and Co of California

### 3301 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	3301	R.L. Polk and Co of California
	Dw isht Bros F F Jackson drugs	R.L. Polk and Co of California

### 3302 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Burdett Mitchell shoe shine R	R.L. Polk and Co of California

### 3306 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Akita S art gds	R.L. Polk and Co of California

### 3311 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Kutz Ray M Helen shoe rep R	R.L. Polk and Co of California

### 3316 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	A Warren L Addle H H	R.L. Polk and Co of California

### 3321 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	ft John A Willings Bake Shop H	R.L. Polk and Co of California

## FINDINGS

### 3323 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Bunsern Frank fruits	R.L. Polk and Co of California

### 3332 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Benvenue Sarah A Mrs beauty shop	R.L. Polk and Co of California

### 3333 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1965	FRANKLIN LIFE INS	R. L. Polk & Co.
1928	B F Pred E sporting gds	R.L. Polk and Co of California

### 3334 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	N Gertrude B Mrs bookselle R	R.L. Polk and Co of California

### 3336 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Narahara M Nara Floral Co H	R.L. Polk and Co of California
	Narahara S Nara Floral Co R	R.L. Polk and Co of California

### 3341 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Sieg Frank G Gladys locksmth	R.L. Polk and Co of California

### 3342 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	61st Minnie L chiropracto R	R.L. Polk and Co of California
	PATTERSON Dora Mrs hairdrs R	R.L. Polk and Co of California
	A Sarah B wid Thos R	R.L. Polk and Co of California
	h Sarah B wid Thos R	R.L. Polk and Co of California

### 3349 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Arbour GOo H hdw	R.L. Polk and Co of California

## FINDINGS

### 3353 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	L Maurice Esther hairdrs R	R.L. Polk and Co of California

### 3360 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Marten Aubrey R	R.L. Polk and Co of California
	Marten Wm F Alice T elec ene H	R.L. Polk and Co of California

### 3363 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Dell Robt V real est	R.L. Polk and Co of California

### 3405 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Weintrob Abr tailo R	R.L. Polk and Co of California

### 3409 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	28th A Woody Mary M dentist	R.L. Polk and Co of California
	Guthridge Ralph W dentist	R.L. Polk and Co of California
	Costa Building	R.L. Polk and Co of California
	r Chandler P Blanche S phys	R.L. Polk and Co of California

### 3411 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Hector E Zaider meats	R.L. Polk and Co of California

### 3415 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Bank Louis A Adeline gro	R.L. Polk and Co of California

### 3429 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Bicker Beni tree surgeon R	R.L. Polk and Co of California
	terian Wm R	R.L. Polk and Co of California
	Muir Andw sismn R	R.L. Polk and Co of California
	Shoe Dorothy wid Semi H	R.L. Polk and Co of California

## FINDINGS

### 3501 GRANADA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Fontaine Pierre A Caroline law yer H	R.L. Polk and Co of California R.L. Polk and Co of California

### GRAND AV GL ENCORT

#### 3217 GRAND AV GL ENCORT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	GRAND AVE CLEANERS	The Pacific Telephone & Telegraph Co.

#### 3220 GRAND AV GL ENCORT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	POLLOCK WARREN J	The Pacific Telephone & Telegraph Co.

#### 3222 GRAND AV GL ENCORT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	EMIL S SHOE STORE	The Pacific Telephone & Telegraph Co.

#### 3326 GRAND AV GL ENCORT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	LAKEVIEW MARKET	The Pacific Telephone & Telegraph Co.

#### 3342 GRAND AV GL ENCORT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	ABE HAROLD J R	The Pacific Telephone & Telegraph Co.

#### 3363 GRAND AV GL ENCORT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	LEVESQUE EILEEN R	The Pacific Telephone & Telegraph Co.

### GRAND AV HI GATE

#### 3213 GRAND AV HI GATE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	LAKEVIEW RESTAURANT	The Pacific Telephone & Telegraph Co.

## FINDINGS

### 3225 GRAND AV HI GATE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	NISSENBAUM JUDITH R	The Pacific Telephone & Telegraph Co.
	SIYDER PATRICIA R	The Pacific Telephone & Telegraph Co.

### 3268 GRAND AV HI GATE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	LAKE BEASITY SALOIS	The Pacific Telephone & Telegraph Co.

### GRAND AV HI NATE

#### 3344 GRAND AV HI NATE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	AYRES GRAND FLOWERS	The Pacific Telephone & Telegraph Co.

### GRAND AV L0 HARRIS ELK I

#### 3220 GRAND AV L0 HARRIS ELK I

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	No11	R.L. Polk and Co of California
	POST OFFICE Oakland	R.L. Polk and Co of California

### GRAND AV OAKLAND

#### 3226 GRAND AV OAKLAND

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	OWL DRUG CO THE	R. L. Polk & Co.

### GRAND AV TW INOAKS

#### 3225 GRAND AV TW INOAKS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	PROSSER FRANK R	The Pacific Telephone & Telegraph Co.

#### 3353 GRAND AV TW INOAKS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	LA CHIC DI RSMKNG	The Pacific Telephone & Telegraph Co.

## FINDINGS

### GRAND AVE

#### 3201 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	H&R BLOCK	EDR Digital Archive
2014	H&R BLOCK	Cole Information
2010	H&R BLOCK	Cole Information
2006	HH&R BLOCK	Haines Company, Inc.
	OAKLAND	Haines Company, Inc.
2000	BLOCK H & R	Pacific Bell
	BLOCK H & R LOCAL OFFICES	Cole Information
1996	BLOCK H & R	PACIFIC BELL DIRECTORY
1995	H & R BLOCK INC	Cole Information
1991	American Custom Shutters And Wall Systems See Dekors Custom Shutters And Wall Systems	PACIFIC BELL WHITE PAGES
	DE KORS CUS TOM S HUTTE RS AN D W ALL S YS TE MS	PACIFIC BELL WHITE PAGES
	De Koven E	PACIFIC BELL WHITE PAGES
	De Koven Elinor	PACIFIC BELL WHITE PAGES
	De Koven Elinor	PACIFIC BELL WHITE PAGES
	Del Cid Rosa	PACIFIC BELL WHITE PAGES
1986	American Custom Shutters And Wall Systems See bekors Custom Shutters And Wall Systems	PACIFIC BELL WHITE PAGES
	Dekors Custom Shutters And Wall Systems	PACIFIC BELL WHITE PAGES
	DECOR S CUSTOM SHUTTERS AND WALL SYSTEMS	Pacific Bell
1984	DECOR S CUSTOM SHUTTERS AND WALL SYSTEMS	Pacific Bell
1982	DECOR S CUSTOM SHUTTERS AND WALL SYSTEMS OAKLAND	Pacific Telephone
	DEKOR S CUSTOM SHUTTERS AND WALL SYSTEMS OAKLAND	Pacific Telephone
1980	American Custom Shutters And Wall Systems See Dekors Custom Shutters And Wali Systems	Pacific Telephone
	Dekors Custom Shutters And Wall Systems	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1979	DECOR S CUSTOM SHUTTERS AND WALL SYSTEMS	Pacific Telephone
	DECOR S CUSTOM SHUTTERS AND WALL SYSTEMS	Pacific Telephone
	DEKOR S CUSTOM SHUTTERS AND WALL SYSTEMS	Pacific Telephone
1975	FIDELITY -SOUND &TV	Pacific Telephone
1970	KENNARD MUSIC CO	Pacific Telephone Directory
1967	TUPPER 9 REED MUS DLRS	R. L. Polk Co.
1962	GOODMANS ROY PIANOS	Pacific Telephone
1955	ART S RELIABLE PIANO SERVICE	The Pacific Telephone & Telegraph Co.
	GOODMAN S ROY PIANOS	The Pacific Telephone & Telegraph Co.
	WILKINSON ART ART S RELIABLE PIANO SERV	The Pacific Telephone & Telegraph Co.
1938	LEWIS FLOWER COTTAGE	Pacific Telephone
1933	LE BALLISTER ELSA MRS NUTS	R. L. Polk & Co.

### 3203 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	FRUIT BASKET (LENORE DAMI D S CHAILLE) FRUIT	R. L. Polk & Co.

### 3205 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	EYE CARE FOR YOU OAKLAND	EDR Digital Archive
2017	JACOB WANON OD	Cole Information
	EYE CARE FOR YOU	Cole Information
	ROBERT A PFOST OD	Cole Information
2014	EYE CARE FOR YOU ON GRAND AVE	Cole Information
2010	VISION & EYE FASHION CTR	Cole Information
	ROBERT PFOST OPTOMETRY	Cole Information
	CLARK STEPHANIE L OD	Cole Information
2006	EYE CARE FORYOU	Haines Company, Inc.
	PFOST ROBERT A	Haines Company, Inc.
2005	EYE CARE FOR YOU	Cole Information
2000	PFOST ROBERT A OD	Pacific Bell

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	EYE CARE FOR YOU	Cole Information
	POST ROBERT A	Cole Information
	PFOST ROBERT A OD	Cole Information
1996	PFOST ROBERT A OD	PACIFIC BELL DIRECTORY
1995	EYE CARE FOR YOU	Cole Information
1992	PFOST ROBERT A OD	PACIFIC BELL DIRECTORY
	PFOST ROBERT A OD	PACIFIC BELL DIRECTORY
	EYE CARE FOR YOU	Cole Information
1991	Eye Care For You	PACIFIC BELL WHITE PAGES
	Eye Center Of Northern California The	PACIFIC BELL WHITE PAGES
	PFOS T ROBE RT A OD	PACIFIC BELL WHITE PAGES
	Pfost Robert A OD	PACIFIC BELL WHITE PAGES
	Post Robert A OD	PACIFIC BELL WHITE PAGES
1986	B & K Woolcrafters	PACIFIC BELL WHITE PAGES
	Woolcrafters B & K	PACIFIC BELL WHITE PAGES
1980	B & K Woolcrafters	Pacific Telephone
	Woolcrafters B & K	Pacific Telephone
1975	B & K WOOLCRAFTERS	Pacific Telephone
1970	GENTILE OF CALIFORNIA	Pacific Telephone Directory
	JENTILE OF CALIFORNIA	Pacific Telephone Directory
1967	VACANT	R. L. Polk Co.
1943	Tobenkin Jos Rose C drugs	R. L. Polk & Co.
1933	AVERY DRUG CO (GRAND AVENUE PHARMACY) (CHAS W AVERY) DRUGS TOILET ARTICLES	R. L. Polk & Co.
	FEDERAL GOVERNMENT	R. L. Polk & Co.

### 3206 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	WARHURST PROPERTIES	Cole Information
	GRAND LAKE SMOKE SHOP	Cole Information
	LAW OFFICES NICHOLAS EVELEIGH	Cole Information
2000	GRAND LAKE SMOKE SHOP	Cole Information
	RAHUL EVELEIGH	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1995	GRAND LAKE SMOKE SHOP	Cole Information
1992	GRAND LAKE SMOKE SH	Cole Information

### 3207 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	LIBERTY TAX SVC	EDR Digital Archive
2017	LIBERTY TAX SERVICE	Cole Information
2014	LIBERTY TAX SERVICE	Cole Information
2010	REALTY 6000	Cole Information
	REALTY MASTERS	Cole Information
	LIBERTY TAX SVC	Cole Information
2006	FIRST UNIVRSL	Haines Company, Inc.
	FNCLSERV	Haines Company, Inc.
	REALTY MASTERS	Haines Company, Inc.
	REALTY MASTERS	Haines Company, Inc.
2000	KEMP VINCE REALTY	Pacific Bell
	REALTY MASTERS	Pacific Bell
	REALTY MASTERS	Cole Information
	KEMP VINCE REALTY	Cole Information
1996	ART REALTY	PACIFIC BELL DIRECTORY
1995	ART REALTY	Cole Information
1992	ART REALTY	PACIFIC BELL DIRECTORY
	ART REALTY	Cole Information
1991	I Art Realty	PACIFIC BELL WHITE PAGES
	Art Rental Service	PACIFIC BELL WHITE PAGES
1986	Art Realty	PACIFIC BELL WHITE PAGES
	Art Rental Service	PACIFIC BELL WHITE PAGES
1980	Nora West realtor	Pacific Telephone
	West Nora Realtor	Pacific Telephone
1975	FIRESIDE STAMP CO	Pacific Telephone
1970	FIRESIDE STAMP CO	Pacific Telephone Directory
1967	VACANT	R. L. Polk Co.
1962	Kimball Robert Prltr	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1962	Marks Jos Rrl est	Pacific Telephone
	Modena Realty Arts	Pacific Telephone
	Reich Co	Pacific Telephone
	Reich Joe	Pacific Telephone
	Sun Building Co	Pacific Telephone
	Tripodes Geo rl est	Pacific Telephone
1955	LANE GALE F SUN RLTY & BLDG CO	The Pacific Telephone & Telegraph Co.
	PETERSON ANNA MAY RLTR	The Pacific Telephone & Telegraph Co.
	SUN REALTY & BUILDING CO	The Pacific Telephone & Telegraph Co.
1933	BLACK & WHITE SANDWICH SHOP (R H CALVERT E J POWELL)	R. L. Polk & Co.

### 3208 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	MODIGLIANI CAFE	EDR Digital Archive
2017	MODIGLIANI	Cole Information
2005	COLONEL MUSTARDS	Cole Information
2000	COLONEL MUSTARD S	Pacific Bell
	COLONEL MUSTARDS	Cole Information
1996	COLONEL MUSTARD S	PACIFIC BELL DIRECTORY
1995	COLONEL MUSTARDS	Cole Information
1992	COLONEL MUSTARD S	PACIFIC BELL DIRECTORY
	COLONEL MUSTARDS	Cole Information
1991	Colonel Mustards	PACIFIC BELL WHITE PAGES
1975	NELLA S DRESSMAKING BOUTIQUE	Pacific Telephone
1970	NELLA S DRESSMAKING BOUTIQUE	Pacific Telephone Directory
1967	NELLAS DRESSMAKING BOUTIQUE	R. L. Polk Co.
1962	Carters Wallpaper Studio	Pacific Telephone
1955	GRAND LAKE LIBRARY & GIFT SHOP	The Pacific Telephone & Telegraph Co.
1950	GRAND LAKE LIBRARY & GIFT SHOP	The Pacific Telephone & Telegraph Co.
1945	GRAND LAKE LIBRARY & GIFT SHOP	The Pacific Telephone & Telegraph Co.
1943	Reeder Aida H library	R. L. Polk & Co.

## FINDINGS

### 3209 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ANNETTE TOBENKIN	EDR Digital Archive
2017	SANFORD DAVIS	Cole Information
2014	DAVIS SANFORD	Cole Information
2010	SANFORD DAVIS	Cole Information
2006	DAVIS Sanford	Haines Company, Inc.
	TOBENKIN Jos	Haines Company, Inc.
2005	SANFORD DAVIS	Cole Information
2000	10 TOBENKIN JOS	Pacific Bell
	JOSEPH TOBENKIN	Cole Information
	SANFORD DAVIS	Cole Information
1996	10 TOBENKIN JOS	PACIFIC BELL DIRECTORY
1995	DAVIS, SANFORD	Cole Information
	TOBENKIN, JOSEPH	Cole Information
1992	10 TOBENKIN JOS	PACIFIC BELL DIRECTORY
	DAVIS, SANFORD	Cole Information
1991	Davis Sanford	PACIFIC BELL WHITE PAGES
	Tobenkin Jos	PACIFIC BELL WHITE PAGES
	Tobey BW	PACIFIC BELL WHITE PAGES
1986	Davis Sanford	PACIFIC BELL WHITE PAGES
	Tobenkin Jos	PACIFIC BELL WHITE PAGES
1980	Davis Sanford	Pacific Telephone
	Tobenkin Jos	Pacific Telephone
1975	DAVIS SANFORD	Pacific Telephone
1970	DAVIS SANFORD	Pacific Telephone Directory
	TOBENKIN JOS	Pacific Telephone Directory
1967	DAVIS SANFORD	R. L. Polk Co.
1962	Davis Sanford	Pacific Telephone
	Tobenkin Jos r	Pacific Telephone
1955	CASSIDY RAY	The Pacific Telephone & Telegraph Co.
	DAVIS SANFORD	The Pacific Telephone & Telegraph Co.
	TOBENKIN JOS R	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	TOBENKIN JOS R	The Pacific Telephone & Telegraph Co.
1945	COURTNEY CLYDE R R	The Pacific Telephone & Telegraph Co.
1943	Hunt Mamie F h	R. L. Polk & Co.
	Taylor Walter R cook r	R. L. Polk & Co.
1933	BROWN GUY DENTIST	R. L. Polk & Co.
	SIEBERT ALF A PHYS	R. L. Polk & Co.

### 3210 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1992	THEATRE CAFE	Cole Information
1991	Theatre Cafe	PACIFIC BELL WHITE PAGES
1986	Grand Lakes Taste Sensation	PACIFIC BELL WHITE PAGES
1980	Cogsw ell J L Jew eler	Pacific Telephone
1975	COGSWELL J L JEWELER	Pacific Telephone
1970	COGSWELL J L JEWELER	Pacific Telephone Directory
1967	COGSWELL J L JEW ELER H	R. L. Polk Co.
1962	Cogsw ell J L Jew eler	Pacific Telephone
1945	DOBROWSKY ERNEST JWLR	The Pacific Telephone & Telegraph Co.
1943	Dobrow sky Ernest Regina jw lr	R. L. Polk & Co.
1938	DOBROWSKY ERNEST JEWELER	Pacific Telephone
1933	DOBROWSKY ERNEST (REGINA) JWLR	R. L. Polk & Co.

### 3211 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	YANG CHOW RESTAURANT	EDR Digital Archive
2017	YANG CHOW	Cole Information
2014	YANG CHOW	Cole Information
2010	YANG CHOW RESTAURANT	Cole Information
2006	YANGCHOW	Haines Company, Inc.
	Rest AURANT	Haines Company, Inc.
2005	YANG CHOW RESTAURANT	Cole Information
2000	YANG CHOW RESTAURANT	Pacific Bell
	YANG CHOW RESTAURANT	Cole Information
1996	YANG CHOW RESTAURANT	PACIFIC BELL DIRECTORY

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1995	YANG CHOW RESTAURANT	Cole Information
1992	YANG CHOW RESTAURANT	PACIFIC BELL DIRECTORY
	YANG CHOW RESTAURNT	Cole Information
1991	YAN G CHOW RE S TAURAN T	PACIFIC BELL WHITE PAGES
	Yang David	PACIFIC BELL WHITE PAGES
	Yang E	PACIFIC BELL WHITE PAGES
1986	YAN G CHOW RE S TAURAN T	PACIFIC BELL WHITE PAGES
1980	YANG CHOW RESTAURANT	Pacific Telephone
1967	VACANT	R. L. Polk Co.
1933	KONDAS CHRIS (ISABELLE) RESTR	R. L. Polk & Co.
1928	Manos Andw Manos & Dotiros R	R.L. Polk and Co of California

### 3213 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	AROUND THE CLOCK RESTAURANT	Pacific Telephone Directory
1967	CHUNGS RESTAURANT	R. L. Polk Co.
1962	Chungs Restaurant	Pacific Telephone
1955	GREAT WALL RESTAURANT	The Pacific Telephone & Telegraph Co.
1945	LAKEVIEW CHINESE RESTAURANT	The Pacific Telephone & Telegraph Co.
1933	DENK ALF O (JOHANNA) BAKER	R. L. Polk & Co.

### 3214 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	GRAND FLOWERS	Cole Information
2014	GRAND FLOWERS	Cole Information
2010	GRAND FLOWERS	Cole Information
2006	ADASMEEs lela	Haines Company, Inc.
	GRAND FLOWERS	Haines Company, Inc.
2005	GRAND FLOWERS	Cole Information
2000	GRAND FLOWERS	Pacific Bell
	GRAND FLOWERS	Cole Information
1996	GRAND FLOWERS	PACIFIC BELL DIRECTORY
1995	GRAND FLOWERS	Cole Information
1992	GRAND FLOWERS	PACIFIC BELL DIRECTORY

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1992	GRAND FLOWERS	Cole Information
1991	Grand Flow ers	PACIFIC BELL WHITE PAGES
1980	Money Box	Pacific Telephone
	Oakland	Pacific Telephone
1975	GRAND LAKE SEW & VAC CENTER	Pacific Telephone
	PACESETTER WARRANTY SALES & SERVICE	Pacific Telephone
	A & B INDUSTRIAL SEWING MACHINES	Pacific Telephone
1970	BEN FRANKLIN INCOME TAX SERVICE	Pacific Telephone Directory
	FRANKLIN BEN INCOME TAX SERVICE	Pacific Telephone Directory
1967	CARTEPS WALLPAPER STUDIO	R. L. Polk Co.
1962	Ault Evelyn ladies apprl	Pacific Telephone
1955	AULT EVELYN LADIES APPRL	The Pacific Telephone & Telegraph Co.
1950	TOLLIE S APPAREL SHOP	The Pacific Telephone & Telegraph Co.
1945	TOLLIE S APPAREL SHOP	The Pacific Telephone & Telegraph Co.
1943	Gray Frances M Mrs dresses	R. L. Polk & Co.
1933	STIER OSWALD N (IRENE L) DRUGS	R. L. Polk & Co.

### 3215 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	LEES DISCOUNT FLORIST	Cole Information
2010	LEES DISCOUNT FLORIST	Cole Information
2006	LEES DISCOUNT FLORIST	Haines Company, Inc. Haines Company, Inc.
2005	LEES DISCOUNT FLORIST	Cole Information
2000	LEE S DISCOUNT FLORIST LEES DISCOUNT FLORIST	Pacific Bell Cole Information
1996	LEE S DISCOUNT FLORIST	PACIFIC BELL DIRECTORY
1995	LEES DISCOUNT FLORIST	Cole Information
1992	DISCOUNT FLRST&GFTS	Cole Information
1986	Presto Video PRE S TO VIDEO	PACIFIC BELL WHITE PAGES PACIFIC BELL WHITE PAGES
1970	MONEY BOX	Pacific Telephone Directory
1967	PETERSEN HARRY	R. L. Polk Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Gaetano Ruocco barber	R. L. Polk & Co.
1933	CUVREAU WM A BARBER	R. L. Polk & Co.
1928	Webster & Kevan J W Scott F C Kevan barbers	R.L. Polk and Co of California

### 3216 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Bee Hive Thrift Shop	Pacific Telephone
1975	BEE HIVE THRIFT SHOP	Pacific Telephone
1967	DELL & GILL TAILORS TE	R. L. Polk Co.
1933	WILSON S RESTR	R. L. Polk & Co.

### 3217 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	NEW GRAND LAKE MARKET	EDR Digital Archive
2017	NEW GRAND LAKE MARKET	Cole Information
2014	NEW GRAND LAKE MARKET	Cole Information
2010	NEW GRAND LAKE MARKET	Cole Information
2000	NEW GRAND LAKE MARKET	Pacific Bell
	NEW GRAND LAKE MARKET	Cole Information
1996	GRAND LAKE LIQUOR	PACIFIC BELL DIRECTORY
1995	GRANDE LIQUORS	Cole Information
1992	GRANDE LIQUORS	PACIFIC BELL DIRECTORY
	GRANDE LIQUORS	Cole Information
1991	Grande Liquors	PACIFIC BELL WHITE PAGES
	Grande M	PACIFIC BELL WHITE PAGES
1986	Chaunceys	PACIFIC BELL WHITE PAGES
1980	Dolphin Liquors	Pacific Telephone
1975	DOLPHIN LIQUORS	Pacific Telephone
1970	T J S PIZZA	Pacific Telephone Directory
1967	GRAND AVENUE CLEANERS	R. L. Polk Co.
	TAILORING GLI 2218	R. L. Polk Co.
1962	Grand Ave Cleaners	Pacific Telephone
	Sherman Julius Grand Ave Cleaners	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	GRAND AVE CLEANERS	The Pacific Telephone & Telegraph Co.
	SHERMAN JULIUS GRAND AVE CLEANERS	The Pacific Telephone & Telegraph Co.
1950	SHERMAN JULIUS GRAND AVE CLEANERS	The Pacific Telephone & Telegraph Co.
1945	GRAND AVE CLEANERS	The Pacific Telephone & Telegraph Co.
	SHERMAN JULIUS GRAND AVE CLEANERS	The Pacific Telephone & Telegraph Co.
1943	Sherman Julius Genevieve E clo clnr	R. L. Polk & Co.
1933	SHERMAN JULIUS CLO CLNR	R. L. Polk & Co.

### 3218 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	DELL & GILL TLRS & HABRDSHR	Pacific Telephone Directory
1962	Dell & Gill tlrs & habrdshrs	Pacific Telephone
1955	DELL & GILL TLRS & HABRDSHRS	The Pacific Telephone & Telegraph Co.
	MCMORRAN WM MEN S FURNSHNG	The Pacific Telephone & Telegraph Co.
1950	DELL & GILL TIRS & FIABRDSRH	The Pacific Telephone & Telegraph Co.
1945	DELL & GILL TLRS & HABRDSHRS	The Pacific Telephone & Telegraph Co.

### 3219 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	LEE'S DISCOUNT FLORIST	EDR Digital Archive
2017	LEES DISCOUNT FLORIST	Cole Information
2014	LEES DISCOUNT FLORIST	Cole Information
2010	GRAND COMMUNICATIONS	Cole Information
2006	GRAND	Haines Company, Inc.
	COMMUNICATIONS	Haines Company, Inc.
2000	OCCUPANT UNKNOWN	Cole Information
1996	GRAND FUTON	PACIFIC BELL DIRECTORY
1992	PIONEER VIDEO	PACIFIC BELL DIRECTORY
	PIONEER VIDEO	Cole Information
1991	Pioneer Video	PACIFIC BELL WHITE PAGES
1986	I Grand Lake Pets	PACIFIC BELL WHITE PAGES
1980	Grand Lake Pets	Pacific Telephone
1975	GRAND LAKE PETS	Pacific Telephone
1970	GRAND AVE PET SHOP	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	GRAND LAKE PETS	Pacific Telephone Directory
1967	GRAND LAKE PETS PET SHOP	R. L. Polk Co.
1962	SIMPLE SIMON PIZZA	Pacific Telephone
1955	DECORATOR PAINTS INC	The Pacific Telephone & Telegraph Co.
1950	NU HUE PAINT STORE	The Pacific Telephone & Telegraph Co.
	PITTS OLIVER HU HUE PAINT STARE	The Pacific Telephone & Telegraph Co.
1933	EDY JOS O (GRACE) CONFY	R. L. Polk & Co.
1928	i & Trueb Mrs Lucile Wood W J Trueb restr 3219	R.L. Polk and Co of California R.L. Polk and Co of California

### 3220 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Antoniettas Alterations & Tailoring	Pacific Telephone
1975	ANTONIETTA S ALTERATIONS & TAILORING	Pacific Telephone
1970	PIERRE S WIG KOIFFURES	Pacific Telephone Directory
1967	VACANT	R. L. Polk Co.
1950	BEARDSLEY CHAS RITR	The Pacific Telephone & Telegraph Co.
1945	DOUD WM E & CO RL EST	The Pacific Telephone & Telegraph Co.
1943	FITTING & EBERHART CO J W Fitting P M Eberhart Real Estate	R. L. Polk & Co.
1938	GRAND LAKE LINEN SHOP	Pacific Telephone
1933	WHITMORE LELAND E (ANNE) REAL EST	R. L. Polk & Co.

### 3221 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	TUINA MASSAGE THERAPY	EDR Digital Archive
2017	TUINA MASSAGE THERAPY	Cole Information
2014	TUINA MASSAGE THERAPY	Cole Information
2010	SILVER MOON KIDS	Cole Information
2006	SILVER MOON	Haines Company, Inc.
2005	HART DIMA	Cole Information
	SILVER MOON KIDS	Cole Information
	SILVER MOON	Cole Information
2000	SILVER MOON	Pacific Bell

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	SILVER MOON	Cole Information
1996	SEPIA REFLECTIONS	PACIFIC BELL DIRECTORY
1995	MONEY BOX	Cole Information
	OCCUPANT UNKNOWN	Cole Information
1992	MONEY BOX	PACIFIC BELL DIRECTORY
	MONEY BOX	Cole Information
1991	Money Box	PACIFIC BELL WHITE PAGES
1986	i Money Box	PACIFIC BELL WHITE PAGES
1980	Bettencourt Joe	Pacific Telephone
	Jarvis Pat	Pacific Telephone
	Maurices by servs	Pacific Telephone
	Richards Room	Pacific Telephone
1970	COOK MYRTLE HAIRDRSR	Pacific Telephone Directory
	MAZETTE BEAUTY SALON	Pacific Telephone Directory
1967	MAZETTE BEAUTY SALON	R. L. Polk Co.
	VIRGINIA BEAUTY SALON	R. L. Polk Co.
1950	PARKS FIGURINE HOBBY SHOP	The Pacific Telephone & Telegraph Co.

### 3222 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	OCCUPANT UNKNOWN	Cole Information
1980	Heads Together Phase II	Pacific Telephone
1975	CHINN JACK STUDIO	Pacific Telephone
1970	CHINN JACK STUDIO	Pacific Telephone Directory
1967	CHINN JACK STUDIO PHOTOG	R. L. Polk Co.
1962	Chinn Jack Studio	Pacific Telephone
1955	EMIL S SHOE STORE	The Pacific Telephone & Telegraph Co.
1945	EMIL S SHOE STORE	The Pacific Telephone & Telegraph Co.
1943	Schaegelen Emil F Beatrice shoes	R. L. Polk & Co.
1933	HART S INC E A HART PRES SHOES	R. L. Polk & Co.

### 3223 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	NEWFANGLES-TALL FASHIONS	EDR Digital Archive

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	ALYCE ON GRAND	Cole Information
	TALL FASHIONSNEWFANGLES	Cole Information
2014	TALL FASHIONSNEWFANGLES	Cole Information
2006	CULTURAL	Haines Company, Inc.
	CROSSROADS	Haines Company, Inc.
2000	VINTAGE PARLOR & GALLERY THE	Pacific Bell
1996	ESSENTIALS BODY CARE	PACIFIC BELL DIRECTORY
1995	ESQUIRE CLEANERS	Cole Information
1992	ESQUIRE CLEANERS	PACIFIC BELL DIRECTORY
	ESQUIRE CLEANERS	Cole Information
1991	Esquire Cleaners	PACIFIC BELL WHITE PAGES
	Esquire Johnathan	PACIFIC BELL WHITE PAGES
1986	Lakeshore Television	PACIFIC BELL WHITE PAGES
1980	Boutique Micco	Pacific Telephone
1967	GRAND WASH HOUSE LAUNDROMAT	R. L. Polk Co.
1950	MATSON HAL PHOTOGRAPHER	The Pacific Telephone & Telegraph Co.
1945	SNOW WHITE STUDIO	The Pacific Telephone & Telegraph Co.
1933	BROOKS ALEX J FLORIST	R. L. Polk & Co.

### 3224 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	510 BRAND	EDR Digital Archive
2006	FIGHTING ARTS	Haines Company, Inc.
	STUDIO	Haines Company, Inc.
2000	FIGHTING ARTS STUDIO	Pacific Bell
	FIGHTING ARTS STUDIO	Cole Information
1996	FIGHTING ARTS	PACIFIC BELL DIRECTORY
1995	FIGHTING ARTS	Cole Information
1992	FIGHTING ARTS	PACIFIC BELL DIRECTORY
	FIGHTING ARTS	Cole Information
1991	Fighting Arts	PACIFIC BELL WHITE PAGES
1986	Fighting Arts	PACIFIC BELL WHITE PAGES
	Figlio Judith	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Figlioli P	PACIFIC BELL WHITE PAGES
1980	Fighting Arts	Pacific Telephone
1970	ENGLISH FISH & CHIP SHOP	Pacific Telephone Directory
	FISH & CHIP SHOP YORKSHIRE	Pacific Telephone Directory
	YORKSHIRE ENGLISH FISH & CHIP SHOP	Pacific Telephone Directory
1967	GUILD LAPIDARY	R. L. Polk Co.
1962	Dons Gallery	Pacific Telephone
1955	JOSEPH S HAIRDORSNG	The Pacific Telephone & Telegraph Co.
1943	Martin Arista beauty shop	R. L. Polk & Co.
1938	CROFT BEAUTY SALON	Pacific Telephone

### 3225 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	WILLIAM LANDIS	EDR Digital Archive
	DANIEL DICKINSON	EDR Digital Archive
	ANNA FORTI	EDR Digital Archive
2017	MONICA ALARCON	Cole Information
	MATS HELLSTEN	Cole Information
	WILLIAM LANDIS	Cole Information
	GABRIEL BARR	Cole Information
	DANIEL DICKINSON	Cole Information
	REBECCA DAVIS	Cole Information
	FRANCISCO PACHECO	Cole Information
	JULIE RAMIREZ	Cole Information
	NANCY LUKANISH	Cole Information
	FELICIA MICHEELS	Cole Information
	ASHLEY WALTON	Cole Information
	DOUGLAS AUSEJO	Cole Information
	EUGENIO CASTRO	Cole Information
2014	MONICA ALARCON	Cole Information
	WILLIAM LANDIS	Cole Information
	GABRIEL BARR	Cole Information
	MICHAELA BUCHANAN	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	DANIEL DICKINSON	Cole Information
	ALANA MCDONOUGH	Cole Information
	RAFAEL RAMIREZ	Cole Information
	JULIE RAMIREZ	Cole Information
	FRANCISCO PACHECO	Cole Information
	DARLENE BROWN	Cole Information
	DOUGLAS AUSEJO	Cole Information
	LARRY RAIL	Cole Information
	KATHERINE SINCLAIR	Cole Information
2010	EUGENIO CASTRO	Cole Information
	AMANDA THOMPSON	Cole Information
	WILLIAM LANDIS	Cole Information
	RAFAEL RAMIREZ	Cole Information
	DANIEL DICKINSON	Cole Information
	RICHARD SHARPNAK	Cole Information
	AARON HUG	Cole Information
	FRANCISCO PACHECO	Cole Information
	MATTHEW BROWN	Cole Information
	TUCKER PERRY	Cole Information
	DOUGLAS AUSEJO	Cole Information
	ALLISON FAWCETT	Cole Information
2006	EUGENIO CASTRO	Cole Information
	AUSEJO Douglas	Haines Company, Inc.
	DICKINSON Daniel	Haines Company, Inc.
	MODENA Madon	Haines Company, Inc.
2005	PACHECO Francisco	Haines Company, Inc.
	WILLIAM LANDIS	Cole Information
	DANIEL DICKINSON	Cole Information
	CATHERINE LONG	Cole Information
	FRANCISCO PACHECO	Cole Information
	RAMOS DE	Cole Information
	EUGENIO CASTRO	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	2 GALLAGHER PATRICK SEAN	Pacific Bell
	9 DICKINSON DANIEL R	Pacific Bell
	10 LOTH LAWRENCE M	Pacific Bell
	14 SINGER ALEXANDRA	Pacific Bell
	17 SHELLEY DYLAN	Pacific Bell
	20 MODENA MARION	Pacific Bell
	A SINGER	Cole Information
	BARBARA GUADA	Cole Information
	DYLAN SHELLEY	Cole Information
	DANIEL DICKINSON	Cole Information
	FRANK ROWICKI	Cole Information
	PATRICK GALLAGHER	Cole Information
	MARION MODENA	Cole Information
	PHILIP PATTAKOS	Cole Information
1996	9 DICKINSON DANIEL R	PACIFIC BELL DIRECTORY
	10 ROWICKI FRANK	PACIFIC BELL DIRECTORY
	15 VINING PEARL	PACIFIC BELL DIRECTORY
	20 MODENA MARION	PACIFIC BELL DIRECTORY
1995	HASKIN, W A	Cole Information
	CAMPBELL, BOB	Cole Information
	DICKINSON, DANIEL R	Cole Information
	MODENA, MARION	Cole Information
	VINING, PEARL	Cole Information
	THOMAS, FRANCES L	Cole Information
	MADOLE, DAVID	Cole Information
1992	9 DICKINSON DANIEL R	PACIFIC BELL DIRECTORY
	10 DOUCET STEVEN	PACIFIC BELL DIRECTORY
	13 MCARTHUR ROB	PACIFIC BELL DIRECTORY
	15 VINING PEARL	PACIFIC BELL DIRECTORY
	16 LOTH LAWRENCE	PACIFIC BELL DIRECTORY
	17 BERLIN MARK	PACIFIC BELL DIRECTORY
	20 MODENA MARION	PACIFIC BELL DIRECTORY

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1992	MCARTHUR, ROB	Cole Information
	BERLIN, MARK	Cole Information
	CASEY, P	Cole Information
	RIGOROUS, M	Cole Information
	LOTH, L	Cole Information
	VINING, PEARL	Cole Information
1991	Dickinson Daniel R	PACIFIC BELL WHITE PAGES
	Doucet Steven	PACIFIC BELL WHITE PAGES
	Hensley Earl D	PACIFIC BELL WHITE PAGES
	Hensley H H	PACIFIC BELL WHITE PAGES
	Hensley HJ	PACIFIC BELL WHITE PAGES
	Modena Marion	PACIFIC BELL WHITE PAGES
	Reichert James	PACIFIC BELL WHITE PAGES
1986	Dexter Perry	PACIFIC BELL WHITE PAGES
	Dickinson Daniel R	PACIFIC BELL WHITE PAGES
	Dtickinson Denise M	PACIFIC BELL WHITE PAGES
	Doucet Steven	PACIFIC BELL WHITE PAGES
	Doucette J I	PACIFIC BELL WHITE PAGES
	Doucette Joe	PACIFIC BELL WHITE PAGES
	Fillmore Gladys	PACIFIC BELL WHITE PAGES
	Green P	PACIFIC BELL WHITE PAGES
	i Green P Hillegass Av Brk	PACIFIC BELL WHITE PAGES
	Hymowitz D M	PACIFIC BELL WHITE PAGES
	Modena Marion	PACIFIC BELL WHITE PAGES
	Row icki Francis	PACIFIC BELL WHITE PAGES
	Row inski David	PACIFIC BELL WHITE PAGES
	Row land D	PACIFIC BELL WHITE PAGES
	Row land Danny	PACIFIC BELL WHITE PAGES
	Thomas F L	PACIFIC BELL WHITE PAGES
	Thomas F R	PACIFIC BELL WHITE PAGES
	Thomas FT	PACIFIC BELL WHITE PAGES
D Vining Pearl	PACIFIC BELL WHITE PAGES	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Advertising Arts By Modena	Pacific Telephone
	Aissa Donald	Pacific Telephone
	Amorin Linda	Pacific Telephone
	Avalos Martin	Pacific Telephone
	Bettencourt E	Pacific Telephone
	Davis Charee D	Pacific Telephone
	Fillmore Gladys	Pacific Telephone
	Modena Marion	Pacific Telephone
	Row icki Francis	Pacific Telephone
	Thomas F L	Pacific Telephone
	Vincent N G	Pacific Telephone
Williams V	Pacific Telephone	
1975	BETTENCOURT E	Pacific Telephone
	DAVID DIANE M	Pacific Telephone
	FILLMORE GLADYS	Pacific Telephone
	FONG CANDACE	Pacific Telephone
	MODENA MARION	Pacific Telephone
	PARENT C S	Pacific Telephone
1970	ADVERTISING ARTS BY MODENA	Pacific Telephone Directory
	BENNETT ANNA G MRS	Pacific Telephone Directory
	BETTENCOURT E	Pacific Telephone Directory
	EVANS SYLVIA	Pacific Telephone Directory
	FILLMORE GLADYS	Pacific Telephone Directory
	GIBBS GENE	Pacific Telephone Directory
	LEE HARRY H	Pacific Telephone Directory
	MODENA MARION ADVERTISING ARTS BY MODENA	Pacific Telephone Directory
	MOTZ PHYLLIS H	Pacific Telephone Directory
	STRYCKER LURA H	Pacific Telephone Directory
	THOMAS M	Pacific Telephone Directory
	VINING PEARL	Pacific Telephone Directory
	WALKER KATHLEEN	Pacific Telephone Directory
WILLIAMS VIRGINIA F	Pacific Telephone Directory	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	KENT APARTMENTS H	R. L. Polk Co.
	CAPPS VELMA G MRS	R. L. Polk Co.
	VINCENT NORMA G MRS	R. L. Polk Co.
	PARKS HAROLD E	R. L. Polk Co.
	THOMAS MARGT	R. L. Polk Co.
	RIGGS DELLA M MRS H	R. L. Polk Co.
	PHEARSON CLAUDINE	R. L. Polk Co.
	EVANS SYLV	R. L. Polk Co.
1962	Bettencourt Elmira	Pacific Telephone
	Brown Ada F	Pacific Telephone
	Evans Sylvia	Pacific Telephone
	Fillmore Gladys	Pacific Telephone
	Foster Mary Greene	Pacific Telephone
	Hill Edith	Pacific Telephone
	Marshall Mazie	Pacific Telephone
	Modena Marion	Pacific Telephone
	Riggs Del M	Pacific Telephone
	Rose Annie Mrs	Pacific Telephone
	Strycker Lura H	Pacific Telephone
	Thomas M	Pacific Telephone
	Vincent Norma G	Pacific Telephone
	Vining Pearl	Pacific Telephone
Walker Kathleen	Pacific Telephone	
1955	BARKER JAS C	The Pacific Telephone & Telegraph Co.
	BETTENCOURT ELMIRA	The Pacific Telephone & Telegraph Co.
	FERRELL LOIS	The Pacific Telephone & Telegraph Co.
	FOSTER MARY GREENE	The Pacific Telephone & Telegraph Co.
	KOELLN K E	The Pacific Telephone & Telegraph Co.
	LATOZAS ADELE	The Pacific Telephone & Telegraph Co.
	RIGGS DEL M	The Pacific Telephone & Telegraph Co.
	SMITH A M MRS	The Pacific Telephone & Telegraph Co.
THOMAS M	The Pacific Telephone & Telegraph Co.	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	THOMPSON REBECCA	The Pacific Telephone & Telegraph Co.
	TOPLIFF CLIFFORD C	The Pacific Telephone & Telegraph Co.
	TROTH G D R	The Pacific Telephone & Telegraph Co.
1950	DAVIS MAX R	The Pacific Telephone & Telegraph Co.
	FIELDS BEN R	The Pacific Telephone & Telegraph Co.
	LOBLINER ABRAM R	The Pacific Telephone & Telegraph Co.
	MEYER LEONARD H R	The Pacific Telephone & Telegraph Co.
	RICHTER J H R	The Pacific Telephone & Telegraph Co.
	ROHIRDS LYDIA R	The Pacific Telephone & Telegraph Co.
	ROCKE LUCILLE B R	The Pacific Telephone & Telegraph Co.
1945	BREITHERICK C O R	The Pacific Telephone & Telegraph Co.
	COPPES ELIZABETH R	The Pacific Telephone & Telegraph Co.
	LAMONT ALICE C R	The Pacific Telephone & Telegraph Co.
	MCNALLY JOS L SGT R	The Pacific Telephone & Telegraph Co.
	POPE WM R	The Pacific Telephone & Telegraph Co.
1943	Ralston Paul P music tchr	R. L. Polk & Co.
1938	MARION SIBYL SCHOOL OF DANCING	Pacific Telephone
1933	MEGLIN DANCE STUDIOS C W SPIELMAN MGR	R. L. Polk & Co.

### 3226 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	GENERAL COMPUTER SYSTEMS	EDR Digital Archive
2017	GENERAL COMPUTER SYSTEMS	Cole Information
2014	GENERAL COMPUTER SYSTEMS	Cole Information
2010	GENERAL COMPUTER SYSTEMS	Cole Information
2006	GENL COMPUTER SYSTEMS	Haines Company, Inc. Haines Company, Inc.
2005	GRAND SYSTEM INC B J FURNBACK	Cole Information Cole Information
2000	GENERAL COMPUTER SYSTEMS B J FURNBACK GENERAL COMPUTER SYSTEMS OCCUPANT UNKNOWN	Pacific Bell Cole Information Cole Information Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1996	GENERAL COMPUTER SYSTEMS	PACIFIC BELL DIRECTORY
1995	CONTRACTORS LICENSE SCHOOL	Cole Information
	ANTHONY SCHOOLS	Cole Information
1992	ANTHONY SCHOOLS	PACIFIC BELL DIRECTORY
	ANTHONY RL EST SC	Cole Information
1991	Anthony Real Estate Schools	PACIFIC BELL WHITE PAGES
	CONTRACTORS LICENSE SCHOOL	PACIFIC BELL WHITE PAGES
	CONTRACTORS SERVICE S	PACIFIC BELL WHITE PAGES
1986	Anthony Real Estate Schools	PACIFIC BELL WHITE PAGES
	ANTHONY SCHOOLS	PACIFIC BELL WHITE PAGES
	CONTRACTORS LICENSE SCHOOL	PACIFIC BELL WHITE PAGES
1982	ANTHONY SCHOOLS OAKLAND	Pacific Telephone
	CONTRACTORS LICENSE SCHOOL OAKLAND	Pacific Telephone
	INSURANCE LICENSE SCHOOL OAKLAND	Pacific Telephone
1980	Anthony Real Estate Schools	Pacific Telephone
	ANTHONY SCHOOLS	Pacific Telephone
	CONTRACTORS LICENSE SCHOOL	Pacific Telephone
	INSURANCE LICENSE SCHOOL	Pacific Telephone
1979	CONTRACTORS LICENSE SCHOOL	Pacific Telephone
	INSURANCE LICENSE SCHOOL	Pacific Telephone
1976	CONTRACTORS LICENSE SCHOOL	R. L. Polk & Co.
	INSURANCE LICENSE SCHOOL	R. L. Polk & Co.
1975	ANTHONY SCHOOLS	Pacific Telephone
	INSURANCE BUILDING BLDG MGRS OFC	Pacific Telephone
1970	ANTHONY SCHOOLS	Pacific Telephone Directory
	CONTRACTORS LICENSE SCHOOL	Pacific Telephone Directory
	INSURANCE LICENSE SCHOOL	Pacific Telephone Directory
1967	ANTHONY SCHOOLS	R. L. Polk Co.
1962	Anderson Pharmacy	Pacific Telephone
1955	ANDERSON PHARMACY	The Pacific Telephone & Telegraph Co.
1945	OWL DRUG CO THE	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	OWL DRUG CO W F SEDGLEY DIST MGR DIST OFFICE	R. L. Polk & Co.

### 3228 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	MC MORRAN WM MEN S FURNSHNG	The Pacific Telephone & Telegraph Co.
1928	res Meat Co Bertram and J J Pringle	R.L. Polk and Co of California

### 3229 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	JONES ROSS A (MERCEDES) COML ARTIST	R. L. Polk & Co.

### 3231 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	OAK COMMON	EDR Digital Archive
2017	OAK COMMON	Cole Information
2014	OAK COMMON	Cole Information
2010	BOMSHELE BEAUTY	Cole Information
2006	NOLAS	Haines Company, Inc.
2005	OPULENCE	Cole Information
	NOLAS	Cole Information
2000	THE NAIL SHOP	Pacific Bell
	THE NAIL SHOP	Cole Information
1996	SOMETHING GRAND	PACIFIC BELL DIRECTORY
1995	OCCUPANT UNKNOWNN	Cole Information
1992	DRESSING UP	PACIFIC BELL DIRECTORY
	DRESSING UP GRAND	Cole Information
1991	Dressing up Grand	PACIFIC BELL WHITE PAGES
1986	Koutchis Ei	PACIFIC BELL WHITE PAGES
1970	C & G LOCK & APPLIANCE REPAIR	Pacific Telephone Directory
1967	BRANDED SHOES	R. L. Polk Co.
1962	Block H & R Co	Pacific Telephone
1950	LINDY S RESTAURANT	The Pacific Telephone & Telegraph Co.
1945	SHIPMATES SEAFOOD RESTAURANT	The Pacific Telephone & Telegraph Co.
1938	GOLDEN CRISP COFFEE SHOP	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	GOLDEN CRISP DONUT AND SANDWICH SHOP	R. L. Polk & Co.

### 3232 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	HUNAN VILLAGE	EDR Digital Archive
2017	HUNAN VILLAGE	Cole Information
2014	HUNAN VILLAGE	Cole Information
2010	HUNAN VILLAGE	Cole Information
2006	HUNAN VILLAGE	Haines Company, Inc.
2005	HUNAN VILLAGE	Cole Information
2000	HUNAN VILLAGE	Pacific Bell
	HUNAN VILLAGE	Cole Information
1996	HUNAN VILLAGE	PACIFIC BELL DIRECTORY
1995	HUNAN VILLAGE	Cole Information
1992	HUNAN VILLAGE	PACIFIC BELL DIRECTORY
	HUNAN VILLAGE	Cole Information
1991	HUN AN VILLAGE	PACIFIC BELL WHITE PAGES
1980	Grand Lake Restaurant	Pacific Telephone
	Grand Lake Restaurant	Pacific Telephone
1975	GRAND LAKE RESTAURANT	Pacific Telephone
1970	GRAND LAKE RESTAURANT	Pacific Telephone Directory
1967	GRAND RESTAURANT	R. L. Polk Co.
1962	Grand Lake Restaurant	Pacific Telephone
1955	GRAND LAKE RESTAURANT	The Pacific Telephone & Telegraph Co.
1938	BLUETTE FOUNTAIN FOOD SHOPS	Pacific Telephone
1933	DALTON THELMA STATY	R. L. Polk & Co.

### 3233 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	CLASSIC CUTS	EDR Digital Archive
	PAULA ISRAELI	EDR Digital Archive
2017	CLASSIC CUTS	Cole Information
	MORI	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	CLASSIC CUTS	Cole Information
	PAULA AT CLASSIC CUTS	Cole Information
	MORI	Cole Information
2010	DONNA AT CLASSIC CUTS	Cole Information
	CLASSIC CUTS	Cole Information
	PAULA AT CLASSIC CUTS	Cole Information
	MORI	Cole Information
2006	CLASSICCUTS	Haines Company, Inc.
	DONNAATCLASSIC	Haines Company, Inc.
	ELENA AT CLASSIC	Haines Company, Inc.
	PAULA AT CLASSIC	Haines Company, Inc.
	RAMIREZ MARIA G	Haines Company, Inc.
2005	DONNA AT CLASSIC CUTS	Cole Information
	CLASSIC CUTS	Cole Information
	PAULA R FERGUSON	Cole Information
2000	CLASSIC CUTS	Pacific Bell
	MORI	Pacific Bell
	DONNA AT CLASSIC CUTS	Pacific Bell
	RAMIREZ MARIA G	Pacific Bell
	PAULA AT CLASSIC CUTS	Pacific Bell
	DONNA AT CLASSIC CUTS	Cole Information
	CLASSIC CUTS	Cole Information
	PAULA AT CLASSIC CUTS	Cole Information
	RAMIREZ MARIA G	Cole Information
	MORI	Cole Information
1996	CLASSIC CUTS	PACIFIC BELL DIRECTORY
	RUTHIE-CASUAL CUTS	PACIFIC BELL DIRECTORY
	MORI	PACIFIC BELL DIRECTORY
	DONNA AT CLASSIC CUTS	PACIFIC BELL DIRECTORY
	BETTENCOURT JOE	PACIFIC BELL DIRECTORY
	PAULA AT CLASSIC CUTS	PACIFIC BELL DIRECTORY
1995	PALACE HAIR DESIGN	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1992	KELVIN S HAIR DESIGN	PACIFIC BELL DIRECTORY
	KENNY S WORKSHOP	Cole Information
1991	Kelvins Hair Design	PACIFIC BELL WHITE PAGES
	Kem Leila V & Son TDD & Voice	PACIFIC BELL WHITE PAGES
	Kem Leila V & Son	PACIFIC BELL WHITE PAGES
	Kem Mill Co	PACIFIC BELL WHITE PAGES
1986	Calvins Hair Design	PACIFIC BELL WHITE PAGES
	KE LVINS HAIR DE S IGN	PACIFIC BELL WHITE PAGES
	Kennys Workshop & Hair Design	PACIFIC BELL WHITE PAGES
1980	KENNY S WORKSHOP	Pacific Telephone
1975	KEN BY PFF HAIR DESIGN FOR MEN & WOMEN	Pacific Telephone
	KEN BY OFF INC	Pacific Telephone
1970	KENNY S BARBER SHOP	Pacific Telephone Directory
	KENNY S WORKSHOP	Pacific Telephone Directory
	KENNY S WORKSHOP	Pacific Telephone Directory
1967	VACANT	R. L. Polk Co.
1962	Abbey Interiors	Pacific Telephone
1938	BLACK & WHITE LIQUOR STORES	Pacific Telephone
	GRAND AVE WINE & LIQUOR STORE	Pacific Telephone
1933	SCHENBERG ISADORE DRY GDS	R. L. Polk & Co.

### 3234 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	NEXT LEVEL	Haines Company, Inc.
	PERSONAL FITNSS	Haines Company, Inc.
	SOL COMPANION	Haines Company, Inc.
2005	NEXT LEVEL PER FITNESS SYSTEMS	Cole Information
1996	TIFFANY S PET SHOP	PACIFIC BELL DIRECTORY
1995	TIFFANY S PET SHOP	Cole Information
1992	TIFFANY S PET SHOP	PACIFIC BELL DIRECTORY
	TIFFANY S PET SHOP	Cole Information
1991	TIFFAN YS PE T S HOP	PACIFIC BELL WHITE PAGES
1986	TIFFAN YS PE T S HOP	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Tiffanys Pet Shop	Pacific Telephone
1970	JANINE S VERY IMPORTANT PETS	Pacific Telephone Directory
	V I P PET SUPLS & GROOMNG	Pacific Telephone Directory
1967	FOX DALE DRESS SHOP	R. L. Polk Co.
1962	Gentlings	Pacific Telephone
1955	GENTLING S	The Pacific Telephone & Telegraph Co.
1943	Gentling Paul B Freda womens clo	R. L. Polk & Co.
1933	MARKELL MURIEL ORIENTAL GDS	R. L. Polk & Co.

### 3235 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	DAVIS CLEANERS	EDR Digital Archive
2017	DAVIS CLEANERS	Cole Information
2014	DAVIS CLEANERS	Cole Information
2010	DAVIS CLEANERS	Cole Information
2006	DAVIS CLEANERS	Haines Company, Inc.
2000	DAVIS CLEANERS	Pacific Bell
	DAVIS CLEANERS	Cole Information
1996	DAVIS CLEANERS	PACIFIC BELL DIRECTORY
1992	BLOCK H & R	PACIFIC BELL DIRECTORY
	BLOCK H&R	Cole Information
1991	Local Offices	PACIFIC BELL WHITE PAGES
	Block H & R	PACIFIC BELL WHITE PAGES
1980	Branch Offices	Pacific Telephone
1975	H & R BLOCK INC	Pacific Telephone
1970	H & R BLOCK	Pacific Telephone Directory
1967	VACANT	R. L. Polk Co.
1955	DIEHL BROS	The Pacific Telephone & Telegraph Co.
	GRAND POULTRY & EGG STORE	The Pacific Telephone & Telegraph Co.
1950	DIEHL BROS	The Pacific Telephone & Telegraph Co.
	GRAND POULTRY & EGG STARE	The Pacific Telephone & Telegraph Co.
1945	GRAND POULTRY & EGG STORE	The Pacific Telephone & Telegraph Co.
1933	GRUTSCH HAZEL MRS BEAUTY SHOP	R. L. Polk & Co.

## FINDINGS

### 3236 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	NEECHA THAI	EDR Digital Archive
2017	NEECHA THAI	Cole Information
2014	NEECHA THAI	Cole Information
2010	NEECHA THAI	Cole Information
1970	LA GRANDE BAKERY	Pacific Telephone Directory
1967	LA GRANDE BAKERY	R. L. Polk Co.
1962	La Grande Bakery	Pacific Telephone
1955	LA GRANDE BAKERY	The Pacific Telephone & Telegraph Co.
1950	LA GRANDE BAKERY	The Pacific Telephone & Telegraph Co.
1945	LA GRANDE BAKERY	The Pacific Telephone & Telegraph Co.
1943	Cushing Dana F Nellie baker	R. L. Polk & Co.
1933	CUSHING DANA F BAKERY	R. L. Polk & Co.
1928	Wi Ulngs Bake Shop 3 A Willing F W Mixer H	R.L. Polk and Co of California

### 3237 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	RECYCLE SPORTS	Cole Information
1996	GRAND LAKE COFFEE SHOP	PACIFIC BELL DIRECTORY
1995	ROGERS TV ELECTRONICS	Cole Information
1992	ROGERS TV ELECTRONICS	PACIFIC BELL DIRECTORY
	ROGERS TV ELCTRNCS	Cole Information
1991	Rogers TV Electronics	PACIFIC BELL WHITE PAGES
1986	Threads N Things	PACIFIC BELL WHITE PAGES
1975	GRAND CRAFTSMAN	Pacific Telephone
1955	EAST BAY TYPEWRITER CO	The Pacific Telephone & Telegraph Co.
1945	CAPPS L R RADIO & ELECTRIC SERVICE	The Pacific Telephone & Telegraph Co.
1938	WALTERS ELSIE HATS	Pacific Telephone
1933	FRANCINES LTD MRS F L KUTTNER SEC LADIES CLO	R. L. Polk & Co.
1928	3237	R.L. Polk and Co of California
	FEANCINES INC H P Kuttner Pres R Lercera V Pres F L Kuttner Sec Ladies and Misses Wearing Apparel General Offices	R.L. Polk and Co of California

## FINDINGS

### 3238 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	COFFEE PIRAWAN	Haines Company, Inc.

### 3241 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	URBAN UNIVERSITY	EDR Digital Archive
	DIRT CHEAP MATTRESS OUTLET	EDR Digital Archive
	CYCLE 4 LYFE	EDR Digital Archive
2017	URBAN FURNITURE	Cole Information
2014	URBAN UNIVERSITY	Cole Information
	URBAN FURNITURE	Cole Information
2010	DIRT CHEAP MATTRESS OUTLET	Cole Information
2006	MATTRess	Haines Company, Inc.
	DISCOUNT OUTLET	Haines Company, Inc.
2000	CYCLE SPORTS	Pacific Bell
	CYCLE SPORTS	Cole Information
1996	CYCLE SPORTS	PACIFIC BELL DIRECTORY
1995	AMERICAN CANCER SOCIETY SHOP	Cole Information
1992	AMERICAN CANCER SOCIETY DISCOVERY SHOP	PACIFIC BELL DIRECTORY
	AMER CANCER SOCIETY	Cole Information
1986	Innocence	PACIFIC BELL WHITE PAGES
	Innocenti Lynn	PACIFIC BELL WHITE PAGES
1980	Dorothys Flea Mkt	Pacific Telephone
1975	DOROTHY S FLEA MKT	Pacific Telephone
1970	PLAYGIRL	Pacific Telephone Directory
1967	GRAND COCKTAIL LOUNGE	R. L. Polk Co.
1962	CHUCK COUGHLINS FRENCH CUISINE	Pacific Telephone
	Coughlin Chuck Chuck Coughlins French Cuisine	Pacific Telephone
1945	FOOD SPOT MARKET	The Pacific Telephone & Telegraph Co.
1943	Hansen Erich C Lois A meats	R. L. Polk & Co.
	Merlino Chris Frances M fruits	R. L. Polk & Co.
1938	HANSEN MEAT SHOP	Pacific Telephone

## FINDINGS

### 3242 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	J & J BEAUTY SUPPLIES INC	EDR Digital Archive
	YOE MOON	EDR Digital Archive
	PAUL MOON	EDR Digital Archive
	JONG MOON	EDR Digital Archive
	CHAN MOON	EDR Digital Archive
2014	STYLEZ BY US	Cole Information
2010	STYLES BY US	Cole Information
2006	J&J BEAUTY	Haines Company, Inc.
	SUPPLIES INC	Haines Company, Inc.
2005	MONTCLAIR KARATE & FITNESS	Cole Information
2000	M G O CLUB	Pacific Bell
1995	WELLS FARGO BANK	Cole Information
1991	Grand Avenue	PACIFIC BELL WHITE PAGES
1986	Grand Avenue Office	PACIFIC BELL WHITE PAGES
1980	Grand Avenue Office	Pacific Telephone
1970	WELLS FARGO BANK NA	Pacific Telephone Directory
1967	WELLS FARGO BANK	R. L. Polk Co.
1962	Grand Av Office	Pacific Telephone
1943	GRAND AV OFFICE C A Golly Mgr	R. L. Polk & Co.
1933	AMERICAN TRUST CO (MAIN OFFICE SAN FRANCISCO) BROADWAY OFFICE	R. L. Polk & Co.

### 3244 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	OAKLAND COIN SHOP	Pacific Telephone
	OAKLAND COIN SHOP	Pacific Telephone
	PIERCE STANLEY W	Pacific Telephone
1970	OAKLAND COIN SHOP	Pacific Telephone Directory
	YOUNG LEO A	Pacific Telephone Directory
1967	OAKLAND COIN SHOP TE	R. L. Polk Co.
1962	Morrison R W	Pacific Telephone
	Oakland Coin Shop	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1962	Young Leo A numismatist	Pacific Telephone
	Young Leo A numismatist	Pacific Telephone
1955	LA TIENDA WOMEN S APPRL	The Pacific Telephone & Telegraph Co.
1945	EBERHART FITTING CO RL EST	The Pacific Telephone & Telegraph Co.
	FITTING EBERHART CO RL EST	The Pacific Telephone & Telegraph Co.
1943	Dell John E mens furngs	R. L. Polk & Co.
1938	DELL & GILL TAILORS & HABERDASHERS	Pacific Telephone
1933	DELL JOHN E (MARY E) TAILOR	R. L. Polk & Co.
	SMITH RAE R MEN S FURNGS	R. L. Polk & Co.

### 3245 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	VERNILLE NITZA VERNILLE STUDIO OF COSMETIC ART	The Pacific Telephone & Telegraph Co.
	VERNILLE STUDIO OF COSMETIC ART	The Pacific Telephone & Telegraph Co.
1933	MERLINO CHRIS (FRANCES) FRUIT	R. L. Polk & Co.
1928	Merlino Chris Frances Jos Martorana & Co H	R.L. Polk and Co of California

### 3246 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	WILLIAMS & SLADE (CHESTER WILLIAMS CLARENCE SLADE) ART GDS	R. L. Polk & Co.

### 3247 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	MARY JONLICK	EDR Digital Archive
	ISADORA BETANCOURT	EDR Digital Archive
	RAFAEL RAMIREZ	EDR Digital Archive
2017	MARY JONLICK	Cole Information
	SCOTT AMIS	Cole Information
	ISADORA BETANCOURT	Cole Information
	RAFAEL RAMIREZ	Cole Information
2014	LYDIA BAILLERGEAU	Cole Information
	MARY JONLICK	Cole Information
	SCOTT AMIS	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	ISADORA BETANCOURT	Cole Information
2010	LYDIA BAILLERGEAU	Cole Information
	MARY JONLICK	Cole Information
	SCOTT AMIS	Cole Information
	ISADORA BETANCOURT	Cole Information
2006	AMIS Scott	Haines Company, Inc.
	EIDSON Paula A	Haines Company, Inc.
2005	MARY JONLICK	Cole Information
	MARK FILAMOR	Cole Information
2000	1A MITCHELL ANDREW	Pacific Bell
1996	1A GAMBURG VICTORIA	PACIFIC BELL DIRECTORY
1995	SCOP, J C	Cole Information
	GALLAGHER, PATRICK S	Cole Information
1992	2A GALLAGHER PATRICK S	PACIFIC BELL DIRECTORY
1991	Gallagher Patrick S	PACIFIC BELL WHITE PAGES
	Manegold Loren	PACIFIC BELL WHITE PAGES
1986	Gallagher Patrick S	PACIFIC BELL WHITE PAGES
	Gallagher Peter & Susan	PACIFIC BELL WHITE PAGES
	Gallagher Richard	PACIFIC BELL WHITE PAGES
	Gallagher Richard	PACIFIC BELL WHITE PAGES
	Manegold Loren	PACIFIC BELL WHITE PAGES
1980	Crawford John	Pacific Telephone
	Thomas Kelly	Pacific Telephone
1975	GRIDER EDDIE	Pacific Telephone
1970	CLAWSON VIRA F	Pacific Telephone Directory
1967	APARTMENTS	R. L. Polk Co.
	IMC CLINTOCK RODNEY C	R. L. Polk Co.
	STOKES AB 81 E M MRS	R. L. Polk Co.
	VACANT	R. L. Polk Co.
1962	Delger E F	Pacific Telephone
	Tomlin May	Pacific Telephone
1955	CIARLO LEONARDO MUSIC INSTRCTN	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	FRENZ F ALBERT	The Pacific Telephone & Telegraph Co.
	ROSENER M L	The Pacific Telephone & Telegraph Co.
1950	CIARLO LEONARDO R	The Pacific Telephone & Telegraph Co.
	STANLEY PRINTING COMPANY	The Pacific Telephone & Telegraph Co.
1945	LOSEY O I DENTIST	The Pacific Telephone & Telegraph Co.
1943	Losey Oscar I Hazel E dentist	R. L. Polk & Co.
	Merlino Bartola Grace h	R. L. Polk & Co.
	Merlino Chris Frances M fruits h	R. L. Polk & Co.
1938	LOSEY O I DENTIST	Pacific Telephone
1933	EATON CHELSEA D PHYS	R. L. Polk & Co.
	FARRAR SAM CLK R	R. L. Polk & Co.
	MERLINO BARDLOW (GRACE) CLK CHRIS MERLINO H	R. L. Polk & Co.
	MERLINO CHRIS (FRANCES) FRUIT	R. L. Polk & Co.
	PENNIE PHILO (LORA) DENTIST	R. L. Polk & Co.

### 3249 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	FOG CITY BAKEHOUSE	EDR Digital Archive
	KUDOLE LLC	EDR Digital Archive
2017	LIEU INC	Cole Information
2014	LIEU INC	Cole Information
	BONIERE BAKERY	Cole Information
2010	LIEU INC	Cole Information
2006	GRAND LAKE	Haines Company, Inc.
	DONUTS	Haines Company, Inc.
2005	GRAND LAKE DONUT	Cole Information
2000	GRAND LAKE DONUT	Pacific Bell
	GRAND LAKE DONUT	Cole Information
	OCCUPANT UNKNOWN	Cole Information
1996	GRAND LAKE DONUT	PACIFIC BELL DIRECTORY
1995	GRAND LAKE DONUT	Cole Information
1992	GRAND LAKE DONUT	PACIFIC BELL DIRECTORY
	GRAND LAKE DNT&BKRY	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Dick Vance Studio	PACIFIC BELL WHITE PAGES
	Tape Service Unlimited	PACIFIC BELL WHITE PAGES
	Vance Dick Recording & Voice Studio	PACIFIC BELL WHITE PAGES
1980	dick Vance Studio	Pacific Telephone
	Tape Services Unlimited	Pacific Telephone
	Vance Dick Recording & Voice Studio	Pacific Telephone
1975	DICK VANCE STUDIO	Pacific Telephone
1970	DICK VANCE STUDIO	Pacific Telephone Directory
	VANCE DICK RECORDING & VOICE STUDIO	Pacific Telephone Directory
1967	VANCE DICK PRODUCTIONS	R. L. Polk Co.
	RECORDING STUDIO	R. L. Polk Co.
1962	Dick Vance Studio Dick Vance Popular Vocal Studio	Pacific Telephone
	VANCE DICK POPULAR VOCAL STUDIO	Pacific Telephone
1955	RAIBLE S FLWRS	The Pacific Telephone & Telegraph Co.
1943	Reetz Dale H Minnie Iw elder h	R. L. Polk & Co.
1933	LANDOWITZ JOS CLO CLNR	R. L. Polk & Co.

### 3250 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	GRAND LAKE SEW & VAC CTR	EDR Digital Archive
	FILTER QUEEN AUTHORIZED SVC	EDR Digital Archive
	ONE HOUR MARTINIZING	EDR Digital Archive
2017	RUG DOCTOR	Cole Information
	MARTINIZING DRY CLEANING	Cole Information
2014	RUG DOCTOR	Cole Information
	FILTER QUEEN AUTHORIZED SERVICE	Cole Information
	SEWING MACHINE & VACUUM CENTER	Cole Information
	MIELE	Cole Information
	DYSON	Cole Information
	GRAND LAKE SEW & VAC CENTER	Cole Information
2010	ONE HOUR MARTINIZING	Cole Information
	RUG DOCTOR	Cole Information
	GRAND LAKE SEW & VAC CTR	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2010	FILTER QUEEN AUTHORIZED SVC	Cole Information
	MIELE KITCHEN & LAURDRY APPLS	Cole Information
2006	DYSON	Haines Company, Inc.
	FILTERQUEEN	Haines Company, Inc.
	AUTHORIZED SERV	Haines Company, Inc.
	GRAND LAKE SEW&	Haines Company, Inc.
	VAC CENTER	Haines Company, Inc.
	AMIELE	Haines Company, Inc.
	ONE-HOUR	Haines Company, Inc.
	MARTINIZING	Haines Company, Inc.
	RUG DOCTOR	Haines Company, Inc.
	RENTS	Haines Company, Inc.
	SEWING MACHINES	Haines Company, Inc.
	VACUUM CENTER	Haines Company, Inc.
	VACUUM & SEWING	Haines Company, Inc.
	MACHINE CENTER	Haines Company, Inc.
2005	VACUUM CLEANER CENTER	Cole Information
	ONE HOUR MARTINIZING	Cole Information
	VACUUM & SEWING MACHINE CENTER	Cole Information
2000	ONE HOUR MARTINIZING	Pacific Bell
	FILTER QUEEN AUTHORIZED SERVICE	Pacific Bell
	GRAND LAKE SEW & VAC CENTER	Pacific Bell
	ONE HOUR MARTINIZING	Cole Information
	GRAND LAKE SEW & VAC CENTER	Cole Information
	SEWING MACHINE & VACUUM CENTER	Cole Information
	FILTER QUEEN AUTHORIZED SERVICE	Cole Information
	RUG DOCTOR RENTS OAKLAND	Cole Information
1996	ONE HOUR MARTINIZING	PACIFIC BELL DIRECTORY
	FILTER QUEEN AUTHORIZED SERVICE	PACIFIC BELL DIRECTORY
	GRAND LAKE SEW & VAC CENTER	PACIFIC BELL DIRECTORY
1995	RUG DOCTOR RENTS	Cole Information
	ONE HOUR MARTINIZING	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1995	GRAND LAKE SEW & VAC CTR	Cole Information
1992	ONE HOUR MARTINIZING	PACIFIC BELL DIRECTORY
	FILTER QUEEN AUTHORIZED SERVICE	PACIFIC BELL DIRECTORY
	GRAND LAKE SEW & VAC CENTER	PACIFIC BELL DIRECTORY
	FILTER QUEEN SERV	Cole Information
	CARSONS 1 HR MRTNZG	Cole Information
1991	E CS	PACIFIC BELL WHITE PAGES
	E D COAT IN C	PACIFIC BELL WHITE PAGES
	Grand Lake Sew & Vac Center	PACIFIC BELL WHITE PAGES
	ON E HOUR MARTIN IZIN G	PACIFIC BELL WHITE PAGES
1986	Carsons One Hour Martinizing	PACIFIC BELL WHITE PAGES
	ON E HOUR MARTIN IZIN G	PACIFIC BELL WHITE PAGES
	Oakland	PACIFIC BELL WHITE PAGES
	S E W IN G MACHIN E & VACUUM CE N TE R	PACIFIC BELL WHITE PAGES
	Vacs	PACIFIC BELL WHITE PAGES
	VACUUM & S E W IN G MACHIN E CE N TE R	PACIFIC BELL WHITE PAGES
1980	CARSONS ONE HOUR MARTINIZING	Pacific Telephone
	Grand Lake Sew & Vac Center	Pacific Telephone
	Helens Alterations	Pacific Telephone
	One Hour Martinizing	Pacific Telephone
	Pacesetter Warranty Sales & Service	Pacific Telephone
1975	CARSON S ONE HOUR MARTINIZING	Pacific Telephone
	ONE TIOUR MARTINIZING	Pacific Telephone
1970	CARSON S ONE HOUR MARTINIZING	Pacific Telephone Directory
	ONE HOUR MARTINIZING	Pacific Telephone Directory
1967	CARSONS ONE H 04 R MARTINIZING	R. L. Polk Co.
1955	LUCKY STORES INC	The Pacific Telephone & Telegraph Co.
1945	LUCKY STORES INC	The Pacific Telephone & Telegraph Co.
1943	Stores	R. L. Polk & Co.
1938	LUCKY MARKETS	Pacific Telephone
1933	PUBLIC FOOD STORES (OFFICE) C A MCALLISTER MGR GRO	R. L. Polk & Co.

## FINDINGS

### 3251 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	NAIL PRO	EDR Digital Archive
2014	NAILPRO	Cole Information
2010	NAIL PRO	Cole Information
2006	NAIL PRO	Haines Company, Inc.
2000	NAIL PRO	Pacific Bell
	NAIL PRO	Cole Information
	OCCUPANT UNKNOWN	Cole Information
1996	LES MODES NEW LOOK FASHIONS INC	PACIFIC BELL DIRECTORY
1992	VERNAS FLOWERS	Cole Information
1991	VERNAS FLOWERS	PACIFIC BELL WHITE PAGES
1986	VERNAS FLOWERS	PACIFIC BELL WHITE PAGES
	Vernaza Rafael	PACIFIC BELL WHITE PAGES
1980	VERNAS FLOWERS	Pacific Telephone
1975	BURCKHARDT INSURANCE PERSONNEL AGENCY	Pacific Telephone
1970	BURCKHARDT INSURANCE PERSONNEL AGENCY	Pacific Telephone Directory
	KIMBALL FREY REALTY	Pacific Telephone Directory
	MCMANAMY PHILLIP J	Pacific Telephone Directory
	REPLOGLE CARL S CONSLTNG ENGR	Pacific Telephone Directory
	SUN BUILDING CO	Pacific Telephone Directory
1967	EDINGER VINCENT REAL EST	R. L. Polk Co.
1962	Henderson John M Co Inc distrs	Pacific Telephone
	Suttman Virgil G John M Henderson Co Inc	Pacific Telephone
1955	EBERHART REALTY MAIN OFC	The Pacific Telephone & Telegraph Co.
	HENDERSON JOHN M CO INC	The Pacific Telephone & Telegraph Co.
	SUTTMAN VIRGIL G JOHN M HENDERSON CO INC	The Pacific Telephone & Telegraph Co.
1950	EBERHART REALTY	The Pacific Telephone & Telegraph Co.
1933	ROBINOW YALES (SARAH) DELICATESSEN	R. L. Polk & Co.

## FINDINGS

### 3253 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	GRAND JEWELRY REPAIR	EDR Digital Archive
2017	GRAND JEWELRY REPAIR	Cole Information
2014	GRAND JEWELRY REPAIR	Cole Information
2010	GRAND JEWELRY REPAIR	Cole Information
2006	GRAND JEWELRY REPAIR	Haines Company, Inc. Haines Company, Inc.
2000	GRAND JEWELRY REPAIR GRAND JEWELRY REPAIR OCCUPANT UNKNOWN	Pacific Bell Cole Information Cole Information
1996	GRAND JEWELRY REPAIR	PACIFIC BELL DIRECTORY
1995	GRAND JEWELRY REPAIR	Cole Information
1992	GRAND JEWELRY REPAIR GRAND JEWELRY RPR	PACIFIC BELL DIRECTORY Cole Information
1991	Grand Jew elry Repair	PACIFIC BELL WHITE PAGES
1986	Maxines jw lr I Maxion Consalagion	PACIFIC BELL WHITE PAGES PACIFIC BELL WHITE PAGES
1980	Maxines jw lr	Pacific Telephone
1975	MAXINE S JWLR	Pacific Telephone
1970	MAXINE S JWLR	Pacific Telephone Directory
1967	VACANT	R. L. Polk Co.
1962	Maxines jw lr	Pacific Telephone
1955	MAXINE S JWLR	The Pacific Telephone & Telegraph Co.
1950	MAXINE S JWLR	The Pacific Telephone & Telegraph Co.
1938	WHEELER BEAUTY SALON	Pacific Telephone
1933	DAUGHERTY JOS A BEAUTY SHOP	R. L. Polk & Co.

### 3255 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ST GERMAIN FOUNDATION	EDR Digital Archive
2017	SAINT GERMAIN FOUNDATION	Cole Information
2014	SAINT GERMAIN FOUNDATION	Cole Information
2006	ST GERMAIN	Haines Company, Inc.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	FOUNDATION	Haines Company, Inc.
2000	I AM SANCTUARY	Pacific Bell
	I AM SANCTUARY	Cole Information
	SAINT GERMAIN FOUNDATION	Cole Information
1996	I AM SANCTUARY	PACIFIC BELL DIRECTORY
1995	SAINT GERMAIN FOUNDATION	Cole Information
	I AM SANCTUARY	Cole Information
1992	I AM SANCTUARY	PACIFIC BELL DIRECTORY
	I AM SANCTUARY	Cole Information
1991	I Am Sanctuary	PACIFIC BELL WHITE PAGES
	I Care Landscaping	PACIFIC BELL WHITE PAGES
	I Chem Research	PACIFIC BELL WHITE PAGES
	I Sync Productions	PACIFIC BELL WHITE PAGES
	IAAM Ltd	PACIFIC BELL WHITE PAGES
	IAD Ltd	PACIFIC BELL WHITE PAGES
1986	I Am Sanctuary	PACIFIC BELL WHITE PAGES
	Saint Germain Foundation	PACIFIC BELL WHITE PAGES
1980	I Am Sanctuary	Pacific Telephone
	Saint Germain Foundation	Pacific Telephone
1975	I AM SANCTUARY	Pacific Telephone
1970	I AM SANCTUARY	Pacific Telephone Directory
1967	I AM SANCTUARY	R. L. Polk Co.
1962	I Am Sanctuary	Pacific Telephone
1955	I AM SANCTUARY	The Pacific Telephone & Telegraph Co.
1945	I AM READING ROOM	The Pacific Telephone & Telegraph Co.
1943	LAKE Shore Masonic Temple	R. L. Polk & Co.
1933	GRAND LAKE LUTHERAN CHURCH REV W G RUEHL PASTOR	R. L. Polk & Co.

### 3256 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	ALCHEMY BOTTLE SHOP	Cole Information
1996	OAKLAND KOSHER FOODS	PACIFIC BELL DIRECTORY
1995	OAKLAND KOSHER FOODS	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1992	OAKLAND KOSHER FOODS	PACIFIC BELL DIRECTORY
	OAKLD KOSHER FOODS	Cole Information
1986	Brills Kosher Meat Market See Kosher Meat Market	PACIFIC BELL WHITE PAGES
	Henrys Kosher Meat Market	PACIFIC BELL WHITE PAGES
	Kosher Meat Market	PACIFIC BELL WHITE PAGES
1980	Brills Kosher Meat Market See Kosher Meat Market	Pacific Telephone
	Henrys Kosher Meat Market	Pacific Telephone
	Kosher Meat Market	Pacific Telephone
1975	EDMUNDS LIQUOR STORE	Pacific Telephone
1970	EDMUNDS LIQUOR STORE	Pacific Telephone Directory
1967	EDMUNDS LIQUORS	R. L. Polk Co.
1962	Edmunds Liquor Store	Pacific Telephone
1955	EDMUNDS LIQUOR STORE	The Pacific Telephone & Telegraph Co.
1950	EDMUNDS LIQUOR STORE	The Pacific Telephone & Telegraph Co.
1945	EDMUNDS LIQUOR STORE	The Pacific Telephone & Telegraph Co.
1943	Edmunds C A Edmunds mgr liquors	R. L. Polk & Co.
1938	LOMBARD S LIQUOR STORE	Pacific Telephone

### 3257 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	LYDIA S DRAPERY SERV	The Pacific Telephone & Telegraph Co.
	ROBIRDS LYDIA LYDIA S DRAPERY SERV	The Pacific Telephone & Telegraph Co.
1950	LYDIA S DRAPERY SERV	The Pacific Telephone & Telegraph Co.
	ROBIRDS LYDIA LYDIA S DRAPERY SERV	The Pacific Telephone & Telegraph Co.

### 3258 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	KNIMBLE	EDR Digital Archive
2017	KNIMBLE	Cole Information
2014	KNIMBLE	Cole Information
2010	FORDS FINE FURNITURE	Cole Information
2006	COLLECTABLE	Haines Company, Inc.
	DESIGNS	Haines Company, Inc.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2006	FORDS FINE	Haines Company, Inc.	
	FURNITURE	Haines Company, Inc.	
	FORDS FINE	Haines Company, Inc.	
	FURNITURE	Haines Company, Inc.	
2000	COLLECTABLE DESIGNS	Pacific Bell	
	COLLECTABLE DESIGNS	Cole Information	
1996	COLLECTABLE DESIGNS	PACIFIC BELL DIRECTORY	
1995	MODERN ART	Cole Information	
	MODERN BRIDAL IMAGES	Cole Information	
1992	MODERN ART	PACIFIC BELL DIRECTORY	
	CUSTOM COLOR	Cole Information	
	FISHER ELISA	Cole Information	
1991	Custom Color	PACIFIC BELL WHITE PAGES	
	Custom Color Labs	PACIFIC BELL WHITE PAGES	
	i MODERN ART	PACIFIC BELL WHITE PAGES	
	Modern Bridal	PACIFIC BELL WHITE PAGES	
1986	Custom Color Labs	PACIFIC BELL WHITE PAGES	
	Custom Concrete Cutting	PACIFIC BELL WHITE PAGES	
	Custom Design Woodworking	PACIFIC BELL WHITE PAGES	
	Fisher Leonard	PACIFIC BELL WHITE PAGES	
	MODERN ART	PACIFIC BELL WHITE PAGES	
	Modern Bridal	PACIFIC BELL WHITE PAGES	
	Modern Bridal Images	PACIFIC BELL WHITE PAGES	
	Modern Bridal Invitations	PACIFIC BELL WHITE PAGES	
	Modern Bridal Photography	PACIFIC BELL WHITE PAGES	
	Modern Photo Color	PACIFIC BELL WHITE PAGES	
	1980	CUSTOM COLOR LABS	Pacific Telephone
		MODERN PHOTOCOLOR	Pacific Telephone
1970	MODERN PHOTOCOLOR	Pacific Telephone Directory	
	MODERN PHOTOCOLOR	Pacific Telephone Directory	
1967	GRAND MUSIC CENTER MUS DLRS	R. L. Polk Co.	
1962	Marcel Music Center	Pacific Telephone	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	LA MERITE STYLE SHOPPE	The Pacific Telephone & Telegraph Co.
1945	LA MERITE DRESS SHOP	The Pacific Telephone & Telegraph Co.
1943	De Vorin Jos Fannie womens clo	R. L. Polk & Co.
1938	DE VORIN F MRS LA MERITE DRESS SHOP	Pacific Telephone
1933	DEVORIN JOS (FANNIE) WOMEN S CLO	R. L. Polk & Co.

### 3259 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	GRAND AVE BARBER SHOP	Pacific Telephone
1970	GRAND AVE BARBER SHOP	Pacific Telephone Directory
1967	GRAND AVENUE BARBER SHOP	R. L. Polk Co.
1962	Grand Avenue Barber Shop	Pacific Telephone
1943	Beardsw orth Harlan W Cora A barber	R. L. Polk & Co.
1933	RUSSELL CARLON CO (ROBT RUSSELL WM CARLON) STATIONERS	R. L. Polk & Co.

### 3260 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	MIJORI JAPANESE RESTAURANT	EDR Digital Archive
2017	MIJORI JAPANESE RESTAURANT	Cole Information
2014	MIJORI JAPANESE RESTAURANT	Cole Information
2010	MIJORI JAPANESE RESTAURANT	Cole Information
2006	MIJORI JAPANESE Rest AURANT	Haines Company, Inc. Haines Company, Inc.
2005	MIJORI JAPANESE RESTAURANT MIJORI INC	Cole Information Cole Information
2000	MIJORI MIJORI	Pacific Bell Cole Information
1996	MIJORI	PACIFIC BELL DIRECTORY
1995	MIJORI	Cole Information
1992	MIJORI MIJORI MIJORI	PACIFIC BELL DIRECTORY PACIFIC BELL DIRECTORY PACIFIC BELL DIRECTORY
1991	Scooping Station	Cole Information PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1991	Scop Jonathan C	PACIFIC BELL WHITE PAGES
	Scopesi VJ J	PACIFIC BELL WHITE PAGES
	Scordelis Alex C & Georgia	PACIFIC BELL WHITE PAGES
	Scordelis S L	PACIFIC BELL WHITE PAGES
1986	Scooping Station	PACIFIC BELL WHITE PAGES
1975	LAKESHORE LOCKSMITH SERVICE	Pacific Telephone
1970	PAYLESS CLEANERS	Pacific Telephone Directory
1967	GRAND AVENUE STATIONERY	R. L. Polk Co.
1962	Grand Avenue Stationery	Pacific Telephone
1943	Farwell Albt W Gertrude variety store	R. L. Polk & Co.
1933	BETTENCOURT & HUTTON (MARY BETTENCOURT WINIFRED HUTTON) MLNR	R. L. Polk & Co.

### 3261 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	OCCUPANT UNKNOWN	Cole Information
1975	COLOSI A V CIV & STRUCTRI ENGNR	Pacific Telephone
	HODGES RANALD INDSCPE ARCHT SINGER & HODGES LANDSCAPE ARCHITECTURE	Pacific Telephone
1970	BAZEGHI MFG CO	Pacific Telephone Directory
	COLOSI A V CIV & STRUCTRL ENGNR	Pacific Telephone Directory
	HILLS GEORGE CO	Pacific Telephone Directory
	INTERNA TL SYSTEMS ANALYSIS INC	Pacific Telephone Directory
	INTERNA TL SYSTEMS ANALYSIS INC	Pacific Telephone Directory
	JOHNSON DAVID STENHOUSE ARCHT	Pacific Telephone Directory
	MASSEY WARREN & ASSOCIATES	Pacific Telephone Directory
1967	COLOSI ALBERT V ENGINEERING	R. L. Polk Co.
	CIVIL ENG	R. L. Polk Co.
	KIMBALL FREY REALTY	R. L. Polk Co.
	WEIL LILLIAN R ACCT	R. L. Polk Co.
1950	JAZZ RECORD LOUNGE RECORD LOUNGE	The Pacific Telephone & Telegraph Co.
1943	Hulse Earl E Lois M shoe repr	R. L. Polk & Co.
1933	BERRY ENOCH S (BERNICE) SHOE SHINER	R. L. Polk & Co.
	PARRISH EUG G (FLORA) SHOE REPR	R. L. Polk & Co.

## FINDINGS

### 3263 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	FREEMAN HELEN A MIMGRPHNG	Pacific Telephone Directory
1967	SMITH RUNO CONSTRUCTION GENL CONTRS	R. L. Polk Co. R. L. Polk Co.
1962	Prentiss Kingsley W ins Oakland	Pacific Telephone Pacific Telephone
1945	HALPERN J TLR	The Pacific Telephone & Telegraph Co.
1943	Halpern Jacob Minnie tailor	R. L. Polk & Co.
1933	BROWN FREDK W (MARGT E) CIGARS	R. L. Polk & Co.

### 3264 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	MELOMELO OAK LLC GRAND BAKERY	EDR Digital Archive EDR Digital Archive
2017	GRAND BAKERY	Cole Information
2014	GRAND BAKERY	Cole Information
2010	GRAND BAKERY	Cole Information
2006	GRAND BAKERY	Haines Company, Inc.
2005	GRAND BAKERY THE	Cole Information
2000	GRAND BAKERY THE GRAND BAKERY THE	Pacific Bell Cole Information
1996	GRAND BAKERY THE	PACIFIC BELL DIRECTORY
1995	GRAND BAKERY	Cole Information
1992	GRAND BAKERY THE GRAND BAKERY THE	PACIFIC BELL DIRECTORY Cole Information
1991	Grand Bakery The	PACIFIC BELL WHITE PAGES
1986	Rollys Bakery Emporium Rolman Caroline Rolnick Elaine Leah Rolnick Kyle	PACIFIC BELL WHITE PAGES PACIFIC BELL WHITE PAGES PACIFIC BELL WHITE PAGES PACIFIC BELL WHITE PAGES
1980	Ernies Strudel Palace Bakery	Pacific Telephone
1975	ERNIE S CHINESE RESTAURANT	Pacific Telephone
1970	ERNIE S STRUDEL PALACE BAKERY	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	STRUDEL PALACE	Pacific Telephone Directory
1967	STRUDEL PALACE BAKED GOODS	R. L. Polk Co.
1962	New Yorker Bakery	Pacific Telephone
1955	MERRITT BAKERY	The Pacific Telephone & Telegraph Co.
1943	Denk Albt O Johanna C baker	R. L. Polk & Co.

### 3265 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	BROTHER SISTERS FLOWER SHOP	EDR Digital Archive
	CORE POWER YOGA	EDR Digital Archive
2017	GRAND FAIRE	Cole Information
2006	3 DAY BUNDS	Haines Company, Inc.
2005	3 DAY BLINDS	Cole Information
	BANK OF AMERICA NA	Cole Information
1992	SECURITY PAC GRAND	Cole Information
1991	Grand Lake Office	PACIFIC BELL WHITE PAGES
	Branch Office	PACIFIC BELL WHITE PAGES
1986	Grand & Lake Office	PACIFIC BELL WHITE PAGES
1980	Security Pacific National Bank	Pacific Telephone
1970	TRAVEL ALL TRAVEL AGENCY	Pacific Telephone Directory
1967	TRAVEL ALL TRAVEL AGENCY	R. L. Polk Co.
1962	INTER CITY MORTGAGE & REALTY CO INC	Pacific Telephone
	Washburn Rudy Inter City Mtge & Rity Co Inc	Pacific Telephone
1955	ALHAMBRA FURNITURE STUDIO	The Pacific Telephone & Telegraph Co.
1950	DE HART ANNE WEYMEI IITRS & ACCESRS	The Pacific Telephone & Telegraph Co.
	DE HART CHAS W ANN WEYMIER DE HART INTRS & ACCESRS	The Pacific Telephone & Telegraph Co.
1945	MERLINO CHRIS FRUIT	The Pacific Telephone & Telegraph Co.
1938	RICH S HEALTH FOOD STORE VEGETABLE JUICES	Pacific Telephone
1933	SMITS J EVERETT (HAZEL) CONFY	R. L. Polk & Co.

### 3266 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	OCCUPANT UNKNOWN	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Fisher Leonard	Pacific Telephone
	Hendrick Howard	Pacific Telephone
	MODERN ART PHOTO STUDIOS	Pacific Telephone
1975	CUSTOM COLOR LABS	Pacific Telephone
	HENDRICK HOWARD	Pacific Telephone
1970	CUSTOM COLOR LABS	Pacific Telephone Directory
	FISHER LEONARD	Pacific Telephone Directory
	HENDRICK HOWARD	Pacific Telephone Directory
	MODERN ART PHOTO STUDIOS	Pacific Telephone Directory
1967	MODERN ART PHOTO STUDIOS	R. L. Polk Co.
	PHOTOGRAPH	R. L. Polk Co.
1962	Fisher Lenny	Pacific Telephone
	Modern Art Photo Studios	Pacific Telephone
1955	MARZEL WOMENS APPRL	The Pacific Telephone & Telegraph Co.
	PINGREE HAZEL W MARZEL WOMEN S APPRL	The Pacific Telephone & Telegraph Co.
1950	MARYON JESSIE L MRS R	The Pacific Telephone & Telegraph Co.
	PINGREE HAZEL W MARCEL WOMRNISS APPRI	The Pacific Telephone & Telegraph Co.
1945	MARZEL WOMENS APPRL	The Pacific Telephone & Telegraph Co.
1943	Pingree Hazel Mrs dresses	R. L. Polk & Co.

### 3267 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	LAMB CHAS A (EDNA M) BARBER	R. L. Polk & Co.

### 3268 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	IKAROS GREEK RESTAURANT	EDR Digital Archive
2017	IKAROS GREEK RESTAURANT	Cole Information
2014	IKAROS GREEK RESTAURANT	Cole Information
2006	HEADS TOGETHER	Haines Company, Inc.
	PHASE 3D	Haines Company, Inc.
2005	HEADS TOGETHER PHASE III	Cole Information
2000	HEADS TOGETHER PHASE III	Pacific Bell

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	HEADS TOGETHER PHASE III	Cole Information
1996	HEADS TOGETHER PHASE III	PACIFIC BELL DIRECTORY
1995	HEADS TOGETHER PHASE III	Cole Information
1992	HEADS TOGETHER PHASE III	PACIFIC BELL DIRECTORY
	HEADS TOGETHER 3	Cole Information
1991	Heads Together Phase III	PACIFIC BELL WHITE PAGES
1986	Heads Together Phase II	PACIFIC BELL WHITE PAGES
1980	Happy Looker	Pacific Telephone
1970	PAL JOEY S ANTIQUES	Pacific Telephone Directory
	PAL JOEY S SALON OF BEAUTY	Pacific Telephone Directory
1967	PAL JOEYS BEAUTY SALON	R. L. Polk Co.
1962	Erlindas Beauty Salon	Pacific Telephone
1955	ALEXANDER JOAN LAKE BTY SALON	The Pacific Telephone & Telegraph Co.
	LAKE BEAUTY SALON	The Pacific Telephone & Telegraph Co.
1945	LAKE BEAUTY SALON	The Pacific Telephone & Telegraph Co.
1933	HAGSTROM S FOOD STORES INC E A HAGSTROM PRES W B ROSEMOND V-PRES M W MCCART	R. L. Polk & Co.
1928	& Sons Mrs Cecelia Isadore and S dry gds	R.L. Polk and Co of California

### 3270 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Robt Radio Co Robt Land radios and music	R.L. Polk and Co of California

### 3272 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1962	Liquidation Mart	Pacific Telephone
1933	GORI LOUIS A (BEUFORD R) FRUITS	R. L. Polk & Co.
	MARTIN ERNEST (MARGT D) MEATS	R. L. Polk & Co.

### 3276 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Stores	R. L. Polk & Co.
1938	SAFEWAY STORES INC	Pacific Telephone
1933	PIGGLY-WIGGLY DIVISION OF SAFEWAY STORES INC	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	20	R.L. Polk and Co of California
	PIGGLY WIGGLY PACIFIC CO INC Andrew Williams Pres Genl Mgr Grocers	R.L. Polk and Co of California

### 3286 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2010	TRACY SHIMABUKURO	Cole Information

### 3300 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	QUI DUMPLING	EDR Digital Archive
2017	BANKOK PALACE	Cole Information
2014	BANKOK PALACE	Cole Information
2010	BANGKOK PALACE THAI RESTAURANT	Cole Information
2006	BANGKOK PALACE	Haines Company, Inc.
	THAI Rest AURANT	Haines Company, Inc.
	BANGKOK PALACE	Haines Company, Inc.
	THAI Rest AURANT	Haines Company, Inc.
2005	BANGKOK PALACE THAI RESTAURANT	Cole Information
2000	BANGKOK PALACE THAI RESTAURANT	Pacific Bell
	LALIBELA ETHIOPIAN RESTAURANT	Cole Information
1996	LALIBELA ETHIOPIAN RESTAURANT	PACIFIC BELL DIRECTORY
1995	LALIBELA ETHIOPIAN RESTAURANT	Cole Information
1992	LALIBELA ETHIOPIAN RESTAURANT	PACIFIC BELL DIRECTORY
	LALIBELA RESTAURANT	Cole Information
1991	Uncle Gaylords Ice Cream Cafe	PACIFIC BELL WHITE PAGES
1986	o r	PACIFIC BELL WHITE PAGES
	GRAN D OAK GALLE RY & FRAMIN G	PACIFIC BELL WHITE PAGES
1980	Grand Meat Market	Pacific Telephone
1975	GRAND MEAT MARKET	Pacific Telephone
1970	GRAND MEAT MARKET	Pacific Telephone Directory
1967	GRAND MEATS	R. L. Polk Co.
1962	Grand Meat Market	Pacific Telephone
1955	GRAND MEAT MARKET	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	GRAND MEAT MARKET	The Pacific Telephone & Telegraph Co.
1943	Raffanti Peter J Leona meats	R. L. Polk & Co.
1933	BLUE PEACOCK INN	R. L. Polk & Co.

### 3301 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	COLLINS FLOOR COVERINGS	Pacific Telephone Directory
1967	COLLINS FLOOR COVERINGS	R. L. Polk Co.
1962	COLLINS FLOOR COVERINGS	Pacific Telephone
1950	STINNETT ROBT B PHOTGRPHR	The Pacific Telephone & Telegraph Co.
1945	FEDERAL DRUG CO	The Pacific Telephone & Telegraph Co.
1943	Federal Drug Co Inc C V Keenan pres C A Luedeking sec	R. L. Polk & Co.
1938	FEDERAL DRUG CO	Pacific Telephone
1933	FEDERAL DRUG CO C V KEENAN PRES C A LUEDEKING SEC FEDERAL REALTY BLDG	R. L. Polk & Co.

### 3302 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	IDEAL BARBER SHOP	Pacific Telephone Directory
1967	IDEAL BARBER SHOP TE	R. L. Polk Co.
1943	Hillard Frank C Lottie barber	R. L. Polk & Co.
	Snaden Geo H shoe shiner	R. L. Polk & Co.
1933	HENDERSON HORACE SHOE SHINER	R. L. Polk & Co.
	HILLARD & CROFT (F C HILLARD H B CROFT) BARBERS	R. L. Polk & Co.
1928	G & Croft F C Hillard H B Croft barbers	R.L. Polk and Co of California

### 3304 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ATM	EDR Digital Archive
2017	CITIBANK	Cole Information
2014	CITIBANK	Cole Information
2005	CITIGROUP INVESTMENT SERVICES	Cole Information
1996	HOME FEDERAL OF SAN FRANCISCO	PACIFIC BELL DIRECTORY
1995	HOME FEDERAL OF SAN FRANCISCO	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1992	HOME FEDERAL OF SAN FRANCISCO	PACIFIC BELL DIRECTORY
	HOME FEDRL SVGS&LN	Cole Information
1991	HOME FE DE RAL S AVIN GS& LOAN AS S OCIATION OF S AN FRAN CIS CO	PACIFIC BELL WHITE PAGES
1986	HOME FE DE RAL S AVIN GS & LOAN AS S N OF S AN FRAN CIS CO	PACIFIC BELL WHITE PAGES
1980	HOME FEDERAL SAVINGS & LOAN ASSN OF SAN FRANCISCO	Pacific Telephone
1970	CHEFF S DO-NUTS	Pacific Telephone Directory
1967	CHEFFS OCNUTS BREAKFAST LUNCH	R. L. Polk Co.
	RESTR	R. L. Polk Co.
1962	Jeffs Do Nuts	Pacific Telephone
1955	JEFF S DO-NUTS	The Pacific Telephone & Telegraph Co.
1950	JEFF S DO NETS	The Pacific Telephone & Telegraph Co.
1945	JEFF S DO NUTS	The Pacific Telephone & Telegraph Co.
1933	SMITH T HAROLD (BLANCH M) ELEC SUPP	R. L. Polk & Co.

### 3305 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Mostly Zuckermann	PACIFIC BELL WHITE PAGES
1980	Davies & Mc Coy	Pacific Telephone
	Gregson Realty	Pacific Telephone
	Harris Ruth Travel All Travel Agency	Pacific Telephone
	TRAVEL ALL TRAVEL AGENCY	Pacific Telephone
1970	PRENTISS KINGSLEY W INS	Pacific Telephone Directory
	STATE FARM INSURANCE COMPANIES	Pacific Telephone Directory
1967	STATE FARM INSURANCE	R. L. Polk Co.
1962	Country Style Kitchen	Pacific Telephone
	Feitor Jose R Herbs Rstrnt	Pacific Telephone
	HERBS RESTAURANT	Pacific Telephone
1955	YALE S DELICA TESSEN & CATERING	The Pacific Telephone & Telegraph Co.
1950	YALE S DELICA TESSEN & CATERING	The Pacific Telephone & Telegraph Co.
1943	Robinow Yale S Sarah delicatessen	R. L. Polk & Co.
1928	Liberty Cleaning & Dyeing Works David Cohen	R.L. Polk and Co of California

## FINDINGS

### 3306 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1995	JOE BETTENCOURT	Cole Information
	GRAND CENTRAL STATION HAIR	Cole Information
	JENNY ING	Cole Information
	RUTHIE GRAND CENTRAL STATION	Cole Information
	DONNA AT GRAND CENTRAL	Cole Information
	PAULA R FERGUSON	Cole Information
	ING, JENNY	Cole Information
1992	ING JENNY	PACIFIC BELL DIRECTORY
	RUTHIE GRAND CENTRAL STATION	PACIFIC BELL DIRECTORY
	DONNA AT GRAND CENTRAL	PACIFIC BELL DIRECTORY
	BETTENCOURT JOE	PACIFIC BELL DIRECTORY
	GRAND CENTRAL STATION HAIR DESIGN	PACIFIC BELL DIRECTORY
	FERGUSON PAULA R	PACIFIC BELL DIRECTORY
	DONNA AT GRND CNTRL	Cole Information
	GRAND CNTRL STA HR	Cole Information
	RUTHIE GRAND CENTRL	Cole Information
1991	Bettencourt Joe	PACIFIC BELL WHITE PAGES
	Donna At Grand Central	PACIFIC BELL WHITE PAGES
	Donnas Chlldcare Service	PACIFIC BELL WHITE PAGES
	Ferguson Paula R	PACIFIC BELL WHITE PAGES
	GRAN D CE N TRAL S TATION HAIR DE S IGN	PACIFIC BELL WHITE PAGES
	llg Jenny	PACIFIC BELL WHITE PAGES
1986	Bettencourt Joe	PACIFIC BELL WHITE PAGES
	GRAN D CE N TRAL S TATION HAIR DE S IGN	PACIFIC BELL WHITE PAGES
	Maurices bty servs	PACIFIC BELL WHITE PAGES
	Maurino Nici	PACIFIC BELL WHITE PAGES
	Mauro John M	PACIFIC BELL WHITE PAGES
	Ruthie Grand Central Station	PACIFIC BELL WHITE PAGES
1980	Grand Central Station Hair Design	Pacific Telephone
1975	ELSHOUT ANTHONY	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	ELSIE S SALON OF BEAUTY	Pacific Telephone Directory
1967	SENROR RUDY S COIFFURES	R. L. Polk Co.
1962	HARRIS RUTH Travl All Travl Agcy	Pacific Telephone
	TRAVEL ALL TRAVEL AGCY	Pacific Telephone
1955	TRAVEL ALL TRAVEL AGCY	The Pacific Telephone & Telegraph Co.
1950	WARREN S CANDIES OF DISTINCTION	The Pacific Telephone & Telegraph Co.
1933	AKITA S ORIENTAL GDS	R. L. Polk & Co.
	KUTZ RAY N SHOE REPR	R. L. Polk & Co.

### 3307 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	LOUNGE OAKLAND THE	Cole Information
2006	DECORATOR	Haines Company, Inc.
	PAINTS	Haines Company, Inc.
2005	DECORATOR PAINTS	Cole Information
2000	DECORATOR PAINTS	Pacific Bell
	DECORATOR PAINTS	Cole Information
1996	DECORATOR PAINTS	PACIFIC BELL DIRECTORY
1995	DECORATOR PAINTS	Cole Information
	CRAPA, RONALD L	Cole Information
1992	DECORATOR PAINTS	PACIFIC BELL DIRECTORY
	DECORATOR PAINTS	Cole Information
1991	Decorator Paints	PACIFIC BELL WHITE PAGES
	De Cord Lucette	PACIFIC BELL WHITE PAGES
1986	DE CORATOR PAIN TS	PACIFIC BELL WHITE PAGES
	De Coss Donald A	PACIFIC BELL WHITE PAGES
1980	DECORATOR PAINTS INC	Pacific Telephone
1975	DECORATOR PAINTS INC	Pacific Telephone
1970	DECORATOR PAINTS INC	Pacific Telephone Directory
1967	DECORATOR PAINTS INC	R. L. Polk Co.
1962	DECORATOR PAINTS INC	Pacific Telephone
1950	CAPPS APPLIANCES LTD	The Pacific Telephone & Telegraph Co.
	CAPPS RADIO REPAIR SERVICE	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	UNITED STATES GOVERNMENT	The Pacific Telephone & Telegraph Co.
1943	TULEY Gilbert M Mae C hdw	R. L. Polk & Co.
1928	w and John A Teresa C furn	R.L. Polk and Co of California

### 3308 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	BOOT & SHOE SVC	EDR Digital Archive
	CR PIZZA LLC	EDR Digital Archive
2017	BOOT & SHOE SERVICE	Cole Information
2014	BOOT & SHOE SERVICE	Cole Information
2000	OAKLAND PARENT TEACHER STORE	Pacific Bell
	OAKLAND PARENT TEACHER STORE	Cole Information
1996	OAKLAND PARENT TEACHER STORE	PACIFIC BELL DIRECTORY
1995	GRAND DRY CLEANING & SHOE RPR	Cole Information
1992	GRAND DRY CLEANING & SHOE REPAIR	PACIFIC BELL DIRECTORY
	GRAND DRY CLEANING	Cole Information
1980	Adairs Shoe Repairing	Pacific Telephone
1975	ADAIR S SHOE REPAIRING	Pacific Telephone
1970	ADAIR S SHOE REPAIRING	Pacific Telephone Directory
1967	AOAIR SHOE REPAIR	R. L. Polk Co.
1962	Deans Shoe Repairing	Pacific Telephone
1955	DEAN S SHOE REPAIRING	The Pacific Telephone & Telegraph Co.
1950	DEAN S SHOE & HOSIERY REPAIRING	The Pacific Telephone & Telegraph Co.
1945	DEAN S SHOE & HOSIERY REPAIRING	The Pacific Telephone & Telegraph Co.
1943	DEAN Marvin E Claudia L shoe repr	R. L. Polk & Co.
1933	RICHARDSON MARY A MRS RESTR	R. L. Polk & Co.
1928	Jiaer le bt B birds	R.L. Polk and Co of California

### 3309 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	DEKORS CUSTOM	Haines Company, Inc.
	SHTTRS&WALLSYS	Haines Company, Inc.
2000	DEKORS CUSTOM SHUTTERS AND WALL SYSTEMS	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1996	DEKOR S CUSTOM SHUTTERS AND WALL SYSTEMS	PACIFIC BELL DIRECTORY
1995	VERNAS FLOWERS	Cole Information
1992	VERNA S FLOWERS	PACIFIC BELL DIRECTORY
1986	Harris Ruth Travel All Travel Agency	PACIFIC BELL WHITE PAGES
	TRAVEL ALL TRAVEL AGENCY	PACIFIC BELL WHITE PAGES
1933	GRAND AVENUE HARDWARE CORP ERNEST DOERFLER MGR	R. L. Polk & Co.

### 3310 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	CAFE DIBARTOLO	Cole Information
1995	DIANA C YUEN OD	Cole Information
	OCCUPANT UNKNOWNN	Cole Information
1992	YUEN DIANA C OD	PACIFIC BELL DIRECTORY
	YUEN DIANA C OD	Cole Information
1991	Yuen Diana COD	PACIFIC BELL WHITE PAGES
	Yuen Donald & Doris	PACIFIC BELL WHITE PAGES
	Yuen Foon	PACIFIC BELL WHITE PAGES
	Yuen Gilbert	PACIFIC BELL WHITE PAGES
1986	Takahashi Ernest S OD	PACIFIC BELL WHITE PAGES
	Yuen Diana COD	PACIFIC BELL WHITE PAGES
	Yuen Gilbert	PACIFIC BELL WHITE PAGES
1980	Kadonaga Roland optmtrst	Pacific Telephone
	Takahashi Ernest S optmtrst	Pacific Telephone
1970	TAKAHASHI ERNEST S OPTMTRST	Pacific Telephone Directory
1967	TAKAHASHI E S OPTOM TE	R. L. Polk Co.
1962	Takahashi Ernest S optmtrst	Pacific Telephone
1955	TAKAHASHI ERNEST S OPTMTRST	The Pacific Telephone & Telegraph Co.
1945	VICTORY WAFFLE SHOP	The Pacific Telephone & Telegraph Co.
1933	PAVERT AUDREY J (WID REMI) WOMEN S CLO	R. L. Polk & Co.

## FINDINGS

### 3311 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	PENROSE	EDR Digital Archive
	MIJ LLC	EDR Digital Archive
	BERKELEY BOOT LLC	EDR Digital Archive
2017	PENROSE & SONS	Cole Information
2014	PENROSE & SONS	Cole Information
2010	JENNY'S CAFE	Cole Information
2006	JENNY'S CAFE	Haines Company, Inc.
2005	JENNY'S CAFE	Cole Information
2000	JENNY S CAFE	Pacific Bell
	JENNY'S CAFE	Cole Information
1996	LE GRAND FROMAGE	PACIFIC BELL DIRECTORY
1995	LE GRAND FROMAGE	Cole Information
	OCCUPANT UNKNOWN	Cole Information
1992	LE GRAND FROMAGE	PACIFIC BELL DIRECTORY
1991	Le Grand Fromage	PACIFIC BELL WHITE PAGES
	Le Grand Stephen	PACIFIC BELL WHITE PAGES
1986	Le Grand Fromage	PACIFIC BELL WHITE PAGES
1980	Le Grand Fromage	Pacific Telephone
1970	FIDELITY SOUND	Pacific Telephone Directory
1967	FIDELITY SOUND PHONOGRAPH	R. L. Polk Co.
	RECORDS	R. L. Polk Co.
1962	Grand Lake Slenderizing Salon	Pacific Telephone
	Micheli Alice A Grand Lake Slenderizing Salon	Pacific Telephone
1955	NORDBY S UPHOLSTERY	The Pacific Telephone & Telegraph Co.
1943	Striplin Ethel W w id Carl restr	R. L. Polk & Co.
1933	VERZIC PETER BAKERY	R. L. Polk & Co.

### 3313 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ROBISON CAROL EA TAX	EDR Digital Archive
	CAROL ROBINSON EA TAX PREP	EDR Digital Archive

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	CAROL ROBINSON EA TAX PREP	Cole Information
	ROBINSON CAROL EA TAX PREPARATION &	Cole Information
2014	ROBISON CAROL EA TAX PREPARATION & C	Cole Information
	DANIELS AUDREY BEADS	Cole Information
	CAROL ROBINSON EA TAX PREP	Cole Information
2010	E A TAX	Cole Information
	D C PETERSON CO	Cole Information
	AUDREY DANIELS BEADS	Cole Information
	SHIRA STONE	Cole Information
	510 NOTARY	Cole Information
2006	DANIELSAUDREY	Haines Company, Inc.
	BEADS	Haines Company, Inc.
	LAVELLEALICE	Haines Company, Inc.
2005	LAVELLE ALICE MFCC	Cole Information
	DANIELS AUDREY BEADS	Cole Information
	DC PETERSON CO	Cole Information
	ERIN BEALES	Cole Information
	ALICE LAVELLE	Cole Information
2000	101 LAVELLE ALICE MFCC	Pacific Bell
	202 DANIELS AUDREY BEADS	Pacific Bell
	LAVELLE ALICE MFCC	Cole Information
	DANIELS AUDREY BEADS	Cole Information
	ALICE LAVELLE	Cole Information
1996	101 LAVELLE ALICE MFCC	PACIFIC BELL DIRECTORY
	102 TOWNER PETER M	PACIFIC BELL DIRECTORY
	202 CHILDREN S ADVOCACY INSTITUTE	PACIFIC BELL DIRECTORY
1995	TESS HOOVER	Cole Information
	PLANT CLOSURES PROJECT	Cole Information
	RON JACKSON CO	Cole Information
	ALICE LAVELLE	Cole Information
	CHAMBER MUSICIANS NORTHERN CA	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1995	LAVELLE, ALICE	Cole Information
1992	CHAMBER MUSCIANS OF NORTHERN CALIFORNIA	PACIFIC BELL DIRECTORY
	EAST BAY BICYCLE COALITION	PACIFIC BELL DIRECTORY

### 3315 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	DAVID THORNE LANDSCAPE ARCHITE	EDR Digital Archive
	JEFF JOUPPI DESIGN	EDR Digital Archive
2017	DAVID M THORNE LANDSCAPE ARCHITECT	Cole Information
	JEFF JOUPPI DESIGN	Cole Information
2014	THORNE DAVID M LANDSCAPE ARCHITECTS	Cole Information
	KENT NANCY LANDSCAPE ARCHITECT	Cole Information
2010	LARSON SHORES ARCHITECTS	Cole Information
	THORNE STEVE	Cole Information
	NANCY B KENT LANDSCAPE ARCH	Cole Information
	EULATE DESIGN	Cole Information
	DAVID THORNE LANDSCAPE ARCHITE	Cole Information
2006	CITYSHAPERS 51 M	Haines Company, Inc.
	KENZINNS	Haines Company, Inc.
	ARCHITECT	Haines Company, Inc.
	THORNE DAVID M	Haines Company, Inc.
	THORNE STEVE	Haines Company, Inc.
2005	DAVID M THORNE	Cole Information
	DAVID THORNE LANDSCAPE ARCHITECT	Cole Information
	KEN ZINNS ARCHITECTS	Cole Information
	STEVE THORNE DESIGN	Cole Information
	GARDEN EVOLUTION	Cole Information
	KENT NANCY B LANDSCAPE ARCHITECT	Cole Information
	FULL CIRCLE SOLAR	Cole Information
	CITYSHAPERS	Cole Information
	GOLDEN ASSOCIATES	Cole Information
2000	FULL CIRCLE SOLAR	Pacific Bell

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	100 FONG-ZINNS ARCHITECTS	Pacific Bell
	200 THORNE DAVID M	Pacific Bell
	300 GOLDEN ASSOCIATES ASLA	Pacific Bell
	300 THORNE STEVE	Pacific Bell
	400 RATEAVER CHRISTOPHER A	Pacific Bell
	THORNE DAVID M	Cole Information
	FULL CIRCLE SOLAR	Cole Information
	FONG ZINNS ARCHITECTS	Cole Information
	THORNE STEVE ARCHT	Cole Information
1996	FULL CIRCLE SOLAR	PACIFIC BELL DIRECTORY
	100 FONG-ZINNS ARCHITECTS	PACIFIC BELL DIRECTORY
	200 THORNE DAVID M	PACIFIC BELL DIRECTORY
	300 MY OWN ROOM	PACIFIC BELL DIRECTORY
	300 THORNE STEVE	PACIFIC BELL DIRECTORY
	400 NAKASO & NAKASO	PACIFIC BELL DIRECTORY
1995	ARCHITECTS, FONG Z	Cole Information
1992	FLOTATION WATERBEDS	PACIFIC BELL DIRECTORY
	PACIFIC PLASTIC PALLETS	PACIFIC BELL DIRECTORY
	CA HAWAITAN PALLETS	Cole Information
	FLOTATION WATERBEDS	Cole Information
1991	California Hawaiian Pallets Same As Pacific Plastic Pallets	PACIFIC BELL WHITE PAGES
	CALIF & HAWAIIAN SUGAR CO	PACIFIC BELL WHITE PAGES
	Flotation Waterbeds	PACIFIC BELL WHITE PAGES
	Maris Akin Ruth	PACIFIC BELL WHITE PAGES
1986	California Hawaiian Pallets	PACIFIC BELL WHITE PAGES
	Central Park Industries	PACIFIC BELL WHITE PAGES
	If No Answer Call	PACIFIC BELL WHITE PAGES
	Central Parking Co PO Box 11174	PACIFIC BELL WHITE PAGES
	Flotation Waterbeds	PACIFIC BELL WHITE PAGES
1980	Ultimate Waterbed Co	Pacific Telephone
1967	WHITE MICH	R. L. Polk Co.
1962	Anderson Silk Screen Printing Inc	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	ANDERSON SILK SCREEN PRINTING	The Pacific Telephone & Telegraph Co.
1950	ANDERSON SILK SCREEN PRINTING	The Pacific Telephone & Telegraph Co.
1943	Edys Grand Ice Cream Co Wm Dyer J O Edy	R. L. Polk & Co.

### 3316 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	WALDEN POND BOOKSTORE	EDR Digital Archive
2017	BARNES & NOBLE	Cole Information
2014	WALDEN POND BOOKS CD & RECORDS	Cole Information
	WALDEN BOOKS CDS & VINTAGE VINYL	Cole Information
	WALDEN POND BOOKSTORE	Cole Information
2010	WALDEN POND BOOKSTORE	Cole Information
2006	WALDEN POND	Haines Company, Inc.
	BOOKSTORE	Haines Company, Inc.
2005	WALDEN POND BOOKSTORE	Cole Information
2000	WALDEN POND BOOKSTORE	Pacific Bell
	WALDEN POND BOOKSTORE	Cole Information
1996	WALDEN POND BOOKSTORE	PACIFIC BELL DIRECTORY
1995	WALDEN POND BOOKS	Cole Information
1992	WALDEN POND	PACIFIC BELL DIRECTORY
	WALDEN POND	Cole Information
1991	W ALDE N PON D	PACIFIC BELL WHITE PAGES
	Walden R A	PACIFIC BELL WHITE PAGES
1986	Ace Grand Lake Hardw are	PACIFIC BELL WHITE PAGES
1980	Ace Grand Lake Hardw are	Pacific Telephone
	GRAND LAKE ACE HARDWARE	Pacific Telephone
1970	GRAND LAKE HARDWARE	Pacific Telephone Directory
1967	GRAND LAKE HARDWARE HOW	R. L. Polk Co.
1962	Grand Lake Hardw are	Pacific Telephone
1955	GRAND LAKE HARDWARE	The Pacific Telephone & Telegraph Co.
1933	JOHNSON WARREN L (ADDIE H) INS AGT	R. L. Polk & Co.

## FINDINGS

### 3317 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	TERESA FRIEDHEIM	Cole Information
2014	OCCUPANT UNKNOWN	Cole Information
	ANN MALKOS	Cole Information
2010	MICHELE DOUGLASS	Cole Information
	OCCUPANT UNKNOWN	Cole Information
	TERESA FRIEDHEIM	Cole Information
	LESLIE MCLEAN	Cole Information
2006	No Current Listing	Haines Company, Inc.
2005	BRIAN JORDAN	Cole Information
	OCCUPANT UNKNOWN	Cole Information
	DAVE PRESTON	Cole Information
1995	GARCIA, JULIO	Cole Information
1986	King Jonathan E	PACIFIC BELL WHITE PAGES
1980	Diehl Patrick	Pacific Telephone
	Giffillan Marcia	Pacific Telephone
1975	JOHNSON DEHI	Pacific Telephone
	MIGNOGNA M	Pacific Telephone
1970	FEINSTEIN WM JR	Pacific Telephone Directory
1967	SVENSON & ASSOCIATES AOV AGCY	R. L. Polk Co.
	GILLETT IVAN	R. L. Polk Co.
1962	Tapia Wm	Pacific Telephone
1955	HUDSON J H	The Pacific Telephone & Telegraph Co.
1950	FOX LYNN R	The Pacific Telephone & Telegraph Co.
1945	OPPIE J W R	The Pacific Telephone & Telegraph Co.
1943	Oppie John W Hilma O USCG h	R. L. Polk & Co.
1938	SIMON LOUIS M MRS R	Pacific Telephone
1933	PUGH CHAS F (BLANCHE E) MINING OPR H	R. L. Polk & Co.
1928	w and John A Teresa C furn	R.L. Polk and Co of California
	H	R.L. Polk and Co of California
	Julia clo slpr	R.L. Polk and Co of California

## FINDINGS

### 3319 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	GORDON SHELL	EDR Digital Archive
2017	GORDON SHELL	Cole Information
2014	GORDON SHELL	Cole Information
2010	GORDON SHELL	Cole Information
2006	o SHELL Gordon R	Haines Company, Inc.
2000	REAR SHELL GORDON R	Pacific Bell
	GORDON SHELL	Cole Information
1995	SHELL, GORDON R	Cole Information
1970	GOUELLAIN ROBT	Pacific Telephone Directory
1967	NATIONAL AUDIT SYSTEM CO	R. L. Polk Co.
	AUDITORS	R. L. Polk Co.
	KENNEDY DONALD R	R. L. Polk Co.
	GOVELLAIN ROBT M	R. L. Polk Co.
1962	Costa Laurence H Natl Audit & Sys Co	Pacific Telephone
	Gouellain Robt	Pacific Telephone
	National Audit & System Co	Pacific Telephone
1955	COSTA LAURENCE H NATL AUDIT & SYS CO	The Pacific Telephone & Telegraph Co.
	NATIONAL AUDIT & SYSTEM CO	The Pacific Telephone & Telegraph Co.
1950	NORTON JERALDINE T R	The Pacific Telephone & Telegraph Co.
1943	Purdue Arth U Helen L USA r	R. L. Polk & Co.
	Williamson John K J Helen slsmn h	R. L. Polk & Co.
1933	BURPEE IDA K (WID E L) H	R. L. Polk & Co.
	BURPEE OREN R	R. L. Polk & Co.

### 3320 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	PRECISION POINT PILATES	EDR Digital Archive
	EAST BAY PROBATES	EDR Digital Archive
	AISLE 5 OAKLAND	EDR Digital Archive
	WE DROP	EDR Digital Archive
	PAYROLL SOLUTIONS INC	EDR Digital Archive

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	BTM INVESTMENTS	EDR Digital Archive
	AISLE 5	EDR Digital Archive
	MING ZHOU	EDR Digital Archive
2017	KARRON MARTIN	Cole Information
	PRUDENTIAL REAL ESTATE	Cole Information
	KARRON MARTIN REALTOR	Cole Information
	EAST BAY PROBATES	Cole Information
2014	BETTER HOMES & GARDENS MASON MCDUFFI	Cole Information
	BETTER HOMES & GARDENS REAL ESTATE S	Cole Information
2010	PRUDENTIAL CALIFORNIA REALTY	Cole Information
2006	PRUDENTIAL CA	Haines Company, Inc.
	REALTY	Haines Company, Inc.
	WILLIAMS D J	Haines Company, Inc.
2005	PRUDENTIAL CALIFORNIA REALTY	Cole Information
	JOAN SIMMONS	Cole Information
	RICHARD MATUS	Cole Information
	KIMMALA RIOS	Cole Information
2000	WESTERN AMERICA MORTGAGE	Pacific Bell
	PRUDENTIAL CALIFORNIA REALTY	Pacific Bell
	TRAC BUSINESS SYSTEMS INC	Pacific Bell
	TRAC BUSINESS SYSTEMS	Pacific Bell
	204 WILLIAMS D J	Pacific Bell
	BARTLETT ROBERT S ATTORNEY	Cole Information
	PRUDENTIAL CALIFORNIA REALTY	Cole Information
	MASON MCDUFFIE REAL ESTATE	Cole Information
	WESTERN AMERICA MORTGAGE	Cole Information
	TRAC BUSINESS SYSTEMS	Cole Information
	TRAC BUSINESS SYSTEMS INCORPORATED	Cole Information
	DWAIN WILLIAMS	Cole Information
1996	WESTERN AMERICA MORTGAGE	PACIFIC BELL DIRECTORY
	MASON-MCDUFFIE REAL ESTATE	PACIFIC BELL DIRECTORY

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1996	MASON-MCDUFFIE REAL ESTATE	PACIFIC BELL DIRECTORY	
	116 RAO CHITRA	PACIFIC BELL DIRECTORY	
	200 JONES MARKETING SERVICES	PACIFIC BELL DIRECTORY	
1995	BOYD AUDIO VISUAL SVC	Cole Information	
	WRITING EDITING SVC	Cole Information	
	MASON MC DUFFIE REAL ESTATE	Cole Information	
	OCCUPANT UNKNOWNN	Cole Information	
1992	MASON MCDUFFIE REAL ESTATE INC	PACIFIC BELL DIRECTORY	
	105 TINLOY EDW A	PACIFIC BELL DIRECTORY	
	111 BOYD AUDIO VISUAL SERVICE	PACIFIC BELL DIRECTORY	
	116 WRITING EDITING SERVICES	PACIFIC BELL DIRECTORY	
	210 FORRISTAL JOHN J	PACIFIC BELL DIRECTORY	
	FORRISTAL JOHN J	Cole Information	
	ZABLEN LESLIE ATTY	Cole Information	
	BOYD AUDIO VISL SVC	Cole Information	
	TINLOY EDW A	Cole Information	
	WRITING EDITING SRV	Cole Information	
	MASON MCDUFFIE RE	Cole Information	
	1991	Bartlett Robt S atty	PACIFIC BELL WHITE PAGES
		Forristal John J	PACIFIC BELL WHITE PAGES
Tinloy Edw A realtor		PACIFIC BELL WHITE PAGES	
Tinloy Frank		PACIFIC BELL WHITE PAGES	
Tinloy John		PACIFIC BELL WHITE PAGES	
Tinloy Patrick		PACIFIC BELL WHITE PAGES	
Tinman Limited The		PACIFIC BELL WHITE PAGES	
Tinnel D K		PACIFIC BELL WHITE PAGES	
Tinnel K		PACIFIC BELL WHITE PAGES	
Tinney J J		PACIFIC BELL WHITE PAGES	
Tinnirello Alicia MFCC		PACIFIC BELL WHITE PAGES	
Writing Editing Services		PACIFIC BELL WHITE PAGES	
Wrixon A		PACIFIC BELL WHITE PAGES	
Zablen Leslie M atty		PACIFIC BELL WHITE PAGES	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Bartlett Robt S atty	PACIFIC BELL WHITE PAGES
	Connies Condos Realtor	PACIFIC BELL WHITE PAGES
	Forrista John J	PACIFIC BELL WHITE PAGES
	Hopson J L	PACIFIC BELL WHITE PAGES
	I Mackey Douglas atty	PACIFIC BELL WHITE PAGES
	Grand Lake Piedmont Sales	PACIFIC BELL WHITE PAGES
	Pension Programs Company	PACIFIC BELL WHITE PAGES
	Penskar Mark H	PACIFIC BELL WHITE PAGES
	Penso G	PACIFIC BELL WHITE PAGES
	Perry Robt A CPA	PACIFIC BELL WHITE PAGES
	Tinloy Edw A realtor	PACIFIC BELL WHITE PAGES
	Tinloy Frank	PACIFIC BELL WHITE PAGES
	Tinloy Lorraine & Bruce	PACIFIC BELL WHITE PAGES
	Tinloy Patrick & Anne	PACIFIC BELL WHITE PAGES
	Tinnel K S	PACIFIC BELL WHITE PAGES
	Tinnirello A B	PACIFIC BELL WHITE PAGES
	I Visco Audio Visual Service	PACIFIC BELL WHITE PAGES
	B Visco Steve	PACIFIC BELL WHITE PAGES
	Young Leo A	PACIFIC BELL WHITE PAGES
	1980	Bow ers & Hamelin Inc
Boyd Audio Visual Service		Pacific Telephone
C S R Associates		Pacific Telephone
Forristal John J		Pacific Telephone
H R W Insurance Service Inc		Pacific Telephone
Hughes Thos G		Pacific Telephone
Insurance Service Of California		Pacific Telephone
Mackey Douglas atty		Pacific Telephone
PARKS HARRY A INC REALTORS		Pacific Telephone
Peninsula Legal Clinics attys		Pacific Telephone
Tinloy Edw A realtor		Pacific Telephone
Visco Audio Visual Service		Pacific Telephone
Young Leo A		Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	AMERICAN FEDERATION OF GOVERNMENT EMPLOYEES	Pacific Telephone
	FORRISTAL JOHN J CONSLTNG TRFFC ENGNR	Pacific Telephone
	HUGHES THOS G	Pacific Telephone
	PARKS HARRY A INC REALTORS	Pacific Telephone
1970	AMERICAN FEDERATION OF GOVERNMENT EMPLOYEES	Pacific Telephone Directory
	GOLD RIDGE FORREST	Pacific Telephone Directory
	MEADOWMONT VILLAGE	Pacific Telephone Directory
	METZ OWEN K PUB ACCT	Pacific Telephone Directory
	PARKS HARRY A INC REALTORS	Pacific Telephone Directory
	PARKS HARRY A INC REALTORS LAND SALES	Pacific Telephone Directory
1967	VACANT	R. L. Polk Co.
1962	Ramsey Variety Store	Pacific Telephone
1955	HENDERSON S VARIETY	The Pacific Telephone & Telegraph Co.
1943	Woolworth F W Co dept stores	R. L. Polk & Co.
1933	WOOLWORTH F W CO	R. L. Polk & Co.
1928	3320	R.L. Polk and Co of California
	Jenny Wren Stores Co Inc	R.L. Polk and Co of California

### 3321 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	MICHAEL ALCEDO	EDR Digital Archive
2017	MICHAEL ALCEDO	Cole Information
	CHAZ HARMON	Cole Information
	WILLIAM HARRIS	Cole Information
	VICKIE FISHER	Cole Information
2014	MICHAEL ALCEDO	Cole Information
	VICKIE FISHER	Cole Information
	MARK VALENZUELA	Cole Information
	GARY HAWKINS	Cole Information
2010	MICHAEL ALCEDO	Cole Information
	MARK VALENZUELA	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2010	GARY HAWKINS	Cole Information
	ANGELA COSTA	Cole Information
2006	No Current Listing	Haines Company, Inc.
2000	A MOORE BILL	Pacific Bell
	BILL MOORE	Cole Information
	MICHAEL SCHAMMA	Cole Information
	MARTIN ANSELL	Cole Information
1996	A MOORE BILL	PACIFIC BELL DIRECTORY
	C ANDERSON LESLIE	PACIFIC BELL DIRECTORY
	3 ANSELL MARTIN	PACIFIC BELL DIRECTORY
1992	3 HAWKINS G R	PACIFIC BELL DIRECTORY
	HAWKINS, G R	Cole Information
	AMBROGIO, CAHN M	Cole Information
1991	Valdez Annamarie	PACIFIC BELL WHITE PAGES
	Vatdez C	PACIFIC BELL WHITE PAGES
1980	Hirvonen T	Pacific Telephone
1975	BRANTLY JESSIE	Pacific Telephone
1967	MC CAIN FREDK L	R. L. Polk Co.
1962	Guitschula C	Pacific Telephone
1955	GEIGER MARY K	The Pacific Telephone & Telegraph Co.
	HARDING ELISKA	The Pacific Telephone & Telegraph Co.
1950	THORNILL BESSIE R	The Pacific Telephone & Telegraph Co.
1945	LAVERING JACK R	The Pacific Telephone & Telegraph Co.
	THORNILL BESSIE R	The Pacific Telephone & Telegraph Co.
1943	Gaetano Ruocco barber h	R. L. Polk & Co.
	Goodman Clyde Betty USN r	R. L. Polk & Co.
	HAZELTON Anne Mrs h	R. L. Polk & Co.
	Lavering Everett C Mae h	R. L. Polk & Co.
	MYHRE Chester Evelyn USMC r	R. L. Polk & Co.
	MYHRE Evelyn K teller B of A r	R. L. Polk & Co.
	Taylor Faye Mrs clk r	R. L. Polk & Co.
	Tiffie lone D waiter r	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Tiffie Ralph lone r	R. L. Polk & Co.
	Woodward Arth Cr	R. L. Polk & Co.
1938	FOREMAN A MRS R	Pacific Telephone
1933	STITH EDNA M DRSMKR H	R. L. Polk & Co.
1928	Mixer Francois W Willings Bake Shop R	R.L. Polk and Co of California

### 3322 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	SIMPSON D ROY CLO CLNR	R. L. Polk & Co.

### 3323 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Gamble Clifford N Dorothea A liquors	R. L. Polk & Co.
1933	GRAND BARBER SHOP THE (C E CHASE FRANK HOWARD)	R. L. Polk & Co.
	WESTERN UNION TELEGRAPH CO CHAS S HOLMES MGR	R. L. Polk & Co.

### 3325 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ATM	EDR Digital Archive
	ALLEY	EDR Digital Archive
2017	THE ALLEY	Cole Information
2014	ALLEY THE	Cole Information
2010	ALLEY	Cole Information
2006	ALLEY THE	Haines Company, Inc.
2000	ALLEY THE	Pacific Bell
	ALLEY THE	Cole Information
	OCCUPANT UNKNOWN	Cole Information
1996	ALLEY THE	PACIFIC BELL DIRECTORY
1995	ALLEY	Cole Information
1992	ALLEY THE	PACIFIC BELL DIRECTORY
	ALLEY THE	Cole Information
1991	I Alley The	PACIFIC BELL WHITE PAGES
1986	Alley The	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Alley The	Pacific Telephone
1975	ALLEY THE	Pacific Telephone
1970	ALLEY THE	Pacific Telephone Directory
1967	VACANT	R. L. Polk Co.
1962	Alley The	Pacific Telephone
1955	ALLEY THE	The Pacific Telephone & Telegraph Co.
1945	GRAND ALLEY COCKTL	The Pacific Telephone & Telegraph Co.
1938	GRAND ALLEY BEER	Pacific Telephone
1933	FRAHM HENRY T (PEARL) DELICATESSEN	R. L. Polk & Co.

### 3326 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	NAIL SHOP	EDR Digital Archive
2017	THE NAIL SHOP	Cole Information
2014	THE NAIL SHOP	Cole Information
2010	NAIL SHOP	Cole Information
2006	DOROTHYYS	Haines Company, Inc.
	TREASURES	Haines Company, Inc.
	THE NAIL SHOP	Haines Company, Inc.
2000	DOROTHY S TREASURES	Pacific Bell
	SAVANNAH & COMPANY	Pacific Bell
	DOROTHYS TREASURES	Cole Information
	SAVANNAH & COMPANY	Cole Information
	NEW NAIL IMAGE	Cole Information
1996	SAVANNAH & COMPANY	PACIFIC BELL DIRECTORY
1995	SAVANNAH & CO	Cole Information
	HAIR BY DONNA	Cole Information
1992	SAVANNAH & COMPANY	PACIFIC BELL DIRECTORY
	SAVANNAH&COMPANY	Cole Information
1991	Savannah & Company	PACIFIC BELL WHITE PAGES
1980	LAKEVIEW MARKET	Pacific Telephone
1975	LAKEVIEW MARKET	Pacific Telephone
1970	LAKEVIEW MARKET	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	SOUZA W J LAKEVIEW MARKET	Pacific Telephone Directory
1967	LAKEVIEW MARKET	R. L. Polk Co.
1962	Lakeview Market	Pacific Telephone
	Souza W J Lakeview Market	Pacific Telephone
1955	LAKEVIEW MARKET	The Pacific Telephone & Telegraph Co.
	SOUZA W J LAKEVIEW MARKET	The Pacific Telephone & Telegraph Co.
1945	LAKEVIEW MARKET	The Pacific Telephone & Telegraph Co.
1938	HAGSTROM S FOOD STORES INC	Pacific Telephone

### 3330 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	YUEN DIANA C OD	EDR Digital Archive
2017	CHONG YU OD	Cole Information
	DIANA C YUEN OD	Cole Information
	YUEN DIANA COD	Cole Information
2014	YUEN DIANA C OD	Cole Information
2010	YUEN DIANA C OD	Cole Information
2006	YUEN DIANA COD	Haines Company, Inc.
2000	YUEN DIANA C OD	Pacific Bell
	YUEN DIANA C OD	Cole Information
1996	YUEN DIANA C OD	PACIFIC BELL DIRECTORY
1995	STOVER LABORATORIES INC	Cole Information
	BETTER HOMES REALTY	Cole Information
	OCCUPANT UNKNOWNN	Cole Information
1992	STOVER LABORATORIES INC	PACIFIC BELL DIRECTORY
	BETTER HOMES REALTY	PACIFIC BELL DIRECTORY
	STOVER LABS INC	Cole Information
	BETTER HOMES REALTY	Cole Information
	DUFLOTH, JAMES	Cole Information
1991	RE ALTY	PACIFIC BELL WHITE PAGES
	Better Homes Realty Lakeshore Piedmont	PACIFIC BELL WHITE PAGES

## FINDINGS

### 3331 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	UNIVERSITY VETERINARY HOSPITAL	Cole Information
	THE GRAND LAKE VETERINARY HOSPITAL	Cole Information
2014	LAKE VETERINARY HOSPITAL	Cole Information
	THE GRAND LAKE VETERINARY HOSPITAL	Cole Information
2010	LAKE VETERINARY HOSPITAL	Cole Information
2006	DUNN ELEANOR	Haines Company, Inc.
	KEEGANAUC 1 A	Haines Company, Inc.
	KNOBEL LAUREN L	Haines Company, Inc.
	LAKE VETERINARY	Haines Company, Inc.
	HOSPITAL THE	Haines Company, Inc.
2005	KNOBEL LAUREN L DVM	Cole Information
	LAPRADE RACHELLE DVM	Cole Information
	LAKE VETERINARY HOSPITAL	Cole Information
2000	LAKE VETERINARY HOSPITAL THE	Pacific Bell
	KNOBEL LAUREN L DVM	Cole Information
	KEEGAN ALICIA DVM	Cole Information
	DUNN ELEANOR DVM	Cole Information
	LAKE VETERINARY HOSPITAL THE	Cole Information
	OCCUPANT UNKNOWN	Cole Information
1996	LAKE VETERINARY HOSPITAL THE	PACIFIC BELL DIRECTORY
1995	LAKE VETERINARY HOSPITAL	Cole Information
	ROBIN WOODLEY DVM	Cole Information
1992	LAKE VETERINARY HOSPITAL THE	PACIFIC BELL DIRECTORY
	WOODLEY ROBIN DVM	Cole Information
1991	LAKE VETERINARY HOSPITAL THE	PACIFIC BELL WHITE PAGES
	Woodley Robin DVM	PACIFIC BELL WHITE PAGES
	Woodley Yvonne	PACIFIC BELL WHITE PAGES
1986	Kroger Dietrich DVM	PACIFIC BELL WHITE PAGES
	Kroger Dietrich DVM	PACIFIC BELL WHITE PAGES
	LAKE VETERINARY HOSPITAL THE	PACIFIC BELL WHITE PAGES
	Woodley Robin d VM	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Clark C C DVM	Pacific Telephone
	Killingsworth C DVM	Pacific Telephone
	Kroger Dietrich DVM	Pacific Telephone
	Kroger Dietrich DVM	Pacific Telephone
	Lake Veterinary Hospital The	Pacific Telephone
1975	CLARK CHARLES C OVM	Pacific Telephone
	KROESEN JOE B	Pacific Telephone
	LAKE VETERINARY HOSPITAL THE	Pacific Telephone
1970	CLARK CHARLES C DVM	Pacific Telephone Directory
	LAKE VETERINARY HOSPITAL THE	Pacific Telephone Directory
	ROBERTS THOS L DNTST	Pacific Telephone Directory
1967	LAKE PET HOSPITAL	R. L. Polk Co.
1962	Grand Ave Pet Shop	Pacific Telephone
	GRAND LAKE PET SHOP	Pacific Telephone
1955	GRAND LAKE PET SHOP	The Pacific Telephone & Telegraph Co.
1950	BAILEY FURNITURE & FLOOR COVERING CO	The Pacific Telephone & Telegraph Co.
1945	BAILEY FURNITURE & FLOOR COVERING CO	The Pacific Telephone & Telegraph Co.
1943	BAILEY Lawrence M Eliz furn	R. L. Polk & Co.
1933	PUCCI JOS (ROSE) FISH	R. L. Polk & Co.
	SCHWALEN WALTER H (EDITH) GRO	R. L. Polk & Co.

### 3332 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	YAY AREA BAR GROUP LLC	EDR Digital Archive
2017	LIBERTINE	Cole Information
2014	KINGMANS LUCKY LOUNGE	Cole Information
2010	KINGMANS LUCKY LOUNGE	Cole Information
2005	LAKESHORE JAVA HO	Cole Information
	KINGMANS LUCKY LOUNGE	Cole Information
2000	KINGMAN S LUCKY LOUNGE	Pacific Bell
1996	NEW CLUB MANHATTAN INC	PACIFIC BELL DIRECTORY
1995	NEW CLUB MANHATTAN INC	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1992	NEW CLUB MANHATTAN INC	PACIFIC BELL DIRECTORY
	NEW CLUB MANHATTAN	Cole Information
1991	Club Manhattan	PACIFIC BELL WHITE PAGES
	New Club Manhattan Inc	PACIFIC BELL WHITE PAGES
1986	Club Manhattan	PACIFIC BELL WHITE PAGES
	Manhattan Club	PACIFIC BELL WHITE PAGES
1980	Club Manhattan	Pacific Telephone
1975	CLUB MANHAL TAN	Pacific Telephone
1970	MANHATTAN CLUB	Pacific Telephone Directory
1967	CLUB MANHATTAN TW	R. L. Polk Co.
1962	Manhattan Club	Pacific Telephone
1945	TRADE WINDS	The Pacific Telephone & Telegraph Co.
1943	LAVIGNE May Mrs restr	R. L. Polk & Co.
1938	NIELSEN S CAFE	Pacific Telephone
1933	GRINAKEK JOHN (PEARL I) BAKER	R. L. Polk & Co.

### 3333 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	LOW TED T DDS	EDR Digital Archive
	FARMERS INSURANCE	EDR Digital Archive
	FARMERS INSURANCE-ANTHONY SUE	EDR Digital Archive
2017	TED LOW DDS	Cole Information
2014	COSGROVE RUSSEL	Cole Information
	RUSSEL COSGROVE ATTORNEY AT LAW	Cole Information
	FARMERS INSURANCE GROUP	Cole Information
	SUE HARVEY D AGENCY INS	Cole Information
	LOW TED DDS	Cole Information
	SUE HARVEY AGENCY	Cole Information
2010	SUE HARVEY AGENCY	Cole Information
	RUSSEL JA COSGROVE LAW OFFICE	Cole Information
	LOW TED T DDS	Cole Information
	HARVEY D SUE INSURANCE	Cole Information
2006	AN EXPERIENCED	Haines Company, Inc.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	TRIAL ATTORNEY	Haines Company, Inc.
	COSGROVE RUSSEL	Haines Company, Inc.
	J AMY	Haines Company, Inc.
	FARMERS INS	Haines Company, Inc.
	HARVEYDSUE	Haines Company, Inc.
	AGENCY	Haines Company, Inc.
	LOWTED TODS	Haines Company, Inc.
	S 6 E HARVEY	Haines Company, Inc.
	AGENCY	Haines Company, Inc.
2005	SUE HARVEY D	Haines Company, Inc.
	HARVEY D SUE AGENCY	Cole Information
	COSGROVE RUSSEL	Cole Information
2000	LOW TED DDS	Cole Information
	201 LOW TED T DDS	Pacific Bell
	202 COSGROVE RUSSEL J A	Pacific Bell
	203 SUE HARVEY D AGENCY	Pacific Bell
	HARVEY D SUE AGENCY	Cole Information
	FARMERS INSURANCE GROUP	Cole Information
	COSGROVE RUSSEL J A ATTORNEY	Cole Information
	AN EXPERIENCED TRIAL ATTORNEY	Cole Information
	LOW TED T DDS	Cole Information
	TED LOW	Cole Information
1996	201 LOW TED T DDS	PACIFIC BELL DIRECTORY
	202 COSGROVE RUSSEL J A	PACIFIC BELL DIRECTORY
	203 SUE HARVEY D AGENCY	PACIFIC BELL DIRECTORY
1995	TED T LOW DDS	Cole Information
	RUSSEL J A COSGROVE	Cole Information
	HARVEY D SUE AGENCY	Cole Information
1992	201 LOW TED T DDS	PACIFIC BELL DIRECTORY
	202 COSGROVE RUSSEL J A	PACIFIC BELL DIRECTORY
	203 SUE HARVEY D AGENCY	PACIFIC BELL DIRECTORY
	HARVEY D SUE AGENCY	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1992	COSGROVE R J ATTY	Cole Information
	LOW TED DDS	Cole Information
1991	a Cosgrove Russel J A atty	PACIFIC BELL WHITE PAGES
	a Cosgrove S A	PACIFIC BELL WHITE PAGES
	Farmers Insurance Group	PACIFIC BELL WHITE PAGES
	Sue Harvey D Agency ins	PACIFIC BELL WHITE PAGES
	Sue J	PACIFIC BELL WHITE PAGES
	Sue Jerry	PACIFIC BELL WHITE PAGES
1986	Active Realty & Investment Company	PACIFIC BELL WHITE PAGES
	COS GROVE RUSSEL J A atty	PACIFIC BELL WHITE PAGES
	Cosgrove T	PACIFIC BELL WHITE PAGES
	Farmers Insurance Group	PACIFIC BELL WHITE PAGES
	Harvey D Sue Agency	PACIFIC BELL WHITE PAGES
	Low Ted T DDS	PACIFIC BELL WHITE PAGES
	RW Enterprises	PACIFIC BELL WHITE PAGES
	Sue Harvey D Agency ins	PACIFIC BELL WHITE PAGES
1980	Active Realty & Investment Company	Pacific Telephone
	Chin Edward W ins	Pacific Telephone
	Chinn Calvin C DDS Inc	Pacific Telephone
	Cosgrove Russel J A atty	Pacific Telephone
	Lim Lum & Gee Office	Pacific Telephone
	Sue Harvey D Farmers Insurance	Pacific Telephone
1975	CHINN CALVIN C DOS INC	Pacific Telephone
	COSGROVE RUSSEL J A ATTY	Pacific Telephone
1970	AMERICAN CASCADE LAND CO	Pacific Telephone Directory
	CELLO BAG CO	Pacific Telephone Directory
	COMPUTER COMPLEX INC	Pacific Telephone Directory
	GORRONO JOE	Pacific Telephone Directory
	GRAND AVENUE RENTALS	Pacific Telephone Directory
	INTERNATIONAL ALARMS INC	Pacific Telephone Directory
	NICHOLS RAY D REALTOR	Pacific Telephone Directory
	SCHILLER BEN W SOMERSETT LOIS REALTY	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	SOMERSETT LOIS REALTY	Pacific Telephone Directory
	WILSON RAE INS AGCY	Pacific Telephone Directory
1967	COLUMBIA PRODUCTS CO CLEANING	R. L. Polk Co.
	COMPOUNDS	R. L. Polk Co.
	ROBERTS THOS L DENTIST	R. L. Polk Co.
	SOMERSET LOIS REAL ESTATE	R. L. Polk Co.
	EQUITABLE REALTY & CO	R. L. Polk Co.
	SMITH RAY INSTITUTE OF	R. L. Polk Co.
	PROFESSIONAL REAL EST SLS	R. L. Polk Co.
	REAL EST SCH	R. L. Polk Co.
	NICHOLS RAY REALTY	R. L. Polk Co.
1933	BECONCINI DON (MARGT) FRUITS	R. L. Polk & Co.
	MAC DONALD HECTOR E MEATS	R. L. Polk & Co.

### 3334 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	ZOE ANNS GIFTS	R. L. Polk Co.
1962	Zoe Ann Gift Shop	Pacific Telephone
1955	ZOE ANN GIFT SHOP	The Pacific Telephone & Telegraph Co.
1950	LIVERMORE GEA D R	The Pacific Telephone & Telegraph Co.
	TREASURE MASTERS CORP GREETING CRDS	The Pacific Telephone & Telegraph Co.
1945	GRAND AV PLUMBING CO	The Pacific Telephone & Telegraph Co.
	GRAND LAKE PLUMBING CO	The Pacific Telephone & Telegraph Co.
	HODES H A GRAND AV PLUMBING CO	The Pacific Telephone & Telegraph Co.
1943	Hodes Henry A Calista E plmbr	R. L. Polk & Co.
1938	GRAND AV PLUMBING CO	Pacific Telephone
	HODES H A GRAND AV PLUMBING CO	Pacific Telephone

### 3335 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	GRAND LAKE ALL ABOUT PETS	EDR Digital Archive
2014	RAY DRUG CO INC	Cole Information
2010	RAY DRUG CO	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	RAYDRUGCOINC	Haines Company, Inc.
2005	RAY DRUG CO INC	Cole Information
2000	RAY DRUG CO INC	Pacific Bell
	RAY DRUG COMPANY INCORPORATED	Cole Information
1996	RAY DRUG CO INC	PACIFIC BELL DIRECTORY
1995	RAY DRUG CO	Cole Information
1992	RAY DRUG CO INC	PACIFIC BELL DIRECTORY
	RAY DRUG CO INC	Cole Information
1991	Ray Drug Co Inc	PACIFIC BELL WHITE PAGES
	Ray E	PACIFIC BELL WHITE PAGES
1980	Ray Drug Co Inc	Pacific Telephone
1970	RAY DRUG CO INC	Pacific Telephone Directory
1967	RAY DRUG CO INC WHOL DRUG	R. L. Polk Co.
1962	Ray Drug Co	Pacific Telephone
1955	CAPPS APPLIANCES LTD	The Pacific Telephone & Telegraph Co.
	CAPPS RADIO REPAIR SERVICE	The Pacific Telephone & Telegraph Co.
1938	BAILEY FURNITURE & FLOOR COVERING CO	Pacific Telephone
1933	MACMARR STORES OPERATED BY MODERN FOOD CO OFFICE AND PLANT	R. L. Polk & Co.

### 3336 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	SAMURAI SUSHI BOAT	EDR Digital Archive
2017	SAMURAI SUSHI BOAT	Cole Information
2014	SAMURAI SUSHI BOAT	Cole Information
2010	SAMURAI SUSHI BOAT	Cole Information
2006	SAMURAI SUSHI	Haines Company, Inc.
2005	BBQ PAVILLION	Cole Information
	EAST WEST USA	Cole Information
2000	SHANGRI-LA RESTAURANT	Pacific Bell
	SHANGRI-LA RESTAURANT	Cole Information
	OCCUPANT UNKNOWN	Cole Information
1996	SHANGRI-LA RESTAURANT	PACIFIC BELL DIRECTORY

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1995	SHANGRI LA RESTAURANT	Cole Information
1992	ELEGANT SCARECROW	Cole Information
1986	Elegant Scarecrow The	PACIFIC BELL WHITE PAGES
	Elegant Table Caterers	PACIFIC BELL WHITE PAGES
1980	Elegant Scarecrow The	Pacific Telephone
1970	RENDEZVOUS BEAUTY SALON	Pacific Telephone Directory
1967	RENDEZVOUS BEAUTY SALON	R. L. Polk Co.
1962	Marylayne School of Nursing	Pacific Telephone
	Savage Jack Marylayne Schl of Nursing	Pacific Telephone
1955	SAVE-MORE CLEANERS	The Pacific Telephone & Telegraph Co.
1943	Doerfler Ernest A Irmgard hdw	R. L. Polk & Co.
1933	CONNELLY BYRD LOCKSMTH	R. L. Polk & Co.
	CONNELLY REGINALD B VACUUM CLNRS	R. L. Polk & Co.
	ESSELINK JOHN H (JOHANNA) ELEC CONTR	R. L. Polk & Co.
	WAYNE WILLARD A RADIOS	R. L. Polk & Co.
1928	Nara Floral Co S and M Narahara	R.L. Polk and Co of California

### 3338 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	BERNARD NATASHA DO	EDR Digital Archive
	QUEEN	EDR Digital Archive
	GERALD KURODA	EDR Digital Archive
2017	QUEEN	Cole Information
2014	QUEEN	Cole Information
2010	QUEEN	Cole Information
2006	QUEEN	Haines Company, Inc.
2000	QUEEN	Pacific Bell
	SECOND TO NONE	Cole Information
1996	SECOND TO NONE	PACIFIC BELL DIRECTORY
1995	SECOND TO NONE	Cole Information
1992	SECOND TO NONE	PACIFIC BELL DIRECTORY
	SECOND TO NONE	Cole Information
1991	Second To None	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Gina Of Grand Ave	PACIFIC BELL WHITE PAGES
1970	STATIONARY ENGINEERS LOCAL 39	Pacific Telephone Directory
1967	VACANT	R. L. Polk Co.
1962	Teakle N C Co electronics distr	Pacific Telephone
1955	TASSIE RUSS SHOP	The Pacific Telephone & Telegraph Co.
1950	RUSS TASSIE	The Pacific Telephone & Telegraph Co.
1938	GRAND VIEW CAFE	Pacific Telephone
1933	HODES HENRY A (CALISTA E) PLMBR	R. L. Polk & Co.
1928	Avenue Plumbing Co H A Hodes mgr	R.L. Polk and Co of California

### 3339 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	SMITTY'S	EDR Digital Archive
	KYESON BONIN	EDR Digital Archive
2014	SMITTY'S COCKTAILS	Cole Information
2010	SMITTY'S COCKTAILS	Cole Information
2006	SNITTY'S	Haines Company, Inc.
	COCKTAILS	Haines Company, Inc.
2005	SMITTY'S COCKTAILS	Cole Information
2000	SMITTY S COCKTAILS	Pacific Bell
	SMITTY'S COCKTAILS	Cole Information
	OCCUPANT UNKNOWN	Cole Information
1996	SMITTY S COCKTAILS	PACIFIC BELL DIRECTORY
1995	SMITTY'S COCKTAILS	Cole Information
1992	SMITTY S COCKTAILS	PACIFIC BELL DIRECTORY
	SMITTY'S COCKTAILS	Cole Information
1991	Smittys Cocktails	PACIFIC BELL WHITE PAGES
1986	Smittys Cocktails	PACIFIC BELL WHITE PAGES
1980	Smittys Cocktails	Pacific Telephone
1970	SMITTY S COCKTAILS	Pacific Telephone Directory
1967	SMITTY'S COCKTAIL LOUNGE	R. L. Polk Co.
1962	Smittys Cocktails	Pacific Telephone
1955	PERRY S RESTAURANT	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	PERRY S RESTAURANT	The Pacific Telephone & Telegraph Co.
1943	Perry Frank B Evelyn L liquors	R. L. Polk & Co.
1938	PERRY S RESTAURANT	Pacific Telephone
1933	DENTON SAML PHOTOG	R. L. Polk & Co.

### 3340 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	CONNIES CANTINA	EDR Digital Archive
2017	LOCKS & LOCKSMITH SERVICE	Cole Information
	CONNIES CANTINA	Cole Information
2014	CONNIES CANTINA	Cole Information
2010	CONNIES CANTINA	Cole Information
2006	CONNIES CANTINA	Haines Company, Inc.
2005	CONNIES CANTINA	Cole Information
2000	CONNIES CANTINA	Pacific Bell
	CONNIES CANTINA	Cole Information
1996	FRIEDA S	PACIFIC BELL DIRECTORY
1995	FRIEDAS	Cole Information
	OCCUPANT UNKNOWNN	Cole Information
1992	FRIEDA S	PACIFIC BELL DIRECTORY
	FRIEDAS	Cole Information
1991	Friedas	PACIFIC BELL WHITE PAGES
1986	Munch Box The	PACIFIC BELL WHITE PAGES
	Munch H	PACIFIC BELL WHITE PAGES
1980	Munch Box The	Pacific Telephone
1970	ANGIES FASHIONS	Pacific Telephone Directory
1967	GRAND NUT HOUSE CONFECTIONARY f NUTS	R. L. Polk Co.
1962	Smith Electric Co	Pacific Telephone
1955	SMITH ELECTRIC CO	The Pacific Telephone & Telegraph Co.
1945	GRAND AVE ELECTRIC & RADIO REPAIR SERVICE	The Pacific Telephone & Telegraph Co.
	SMITH ELECTRIC CO	The Pacific Telephone & Telegraph Co.
1943	Smith T Harold Blanche Melec equip	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	GRAND AVE ELECTRIC & RADIO REPAIR SERVICE	Pacific Telephone
	SMITH ELECTRIC CO	Pacific Telephone
1933	MAGRI ANGELO (VIOLA) FRUITS	R. L. Polk & Co.

### 3342 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	ANNA ISHIDA	Cole Information
2010	BEHIDA DOLIC	Cole Information
2006	CAMPBELL Prtednl	Haines Company, Inc.
	JONES Janel	Haines Company, Inc.
	SANTANA Gerald	Haines Company, Inc.
2005	PRISCILLA CAMPBELL	Cole Information
	JESSICA PLAIR	Cole Information
2000	2 MARCUS JEREMY	Pacific Bell
	4 CAMPBELL PRISCILLA	Pacific Bell
	VOULA GOUGOUSIS	Cole Information
	JEREMY MARCUS	Cole Information
	P CAMPBELL	Cole Information
1996	1 JUN KI SUNG	PACIFIC BELL DIRECTORY
	2 MARCUS JEREMY	PACIFIC BELL DIRECTORY
1995	VONVACANO, MARCELA	Cole Information
	JUN, KI S	Cole Information
	REISCH, GEOFF	Cole Information
1992	1 JUN KI SUNG	PACIFIC BELL DIRECTORY
	2 LASKIN DAVID B	PACIFIC BELL DIRECTORY
	4 CHUN ANN	PACIFIC BELL DIRECTORY
	CHUN, ANN	Cole Information
	JUN, KI S	Cole Information
1991	Brow n Lee	PACIFIC BELL WHITE PAGES
	Chun Ann	PACIFIC BELL WHITE PAGES
	Chun Barbara	PACIFIC BELL WHITE PAGES
	Jun Ki Sung	PACIFIC BELL WHITE PAGES
1986	Aron Stephen	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Aronce Irma	PACIFIC BELL WHITE PAGES
	Commins David & Nancy	PACIFIC BELL WHITE PAGES
	Polkmann Joan	PACIFIC BELL WHITE PAGES
	Green A	PACIFIC BELL WHITE PAGES
	Merchant John J	PACIFIC BELL WHITE PAGES
	Merchant John W	PACIFIC BELL WHITE PAGES
1980	Mock Bing	Pacific Telephone
1970	BRESCHI KAREN	Pacific Telephone Directory
	HERESNIAK K	Pacific Telephone Directory
	LOVETT SHERRIE	Pacific Telephone Directory
	RITTERBAND E	Pacific Telephone Directory
	STONE JUANITA PEARL	Pacific Telephone Directory
1967	APARTMENTS	R. L. Polk Co.
	KEALY P F	R. L. Polk Co.
	RITTERBAND NORBERT	R. L. Polk Co.
	HUTCHINS O W	R. L. Polk Co.
1962	Kealy Patrick F	Pacific Telephone
	Miller Josephine	Pacific Telephone
	Ritterband Norbert	Pacific Telephone
1955	CAYA EARL	The Pacific Telephone & Telegraph Co.
	RISSER R MRS	The Pacific Telephone & Telegraph Co.
	RITTERBAND NORBERT	The Pacific Telephone & Telegraph Co.
1950	ARMSTRONG A E R	The Pacific Telephone & Telegraph Co.
	JACKSON C B R	The Pacific Telephone & Telegraph Co.
	THOMPSON J W R	The Pacific Telephone & Telegraph Co.
1945	CHILDERS H C R	The Pacific Telephone & Telegraph Co.
1943	Bauer Wm C Louise A h	R. L. Polk & Co.
	Chapman C R h	R. L. Polk & Co.
	Foster J Clifton h	R. L. Polk & Co.
	Pendleton Cyril r	R. L. Polk & Co.
	Reif Vincent G photog J E Gatchell r	R. L. Polk & Co.
1938	BUTCHER SUSIE R	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	KROLL RALPH R	Pacific Telephone
1933	BUNKER MINNIE L MRS CHIROPRACTOR	R. L. Polk & Co.
	HOLUB LEO (ELLA) SLSMN H	R. L. Polk & Co.
	HOLUB LYDIA L MRS BR MGR HAGSTROM S FOOD STORES R	R. L. Polk & Co.

### 3343 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1995	OCCUPANT UNKNOWNN	Cole Information
1991	Colter Avery Ray	PACIFIC BELL WHITE PAGES
	Colter Avery Ray	PACIFIC BELL WHITE PAGES
	Colter Gw endolyn	PACIFIC BELL WHITE PAGES
	Colter Sean	PACIFIC BELL WHITE PAGES
1986	I Carreker Barbara Blue	PACIFIC BELL WHITE PAGES
	Carrell Collin	PACIFIC BELL WHITE PAGES
	Schiele Jonathan H	PACIFIC BELL WHITE PAGES
1980	Hunt D B	Pacific Telephone
1975	HUNT D B	Pacific Telephone
	PITSEN SARGER S	Pacific Telephone
1970	MARINELL LAUREL	Pacific Telephone Directory
	MAY CHAS	Pacific Telephone Directory
	REISINGER RITA	Pacific Telephone Directory
1943	Bentley Carol emp MCMCo r	R. L. Polk & Co.
	JOHNSON Roy mech r	R. L. Polk & Co.
	JOHNSTON Geraldine I tel opr r	R. L. Polk & Co.
	Justi Russell Edith USA r	R. L. Polk & Co.

### 3344 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	KAREN'S SALON	EDR Digital Archive
2017	KARENS SALON	Cole Information
2010	PALACE NAILS	Cole Information
2006	PALACE NAILS	Haines Company, Inc.
2005	PALACE NAILS	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1996	IT S YOUR SECRET	PACIFIC BELL DIRECTORY
1995	COLLECTABLE DESIGNS	Cole Information
1992	COLLECTABLE DESIGNS	PACIFIC BELL DIRECTORY
	COLLECTABLE DESIGNS	Cole Information
1991	Olde Years Antiques The	PACIFIC BELL WHITE PAGES
1986	Olde Years Antiques The	PACIFIC BELL WHITE PAGES
1980	The Olde Years Antiques	Pacific Telephone
1975	NINA DRAPERY SERVICE	Pacific Telephone
1970	NINA DRAPERY SERVICE	Pacific Telephone Directory
1967	NINA & OLYMPIA DRAPERIES	R. L. Polk Co.
1962	Leon Music Co	Pacific Telephone
1955	PETE S HOBBY SHOP	The Pacific Telephone & Telegraph Co.
1945	GRAND FLOWER SHOP THE	The Pacific Telephone & Telegraph Co.

### 3345 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	JCRS	EDR Digital Archive
	SAUNDERS DANIELLE	EDR Digital Archive
	MISS SAIGON	EDR Digital Archive
2017	JCRS JEWELRY CLAIMS REPLACEMENT SERV	Cole Information
	FUNIVERSAL TRAVEL CORP	Cole Information
	MISS SAIGON VIETNAMESE RESTAURANT	Cole Information
2014	MISS SAIGA ON VIETNAMESE RESTAURANT	Cole Information
2010	MISS SAIGON VIETNAMESE RSTRNT	Cole Information
2006	FUNIVERSAL	Haines Company, Inc.
	TRAVEL CORP	Haines Company, Inc.
	MISS SAIGON	Haines Company, Inc.
	VIETNAMESE	Haines Company, Inc.
	RSTRNT	Haines Company, Inc.
2005	MISS SAIGON VIETNAMESE RESTAURANT	Cole Information
	JASMINE INFATUATION	Cole Information
	PSYCHCOMP MEDICAL ASSOCIATES	Cole Information
	PRUDENTIAL FINANCIAL	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	JCRS JEWELRY UNDERWRITING & CL	Cole Information
2000	STIR-FRY SEMINARS & CONSULTING	Pacific Bell
	MISS SAIGON VIETNAMESE RESTAURANT	Pacific Bell
	GOLDMACHER DONALD MD	Pacific Bell
	2 BAY AREA APPRAISALS	Pacific Bell
	APPRAISALS	Cole Information
	MISS SAIGON VIETNAMESE RESTAURANT	Cole Information
	STIR-FRY SEMINARS & CONSULTING	Cole Information
1996	PRUDENTIAL INSURANCE	PACIFIC BELL DIRECTORY
	THE FISH PLACE	PACIFIC BELL DIRECTORY
1980	Carreker Barbara Blue	Pacific Telephone
	Treasure Shoppe	Pacific Telephone
1967	MILLER HAROLD P GLI 6083	R. L. Polk Co.
1962	Miller Harold P	Pacific Telephone
1955	FIEBERLING J P R	The Pacific Telephone & Telegraph Co.
	GATES HENRIETTA	The Pacific Telephone & Telegraph Co.
1950	BELL S CLEANING & LAUNDRY	The Pacific Telephone & Telegraph Co.
	COOK M R	The Pacific Telephone & Telegraph Co.
	NUTTALL E B MRS R	The Pacific Telephone & Telegraph Co.
1945	NUTTALL E B MRS R	The Pacific Telephone & Telegraph Co.
1943	ALLEN Minnie E r	R. L. Polk & Co.
	Dietrich Elaine checker r	R. L. Polk & Co.
	Nuttall Evire B w id John h	R. L. Polk & Co.
	Parrish Herschel O Faith steel w kr r	R. L. Polk & Co.
	STEWART Dorothy tel opr r	R. L. Polk & Co.
	STEWART Edith tel opr r	R. L. Polk & Co.
	Tresize Kendal M r	R. L. Polk & Co.
1938	YE OLDE ENGLISH BEAUTY HOUSE	Pacific Telephone
1933	KITCHENER LURA A MRS BEAUTY SHOP	R. L. Polk & Co.
	KITCHENER SAML A (LURA) R	R. L. Polk & Co.

## FINDINGS

### 3346 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	ALICE MCCULLOCH	Cole Information
2014	ALICE MCCULLOCH	Cole Information
2010	PAULINA LOPEZ	Cole Information
2006	MARTIN A	Haines Company, Inc.
2005	A MARTIN	Cole Information
1992	BALDWIN, M	Cole Information
1970	HENDERSON JOHN M CO DISTRS	Pacific Telephone Directory
	SUTTMAN VIRGIL G HENDERSON JOHN M CO	Pacific Telephone Directory
1967	VACANT	R. L. Polk Co.

### 3349 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	BRITE CLEANERS & SHIRT LAUNDRY	EDR Digital Archive
2017	BRITE CLEANERS & SHIRT LAUNDRY	Cole Information
2014	BRITE CLEANERS & SHIRT LAUNDRY	Cole Information
2010	BRITE CLEANERS & SHIRT LAUNDRY	Cole Information
2006	BRITE CLEANERS AND SHIRT LNDRY	Haines Company, Inc. Haines Company, Inc.
2000	BRITE CLEANERS AND SHIRT LAUNDRY BRITE CLEANERS AND SHIRT LAUNDRY	Pacific Bell Cole Information
1996	BRITE CLEANERS AND SHIRT LAUNDRY	PACIFIC BELL DIRECTORY
1995	BRITE CLEANERS & SHIRT LAUNDRY	Cole Information
1992	BRITE CLEANERS AND SHIRT LAUNDRY BRITE CLEANERS&LNDY	PACIFIC BELL DIRECTORY Cole Information
1991	Brite Cleaners And Shirt Laundry	PACIFIC BELL WHITE PAGES
1986	HILL GARY G & CO ins brkr Hill Gayre Hili Geo C III	PACIFIC BELL WHITE PAGES PACIFIC BELL WHITE PAGES PACIFIC BELL WHITE PAGES
1980	HILL GARY G & CO ins brkr	Pacific Telephone
1970	HILL GARY G & CO INS BRKR	Pacific Telephone Directory
1967	PETERSON CONSTRUCTION CORP	R. L. Polk Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	GENL CONTRS GL	R. L. Polk Co.
1962	Ow en Roy F Co adjstr	Pacific Telephone
1933	CEBOLLERO BRIDGETTE MRS CLO CLNR	R. L. Polk & Co.

### 3350 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	PANORAMA FRAMING INC	EDR Digital Archive
2005	WEIGHT WATCHERS INC	Cole Information
1995	KIMS GRAND AVENUE PRODUCE	Cole Information
1992	NEW GRAND PRODUCE MARKET	PACIFIC BELL DIRECTORY
	NEW GRAND PRDCE MKT	Cole Information
1986	Waldens Pond bks & prints	PACIFIC BELL WHITE PAGES
	Walder E	PACIFIC BELL WHITE PAGES
	Waldman A	PACIFIC BELL WHITE PAGES
1980	Waldens Pond bks & prints	Pacific Telephone
1975	FABRIANO FABRICS	Pacific Telephone
1970	HOME UPHOLSTERING & MATERIALS	Pacific Telephone Directory
1967	HOME UPHOLSTERING	R. L. Polk Co.
1962	Baldw ins Restaurant	Pacific Telephone
1955	GRINAKERS RESTAURANT	The Pacific Telephone & Telegraph Co.
1950	GRINAKERS RESTAURANT	The Pacific Telephone & Telegraph Co.
1945	GRINAKER S RESTAURANT & PASTRY SHOP	The Pacific Telephone & Telegraph Co.
1943	Grinak ers Restaurant John L and Ingeborg Grinaker	R. L. Polk & Co.
1938	GRINAKER S RESTAURANT & PASTRY SHOP	Pacific Telephone
1933	SAFEWAY STORES INC LEW COOK DIV MGR JAMES TAYLOR DIST MGR DAVE KIMMEL DIST	R. L. Polk & Co.

### 3351 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	DANIEL JAUJOU	EDR Digital Archive
	STANLEY FILLER	EDR Digital Archive
	SCOTT WAGNER	EDR Digital Archive

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	JAUJOU STUDIO	Cole Information
2014	JAUJOU STUDIO	Cole Information
2010	JAUJOU STUDIO	Cole Information
2006	JAUJOU STUDIO	Haines Company, Inc.
2000	PILLERFAX	Pacific Bell
	PILLER STANLEY M & ASSOCIATES	Pacific Bell
	PILLER STANLEY M & ASSOCIATES	Cole Information
1996	PILLER STANLEY M & ASSOCIATES	PACIFIC BELL DIRECTORY
1995	STANLEY M PILLER & ASSOC	Cole Information
1992	PILLER STANLEY M & ASSOCIATES	PACIFIC BELL DIRECTORY
	PILLER STANLEY & ASOC	Cole Information
1986	O Jack Taylors Stamp Shop	PACIFIC BELL WHITE PAGES
	Piller Stanley M & Associates	PACIFIC BELL WHITE PAGES
	Pillers Jamie	PACIFIC BELL WHITE PAGES
1980	O Jack Taylors Stamp Shop	Pacific Telephone
	Piller Stanley M & Associates	Pacific Telephone
	Taylors Stamp Shop O Jack	Pacific Telephone
1975	GRAND LAKE BICYCLE SHOP	Pacific Telephone
1970	RICHARD S FLOWERS	Pacific Telephone Directory
1967	CGLENVIEW LAUNDRY LNDRY	R. L. Polk Co.
1962	Glen View Laundry	Pacific Telephone
1955	GLEN VIEW LAUNDRY	The Pacific Telephone & Telegraph Co.
1945	ARNELL BEAUTY SHOP	The Pacific Telephone & Telegraph Co.
	ARNELL NELLE L ARNELL BEAUTY SHOP	The Pacific Telephone & Telegraph Co.
1943	Ace Upholserly Co Martin and Mrs Hazel Steppeler	R. L. Polk & Co.
1938	ACE UPHOLSTERING CO	Pacific Telephone

### 3352 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	MICHAEL MISCHER CHOCOLATES	EDR Digital Archive
2017	MICHAEL MISCHER CHOCOLATES	Cole Information
2014	MICHAEL MISCHER CHOCOLATES	Cole Information
2010	MICHAEL MISCHER CHOCOLATES	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	MICHAEL MISCHER	Haines Company, Inc.
	CHOCOLATES	Haines Company, Inc.
2005	LANDAMERICA FINANCIAL GROUP	Cole Information
	MICHAEL MISCHER CHOCOLATES	Cole Information
2000	COMMONWEALTH LAND TITLE COMPANY	Pacific Bell
	COMMONWEALTH LAND TITLE COMPANY	Cole Information

### 3353 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	LYNN & LUS ESCAPADE CAFE	EDR Digital Archive
2017	LYNN & LUS ESCAPADE CAFE	Cole Information
2014	LYNN & LUS ESCAPADE CAFE	Cole Information
2010	LYNN & LUS ESCAPADE CAFE	Cole Information
2006	LYNNS&LUS	Haines Company, Inc.
	ESCAPADE CAFE	Haines Company, Inc.
2005	LYNN & LUS ESCAPADE CAFE	Cole Information
2000	LYNN & LU S ESCAPADE CAFE	Pacific Bell
	LYNN & LUS ESCAPADE CAFE	Cole Information
1996	LYNN & LU S ESCAPADE CAFE	PACIFIC BELL DIRECTORY
1995	LYNN & LOUS CAFE	Cole Information
1992	LYNN & LOU S CAFE	PACIFIC BELL DIRECTORY
	ESCAPADE CAFE THE	Cole Information
1991	Escapade Cafe The	PACIFIC BELL WHITE PAGES
	Lynn & Lous Cafe	PACIFIC BELL WHITE PAGES
1986	Escapade Cafe The	PACIFIC BELL WHITE PAGES
	Escaparro Phillip E	PACIFIC BELL WHITE PAGES
	Lynn & Lous Cafe	PACIFIC BELL WHITE PAGES
1980	Meggyfa Hungarian Restaurant	Pacific Telephone
1970	FAYE S DRESS MAKING & ALTERATIONS	Pacific Telephone Directory
1967	ALEXANDRIA COSTUME DESIGNING	R. L. Polk Co.
	DRESSMKR	R. L. Polk Co.
1962	La Chic drsmkng	Pacific Telephone
1955	LA CHIC DRSMKNG	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	GERALDINE S HEALTH HARBOR	The Pacific Telephone & Telegraph Co.
1933	RUBENSTEIN MAURICE (ESTHER) BEAUTY SHOP	R. L. Polk & Co.

### 3354 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ORDINAIRE	EDR Digital Archive
	ADT ABOUT ALARM ADT	EDR Digital Archive
2017	ADT SECURITY SERVICES	Cole Information
2006	WELLS FARGO	Haines Company, Inc.
	HOMEMORTGAGE	Haines Company, Inc.
2000	NORWEST MORTGAGE	Pacific Bell
	NORWEST MORTGAGE	Cole Information
1995	THOMS LIQUOR STORE	Cole Information
1992	THOM S LIQUOR STORE	PACIFIC BELL DIRECTORY
	THOMS LIQUOR STORE	Cole Information
1991	Thoms Liquor Store	PACIFIC BELL WHITE PAGES
1986	Liquor Store The	PACIFIC BELL WHITE PAGES
1980	PALMARS LIQUOR	Pacific Telephone
1975	GRAND AVE LIQUOR STORE	Pacific Telephone
1970	GRAND AVE LIQUOR STORE	Pacific Telephone Directory
1967	GRAND AVENUE LIQUORS	R. L. Polk Co.
1962	Grand Avenue Liquor Store	Pacific Telephone
1955	GRAND AVENUE LIQUOR STORE	The Pacific Telephone & Telegraph Co.
1945	BLACK & WHITE LIQUOR STORE	The Pacific Telephone & Telegraph Co.
1943	MICHAEL J D Martha J liquors	R. L. Polk & Co.
1938	CHRISTENSEN S R PIEDMONT REALTY CO	Pacific Telephone
	DUNCAN C J PIEDMONT REALTY CO	Pacific Telephone
	PIEDMONT REALTY CO	Pacific Telephone
1933	FARWELL ALBT W (GERTRUDE) NOVELTIES	R. L. Polk & Co.

### 3356 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	NORTHERN CA COIN EXCHANGE	EDR Digital Archive

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	NORTHERN CALIFORNIA COIN EXCHANGE	Cole Information
2014	NORTHERN CALIFORNIA COIN EXCHANGE	Cole Information
2010	NORTHERN CALIFORNIA COIN EXCH	Cole Information
2006	NORTHN CA COIN 510D 39 9397 EXCHANGE	Haines Company, Inc. Haines Company, Inc.
2005	NORTHERN CALIFORNIA COIN EXCHANGE	Cole Information
2000	NORTHERN CALIFORNIA COIN EXCHANGE	Pacific Bell
	NORTHERN CALIFORNIA COIN EXCHANGE	Cole Information
1996	NORTHERN CALIFORNIA COIN EXCHANGE	PACIFIC BELL DIRECTORY
1995	NORTHERN CALIFORNIA COIN EXCH OCCUPANT UNKNOWNN	Cole Information Cole Information
1992	NORTHERN CALIFORNIA COIN EXCHANGE NORTHN CA COIN	PACIFIC BELL DIRECTORY Cole Information

### 3360 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	DOMINO'S PROACTION ATHLETICS	EDR Digital Archive EDR Digital Archive
2017	PROACTION ATHLETICS DOMINOS PIZZA	Cole Information Cole Information
2014	PROACTION ATHLETICS DOMINOS PIZZA	Cole Information Cole Information
2010	DOMINOS PIZZA	Cole Information
2006	DOMINOS PIZZA UNIQUE DENTAL STUDIO	Haines Company, Inc. Haines Company, Inc. Haines Company, Inc.
2005	DOMINOS PIZZA	Cole Information
2000	UNIQUE DENTAL STUDIO DOMINO S PIZZA DOMINOS PIZZA UNIQUE DENTAL STUDIO	Pacific Bell Pacific Bell Cole Information Cole Information
1996	UNIQUE DENTAL STUDIO DOMINO S PIZZA	PACIFIC BELL DIRECTORY PACIFIC BELL DIRECTORY

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1995	UNIQUE DENTAL STUDIO	Cole Information
	DOMINOS PIZZA	Cole Information
1992	UNIQUE DENTAL STUDIO	PACIFIC BELL DIRECTORY
	DOMINO S PIZZA	PACIFIC BELL DIRECTORY
	UNIQUE DENTAL STDO	Cole Information
	DOMINOS PIZZA	Cole Information
1986	Mountain Mikes Pzza	PACIFIC BELL WHITE PAGES
	Unique Dental Studio	PACIFIC BELL WHITE PAGES
1980	PIZZA HUT	Pacific Telephone
	Unique Dental Studio	Pacific Telephone
1970	CHICKERING CRIST FRITSCHI & ROWE INS	Pacific Telephone Directory
	CHICKERING CRIST FRITSCHI & ROWE INS	Pacific Telephone Directory
	CHICKERING ROGER CHICKERING CRIST FRITSCHI & ROWE INS	Pacific Telephone Directory
	CHICKERING ROGER CHICKERING CRIST FRITSCHI & ROWE INS	Pacific Telephone Directory
	CRIST GEORGE H CHICKERING CRIST FRITSCHI & ROWE INS	Pacific Telephone Directory
	CRIST GEORGE H CHICKERING CRIST FRITSCHI & ROWE INS	Pacific Telephone Directory
	FRITSCHI JOHN R CHICKERING CRIST FRITSCHI & ROWE INS	Pacific Telephone Directory
	FRITSCHI JOHN R CHICKERING CRIST FRITSCHI & ROWE INS	Pacific Telephone Directory
	KEY DATA SERVICE	Pacific Telephone Directory
	ROWE EDW H CHICKERING CRIST FRITSCHI & ROWE INS	Pacific Telephone Directory
	ROWE EDW H CHICKERING CRIST FRITSCHI & ROWE INS	Pacific Telephone Directory
1967	STATE COMPENSATION INSURANCE	R. L. Polk Co.
	CRIST & FRITSCHI INSURANCE	R. L. Polk Co.
1962	COMPENSATION INSURANCE FUND	Pacific Telephone
	Compensation Insurance Fund State	Pacific Telephone
	Crist & Fritschi ins	Pacific Telephone
	Fritschi John R Crist & Fritschi ins	Pacific Telephone
	State Compensation Insurance Fund	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	VIV S HOT DOG STAND	The Pacific Telephone & Telegraph Co.
1933	PARKER HERMON C (MARGT) SHOE SHINER	R. L. Polk & Co.
	PIRRO JOHN (ANNA) RESTR	R. L. Polk & Co.

### 3363 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	COFFEE MILL	EDR Digital Archive
2017	THE COFFEE MILL	Cole Information
2014	COFFEE MILL THE	Cole Information
2010	COFFEE MILL	Cole Information
2006	COFFEE MILLS	Haines Company, Inc.
	BAKERY THE	Haines Company, Inc.
2005	COFFEE MILL & BAKERY THE	Cole Information
2000	COFFEE MILL & BAKERY THE	Pacific Bell
	COFFEE MILL & BAKERY THE	Cole Information
1996	COFFEE MILL & BAKERY THE	PACIFIC BELL DIRECTORY
1995	COFFEE MILL	Cole Information
1992	COFFEE MILL THE	PACIFIC BELL DIRECTORY
	COFFEE MILL THE	Cole Information
1991	Coffee Mill The	PACIFIC BELL WHITE PAGES
	Coffee Plaza Center	PACIFIC BELL WHITE PAGES
	Coffee Price G	PACIFIC BELL WHITE PAGES
1986	Coffee Mill The	PACIFIC BELL WHITE PAGES
1980	Coffee Mill The	Pacific Telephone
1975	COFFEE MILL THE	Pacific Telephone
1970	GRAND AVE CLEANERS	Pacific Telephone Directory
1967	EAST BAY TYPEWRITER CO REPPS	R. L. Polk Co.
1962	East Bay Typewriter Co	Pacific Telephone
1955	AMER MUTUAL LIFE INSURANCE CO	The Pacific Telephone & Telegraph Co.
	NELSON REED C CLU GEN AGT	The Pacific Telephone & Telegraph Co.
	SCHULTZ LEON H RALPH W YORK AGT	The Pacific Telephone & Telegraph Co.
	YORK PHIL AGT	The Pacific Telephone & Telegraph Co.
	YORK RALPH W AGT	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	DICKSON R J R	The Pacific Telephone & Telegraph Co.
1945	ESTERLINE MELVIN R	The Pacific Telephone & Telegraph Co.
1943	Dell Raymond V real est	R. L. Polk & Co.
	Matson Gordon H Pauline slsmn M F P Co r	R. L. Polk & Co.
	Turpin Robt L filler MFPCo r	R. L. Polk & Co.
1938	DELL R V REALTOR	Pacific Telephone
	MACGOWAN FRANK C INTERIOR DECORATOR	Pacific Telephone
1933	DELL ROBT V REAL EST	R. L. Polk & Co.

### 3374 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	GRAND 76 AUTO CARE	EDR Digital Archive
2017	76	Cole Information
2014	GRAND 76 AUTO CARE	Cole Information
2010	GRAND AVENUE 76	Cole Information
2006	GRAND AVE	Haines Company, Inc.
2005	3374 GRAND AVENUE GAS STATION	Cole Information
	GRAND 76	Cole Information
	RTH & ASSOCS INC	Cole Information
2000	DHILLON S GRAND AVE UNOCAL	Pacific Bell
	DHILLON S GRAND AVE UNOCAL	Pacific Bell
	DHILLON S GRAND AVE UNOCAL	Pacific Bell
	DHILLONS GRAND AVE UNOCAL	Cole Information
1996	DHILLON S GRAND AVE UNOCAL	PACIFIC BELL DIRECTORY
	DHILLON S GRAND AVE UNOCAL	PACIFIC BELL DIRECTORY
	DHILLON S GRAND AVE UNOCAL	PACIFIC BELL DIRECTORY
1995	LARRYS UNION SVC STATION	Cole Information
1992	LARRY S UNION SERVICE STN	PACIFIC BELL DIRECTORY
	LARRY S UNION SERVICE STN	PACIFIC BELL DIRECTORY
	LARRYS UNION SV STA	Cole Information
1991	Larrys Union Service Stn	PACIFIC BELL WHITE PAGES
	LARRYS UN ION S E RVICE S TN	PACIFIC BELL WHITE PAGES
1986	Larrys Union Service Stn	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	LARRYS UNION SERVICE STN	PACIFIC BELL WHITE PAGES
1980	Larrys Union Service Stn	Pacific Telephone
	LARRYS UNION SERVICE STN	Pacific Telephone
1975	LARRY S UNION SERVICE STN	Pacific Telephone
1970	BILL S UNION SERVICE STN	Pacific Telephone Directory
1967	BIG THREE SERVICE GAS STA	R. L. Polk Co.
	SMITH WM A	R. L. Polk Co.
1955	DICK FREDERICK UNION OIL SERV STN NO 3443	The Pacific Telephone & Telegraph Co.
	UNION OIL SERVICE STATION NO 3443	The Pacific Telephone & Telegraph Co.

### 3401 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	PRIDE CLEANERS	EDR Digital Archive
2017	PRIDE CLEANERS	Cole Information
2014	PRIDE CLEANERS	Cole Information
2010	PRIDE CLEANERS	Cole Information
2006	PRIDE CLEANERS	Haines Company, Inc.
2005	PRIDE CLEANERS	Cole Information
2000	PRIDE CLEANERS	Pacific Bell
	PRIDE CLEANERS	Cole Information
1996	PRIDE CLEANERS	PACIFIC BELL DIRECTORY
1995	PRIDE CLEANERS	Cole Information
1992	PRIDE CLEANERS	PACIFIC BELL DIRECTORY
	PRIDE CLEANERS	Cole Information
1991	Pride Cleaners	PACIFIC BELL WHITE PAGES
1986	I Pride Cleaners	PACIFIC BELL WHITE PAGES
1980	Pride Cleaners	Pacific Telephone
1970	PRIDE CLEANERS	Pacific Telephone Directory
1967	PRTDE CLEANERS CLNS	R. L. Polk Co.
1962	Pride Cleaners	Pacific Telephone
1943	Lusk Gladys clk r	R. L. Polk & Co.
	Weintrob Abe Dora clo clnr	R. L. Polk & Co.

## FINDINGS

### 3405 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	MABLE AMBEAU	Cole Information
2010	MABLE AMBEAU	Cole Information
1955	IDEAL CLEANERS	The Pacific Telephone & Telegraph Co.
1950	IDEAL CLEANERS	The Pacific Telephone & Telegraph Co.
1945	DOMESTIC CLEANERS	The Pacific Telephone & Telegraph Co.
	IDEAL CLEANERS	The Pacific Telephone & Telegraph Co.
1933	WEINTROB ABR (DORA) CLO CLNR	R. L. Polk & Co.

### 3409 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	VALERIE VEZA INTEGRATIVE THRPY	EDR Digital Archive
	RIVERSTONE CHIROPRACTIC	EDR Digital Archive
2017	RIVERSTONE CHIRPORACTIC	Cole Information
2014	MCKEE PHILIP MASSAGE THERAPY	Cole Information
	RIVERSTONE CHIRPORACTIC	Cole Information
2010	ED SUPPORT SVC	Cole Information
	MC KEE PHIL	Cole Information
	MERIT REALTY & INVESTMENT	Cole Information
2006	ADVANCED	Haines Company, Inc.
	THERAPEUTIC BODY	Haines Company, Inc.
	MCKEE PHIL	Haines Company, Inc.
	MERIT REALTY	Haines Company, Inc.
	INVESTMENT	Haines Company, Inc.
2005	MAC OMBER CONSTRUCTION	Cole Information
	MCKEE PHIL	Cole Information
2000	WOOLF WM H JR CLU & ASSOCIATES- BLUE	Pacific Bell
	7 TEX-TONE MUSIC	Pacific Bell
	9 MCKEE PHIL	Pacific Bell
	WOOLF WILLIAM H JR CLU & ASSOCIATES BLUE SHLD AUTHORIZ	Cole Information
	TEX-TONE MUSIC	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1996	WOOLF WM H JR CLU & ASSOCIATES-BLUE	PACIFIC BELL DIRECTORY
	1 LETT TAMARA CMT	PACIFIC BELL DIRECTORY
	5 PETERS CHRIS LCSW	PACIFIC BELL DIRECTORY
	9 COOPERSMITH PAUL	PACIFIC BELL DIRECTORY
1995	INVESTCO	Cole Information
	NATIONAL TRAVELERS LIFE CO	Cole Information
	LEONARD O SMITH	Cole Information
	WILLIAM H WOOLF JR & ASSOC	Cole Information
	P COOPERSMITH ACCOUNTING CORP	Cole Information
1992	NATIONAL TRAVELERS LIFE CO	PACIFIC BELL DIRECTORY
	WU JOHN & CO	PACIFIC BELL DIRECTORY
	SMITH LEONARD O	PACIFIC BELL DIRECTORY
	1 INVESTCO	PACIFIC BELL DIRECTORY
	9 COOPERSMITH PAUL	PACIFIC BELL DIRECTORY
	INVESTCO	Cole Information
	NATL TRAVELERS LIFE	Cole Information
	COOPERSMITH PAUL	Cole Information
1991	BLUE SHIELD AUTHORIZED SALES AGENTS WOLF WM H JR CLU & ASSOCIATES	PACIFIC BELL WHITE PAGES
	Blue Shield Authorized Sales Representatives Lee E G & Co ins Group Plans	PACIFIC BELL WHITE PAGES
	Blue Shield New Enrollment	PACIFIC BELL WHITE PAGES
	Coopersmith Paul pub acct	PACIFIC BELL WHITE PAGES
	COOPERSS DRIVING SCHOOL	PACIFIC BELL WHITE PAGES
	National Travelers Life Co	PACIFIC BELL WHITE PAGES
	Smith Leonard O	PACIFIC BELL WHITE PAGES
	Wolf Wm H Jr CLU & Associates National Travelers Life Co	PACIFIC BELL WHITE PAGES
	Woolfanthony L	PACIFIC BELL WHITE PAGES
	Woolfe Kenneth	PACIFIC BELL WHITE PAGES
	Woolfolk Children	PACIFIC BELL WHITE PAGES
	Woolfolk S	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Blackstone Daniel L	PACIFIC BELL WHITE PAGES
	Coopersmith Paul pubacct	PACIFIC BELL WHITE PAGES
	Investco rl est investmts	PACIFIC BELL WHITE PAGES
	National Travelers Life Co	PACIFIC BELL WHITE PAGES
	Woolf Wm H Jr CLU 8& Associates National Travelers Life Co	PACIFIC BELL WHITE PAGES
	Woolfe Kenneth	PACIFIC BELL WHITE PAGES
	YIN GE ORGE IN S URAN CE AGE N CY	PACIFIC BELL WHITE PAGES
1980	Blackstone Daniel L	Pacific Telephone
	Blackstone Daniel L	Pacific Telephone
	George Yin Insurance Agency	Pacific Telephone
	National Travelers Life Co	Pacific Telephone
	Torsiello Peter M	Pacific Telephone
	Woolf Wm H Jr CLU & Associates National Travelers Life Co	Pacific Telephone
	f YIN GEORGE ins	Pacific Telephone
1975	NATIONAL TRAVELERS LIFE CO	Pacific Telephone
1970	BOBET J E JR RL EST	Pacific Telephone Directory
	MURPHY ARCHIE E DR PODTRST	Pacific Telephone Directory
	NATIONAL TRAVELERS LIFE CO	Pacific Telephone Directory
	WOOLF WM H JR CLU & ASSOCIATES NATL TRAVELERS LIFE CO	Pacific Telephone Directory
1967	MURPHY ARCHIE E PODIATRIST TE	R. L. Polk Co.
	NATIONAL TRAVELERS LIFE	R. L. Polk Co.
	INSURANCE CO	R. L. Polk Co.
1962	Murphy Archie E Dr podiatrist	Pacific Telephone
	Stone Gate China Co	Pacific Telephone
	Stonegate China Co	Pacific Telephone
	Office	Pacific Telephone
1955	DICK VANCE STUDIO DICK VANCE POPULAR VOCAL STUDIO	The Pacific Telephone & Telegraph Co.
	HARMONY UNLIMITED	The Pacific Telephone & Telegraph Co.
	MURPHY ARCHIE E CHIRPDST	The Pacific Telephone & Telegraph Co.
	VANCE DICK POPULAR VOCAL STUDIO	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	DICK VANCE STUDIO DICK VANCE POPULAR VOCAL STUDIO	The Pacific Telephone & Telegraph Co.
	MURPHY ARCHIE E CHIRPDST	The Pacific Telephone & Telegraph Co.
	ROBERTS THOS L DNTST	The Pacific Telephone & Telegraph Co.
	VANCE DICK POPULAR VOCAL STUDIO	The Pacific Telephone & Telegraph Co.
1945	ROBIRDS LYDIA R	The Pacific Telephone & Telegraph Co.
1943	Dee John Sylvia h	R. L. Polk & Co.
	KELLEY Hazel Mrs beauty shop	R. L. Polk & Co.
	KELLEY Knute Hazel brkmn h	R. L. Polk & Co.
	Lew is Building	R. L. Polk & Co.
	Millard Arth D Belle baker h	R. L. Polk & Co.
1933	BAKER A WOODLY (MARY M) DENTIST	R. L. Polk & Co.
	GUTHRIDGE RALPH W DENTIST	R. L. Polk & Co.

### 3411 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	L & M LAUNDERETTE	EDR Digital Archive
2017	L & M LAUNDERETTE	Cole Information
2014	L & M LAUNDERETTE	Cole Information
2010	L & M LAUNDRETTE	Cole Information
2006	LSM	Haines Company, Inc.
	LAUNDERETTE	Haines Company, Inc.
2005	L & M LAUNDERETTE	Cole Information
2000	L & M LAUNDERETTE	Pacific Bell
	L & M LAUNDERETTE	Cole Information
1995	L & M LAUNDERETTE	Cole Information
1992	L & M LAUNDERETTE	PACIFIC BELL DIRECTORY
	L&M LAUNDERETTE	Cole Information
1991	L & M Launderette	PACIFIC BELL WHITE PAGES
1980	L & M Launderette	Pacific Telephone
1967	SELF SERVICE LAUNDRY	R. L. Polk Co.
1955	KUSTOM LAUNDERIT	The Pacific Telephone & Telegraph Co.
1943	Souza Wm J Gertrude M gro	R. L. Polk & Co.
1933	PIHL JOS (MARIE H) GRO	R. L. Polk & Co.

## FINDINGS

### 3415 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	MILLENNIA CAFE	Cole Information
2010	KUNG PAO KITCHEN	Cole Information
2006	MILLENNIA CAFE	Haines Company, Inc.
	MILLENNIA CAFE	Haines Company, Inc.
2005	MILLENNIA CAFE	Cole Information
	KOWLOON GOURMAND	Cole Information
2000	KOWLOON CHINESE KITCHEN	Pacific Bell
	KOWLOON GOURMAND	Cole Information
1996	KOWLOON CHINESE KITCHEN	PACIFIC BELL DIRECTORY
1995	KOWLOON CHINESE KITCHEN	Cole Information
1992	KOWLOON CHINESE KITCHEN	PACIFIC BELL DIRECTORY
	CHINESE KITCHEN	Cole Information
1991	CHINESE KITCHEN KOW LOON	PACIFIC BELL WHITE PAGES
	KOW LOON CHINESE KITCHEN	PACIFIC BELL WHITE PAGES
1986	KOW LOON CHINESE KITCHEN	PACIFIC BELL WHITE PAGES
1980	CHINESE KITCHEN KOWLOON	Pacific Telephone
	KOWLOON CHINESE KITCHEN	Pacific Telephone
1975	CHINESE KITCHEN KOWLOON	Pacific Telephone
	KOWLOON CHINESE KITCHEN	Pacific Telephone
1970	CHINESE KITCHEN KOWLOON	Pacific Telephone Directory
	KOWLOON CHINESE KITCHEN	Pacific Telephone Directory
1967	KOW LOON CHINESE KITCHEN RESTR	R. L. Polk Co.
1962	Michael Distributing Co	Pacific Telephone
	Shanes Jew elers	Pacific Telephone

### 3417 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	SHOGUN JAPANESE SUSHI & GRILL	EDR Digital Archive
2010	PRIME SPOT	Cole Information
2006	MIKADO JAPANESE	Haines Company, Inc.
	Rest AURANT	Haines Company, Inc.
2005	MIKADO JAPANESE RESTAURANT	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	MIKADO JAPANESE RESTAURANT	Pacific Bell
	MIKADO JAPANESE RESTAURANT	Cole Information
1996	MIKADO JAPANESE RESTAURANT	PACIFIC BELL DIRECTORY
1995	MIKADO II JAPANESE RESTAURANT	Cole Information
1992	MIKADO H JAPANESE RESTAURANT	PACIFIC BELL DIRECTORY
	MIKADO 2 JPNSE REST	Cole Information
1986	Grand Central Aquarium	PACIFIC BELL WHITE PAGES
1980	Oakland Aquarium	Pacific Telephone
1970	LAND BROKERAGE INC	Pacific Telephone Directory
1967	OLD MILL COFFEE INC OF	R. L. Polk Co.
	NORTHERN CALIFORNIA ROASTERS	R. L. Polk Co.
1962	JONES MORTGAGE CO	Pacific Telephone
1955	BUILDERS CONTROL SERVICE OF NORTHERN CALIF INC	The Pacific Telephone & Telegraph Co.
	THRANE F W BLDR S CONTROL SERV OF NORTHERN CALIF INC	The Pacific Telephone & Telegraph Co.
1950	BUSINESS MEN S ASSURANCE CO OF AMERICA	The Pacific Telephone & Telegraph Co.
	GULICK C M BUSINESS MEN S ASSURANCE CO OF AMERICA	The Pacific Telephone & Telegraph Co.

### 3419 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	INVESTCO	EDR Digital Archive
2017	INVESTCO	Cole Information
	A & S SPA	Cole Information
2014	INVESTCO	Cole Information
	A & S SPA	Cole Information
	MARY FRASER	Cole Information
2010	INVESTCO	Cole Information
	JOHN WU & CO	Cole Information
	SABRE CONTROLS	Cole Information
2006	INVESTCO	Haines Company, Inc.
	SABRE CONTROLS	Haines Company, Inc.
2005	INVESTCO	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	WU JOHN CO	Cole Information
	SABRE CONTROLS INC	Cole Information
	ANNE WU	Cole Information
2000	203 INVESTCO	Pacific Bell
	203 WU JOHN & CO	Pacific Bell
	204 SABRE CONTROLS INC	Pacific Bell
	WU JOHN & COMPANY	Cole Information
	MIDWEST INSTRUMENTS	Cole Information
	INVESTCO	Cole Information
	WALLACE & TIERNAN DEALER SABRE CONTROLS	Cole Information
1996	203 INVEST CO	PACIFIC BELL DIRECTORY
	203 WU JOHN & CO	PACIFIC BELL DIRECTORY
	204 SABRE CONTROLS	PACIFIC BELL DIRECTORY
1995	WILLIAMS & CO	Cole Information
	SABRE CONTROLS	Cole Information
	SCOTT BOROWIAK TENNIS LESSONS	Cole Information
1992	BOROWIAK SCOTT TENNIS & GOLF TOURS	PACIFIC BELL DIRECTORY
	203 WILLIAMS & KILIAN	PACIFIC BELL DIRECTORY
	204 SABRE CONTROLS	PACIFIC BELL DIRECTORY
	U B I BUSINESS BRKR	Cole Information
	WALLACE&TIERNAN DLR	Cole Information
1991	Midw est Instruments	PACIFIC BELL WHITE PAGES
	Sabre Controls	PACIFIC BELL WHITE PAGES
	Sabree Nabeehah	PACIFIC BELL WHITE PAGES
	Sabree Silkie	PACIFIC BELL WHITE PAGES
	Sabry Zakariah I	PACIFIC BELL WHITE PAGES
1986	Horn David S CPA	PACIFIC BELL WHITE PAGES
	Kalman H S CPA	PACIFIC BELL WHITE PAGES
	Kalman J	PACIFIC BELL WHITE PAGES
	Kalman Jas E 6363 Christie Av EmvI	PACIFIC BELL WHITE PAGES
	MIDW E S T I N S TRUME N TS	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	RS L	PACIFIC BELL WHITE PAGES
	RS MCo	PACIFIC BELL WHITE PAGES
	RS S Medical Inc Glasrock Home Health Care	PACIFIC BELL WHITE PAGES
	Sabre Controls	PACIFIC BELL WHITE PAGES
	Wallace & Tiernan Dealer Sabre Controls	PACIFIC BELL WHITE PAGES
	Wallace Tim & MJ J	PACIFIC BELL WHITE PAGES
1980	Horn David S CPA	Pacific Telephone
	Kalman H S CPA	Pacific Telephone
	Kalman & Horn CPAs	Pacific Telephone
	Sabre Controls	Pacific Telephone
	Wallace & Tiernan Dealer Sabre Controls	Pacific Telephone
1975	KALMAN H S CPA	Pacific Telephone
	MEDICAL MEASUREMENTS	Pacific Telephone
1970	DEALEY RENTON & KELLY INC INS	Pacific Telephone Directory
	EDUCATIONAL ASSOCIATES	Pacific Telephone Directory
	KALMAN H S CPA	Pacific Telephone Directory
1967	DEALEY RENTON KELLY INC INS	R. L. Polk Co.
	KALMAN HERBERT S ACCT	R. L. Polk Co.
1962	Adams Ray S Engrns & Scientists of Calif	Pacific Telephone
	DEALEY GEORGE L & CO INC ins	Pacific Telephone
	Engineers & Scientists of Calif	Pacific Telephone
	Kalman H S CPA	Pacific Telephone
	Roberts Thos L dntst	Pacific Telephone
1955	AETNA INSURANCE CO	The Pacific Telephone & Telegraph Co.
	DEALEY GEORGE L & CO INC INS	The Pacific Telephone & Telegraph Co.
	GARRELTS ARTHUR W DDS	The Pacific Telephone & Telegraph Co.
1950	CROCKER H S CO INC CROCKER UNION DIVISION	The Pacific Telephone & Telegraph Co.
	CRACKER UNION SEE II S CROCKER CO INC	The Pacific Telephone & Telegraph Co.
	GREIG KENNETT A MD OFC	The Pacific Telephone & Telegraph Co.
	OAKLAND REALTY LOAN SERVICE	The Pacific Telephone & Telegraph Co.
	YCRK PHIL AST	The Pacific Telephone & Telegraph Co.

## FINDINGS

### 3421 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	TRACI NAIL SALON	EDR Digital Archive
2017	TRACIS NAILS	Cole Information
2014	TRACIS NAILS	Cole Information
2010	TRACIS NAILS	Cole Information
2006	TRACIS NAILS	Haines Company, Inc.
2000	TRACI S NAILS	Pacific Bell
	TRACIS NAILS	Cole Information
1996	RED ACCORDION THE	PACIFIC BELL DIRECTORY
1995	ITS YOUR SECRET	Cole Information
1992	SCOLA GALLERIA	Cole Information
1991	GAULLE RIAS COLA	PACIFIC BELL WHITE PAGES
	Scola Galleria	PACIFIC BELL WHITE PAGES
	Scola P M	PACIFIC BELL WHITE PAGES
1986	GALLE RIA S COLA	PACIFIC BELL WHITE PAGES
	Scola Galleria	PACIFIC BELL WHITE PAGES
	Scola P M	PACIFIC BELL WHITE PAGES
1980	DONOHO MICHAEL GALLERY	Pacific Telephone
1975	ATHENA GALLERY	Pacific Telephone
1970	BENEFICIAL INS GROUP BENEFICIAL STANDARD LIFE INS CO	Pacific Telephone Directory
	BENEFICIAL STANDARD LIFE INS CO	Pacific Telephone Directory
1967	BENEFICIAL STANDARD LIFE INSURANCE CO	R. L. Polk Co.
		R. L. Polk Co.
1962	Main Ofc	Pacific Telephone
	District Sales Offices	Pacific Telephone
1955	MCCARTER ROBT S PAC MUTUAL LIFE INS CO MTGE LOAN DEPT	The Pacific Telephone & Telegraph Co.
	PAC MUTUAL LIFE INS CO	The Pacific Telephone & Telegraph Co.

### 3423 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	OCCUPANT UNKNOWN	Cole Information
2010	OCCUPANT UNKNOWN	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	No Current Listing	Haines Company, Inc.
1992	HANSEN S RESTAURANT	PACIFIC BELL DIRECTORY
	JOURNEYS RESTAURANT	Cole Information
1991	Sirloin Restaurant	PACIFIC BELL WHITE PAGES
1986	Mitchs Sir Loin	PACIFIC BELL WHITE PAGES
	Sir Loin Restaurant	PACIFIC BELL WHITE PAGES
	SIRLOIN RESTAURANT	PACIFIC BELL WHITE PAGES
1980	MITCHS SIR LOIN	Pacific Telephone
	SIR LOIN RESTAURANT	Pacific Telephone
	SIRLOIN RESTAURANT	Pacific Telephone
1970	MITCH S & JIMS SIR-LOIN	Pacific Telephone Directory
	SIR-LOIN RESTAURANT	Pacific Telephone Directory
1967	VACANT	R. L. Polk Co.
1962	Moreys Prime Rib & Steak House	Pacific Telephone
	Moreys Prime Rib & Steak House	Pacific Telephone
1955	MOREY S PRIME RIB & STEAK HOUSE	The Pacific Telephone & Telegraph Co.
	MOREY S PRIME RIB & STEAK HOUSE	The Pacific Telephone & Telegraph Co.
1943	Meo Saml Frances shoe repr	R. L. Polk & Co.

### 3425 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	COPA FINA WINE IMPORTS LLC	EDR Digital Archive
	STAR	EDR Digital Archive
2017	THE STAR ON GRAND LLC	Cole Information
	JAYS SMALL MOVES	Cole Information
	THE STAR ON GRAND	Cole Information
	MILANO RESTAURANT OAKLAND	Cole Information
2014	THE STAR ON GRAND LLC	Cole Information
	THE STAR ON GRAND	Cole Information
	GYASI EDWARDS	Cole Information
2010	MILANO RESTAURANT OAKLAND	Cole Information
	GYASI EDWARDS	Cole Information
2006	MILANO	Haines Company, Inc.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	Rest AURANT	Haines Company, Inc.
	OAKLAND	Haines Company, Inc.
	MILANO	Haines Company, Inc.
	Rest AURANT	Haines Company, Inc.
	OAKLAND	Haines Company, Inc.
	ROLANDOLuin	Haines Company, Inc.
2005	GRANDE MILANO RISTORANTE INC	Cole Information
	MILANO RESTAURANT OAKLAND	Cole Information
2000	MILANO RESTAURANT OAKLAND	Pacific Bell
	B FLORES FELIPE	Pacific Bell
	MILANO RESTAURANT OAKLAND	Cole Information
	FELIPE FLORES	Cole Information
1996	MILANO RESTAURANT OAKLAND	PACIFIC BELL DIRECTORY
1955	NETTIE WESTGATE S	The Pacific Telephone & Telegraph Co.
	WESTGATE S NETTIE BTY SALN	The Pacific Telephone & Telegraph Co.
1950	WESTGATE S NETTLE BTY SAIN	The Pacific Telephone & Telegraph Co.
1933	CORLEY LEAHMAN B (BERTHA) CHIROPRACTOR	R. L. Polk & Co.

### 3428 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Costa Margt C Mrs h	R. L. Polk & Co.

### 3429 GRAND AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	MANGES BILL	R. L. Polk Co.
1962	Girard Louise	Pacific Telephone
1955	FOLSOM EMMA C MRS R	The Pacific Telephone & Telegraph Co.
1950	FOLSOM EMMA C MRS R	The Pacific Telephone & Telegraph Co.
1945	FOLSOM EMMA C MRS R	The Pacific Telephone & Telegraph Co.
1938	FOLSOM EMMA C MRS R	Pacific Telephone
1933	COSTA JOHN (MARGT) MINER H	R. L. Polk & Co.
	FOLSOM EMMA C MRS DEPT MGR EAST BAY TITLE INS CO H	R. L. Polk & Co.
	FOLSOM JOHN C MINER R	R. L. Polk & Co.

## FINDINGS

### **GRAND AVE%**

#### **3301 GRAND AVE%**

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	3301	R.L. Polk and Co of California
	FEDERAL DRUG CO C V Keenan Pres C A Lnedeking Sec Prescription Druggists Ko daks and Stationery	R.L. Polk and Co of California

### **GRAND ST**

#### **3203 GRAND ST**

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	ROSALIE FLOWER SHOP	The Pacific Telephone & Telegraph Co.

#### **3205 GRAND ST**

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1962	Tobenkin Pharmacy	Pacific Telephone
1955	TOBENKIN PHARMACY	The Pacific Telephone & Telegraph Co.
1950	TOBENKIN PHARMACY	The Pacific Telephone & Telegraph Co.
1945	TOBENKIN PHARMACY	The Pacific Telephone & Telegraph Co.
1938	TOBENKIN PHARMACY	Pacific Telephone

#### **3207 GRAND ST**

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	TONY S LITTLE RESTAURANT	The Pacific Telephone & Telegraph Co.

#### **3213 GRAND ST**

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	DENK S BAKE SHOP	Pacific Telephone

#### **3217 GRAND ST**

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	GRAND AV CLEANERS	Pacific Telephone
	SHERMAN JULIUS GRAND AV CLEANERS	Pacific Telephone

#### **3218 GRAND ST**

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	EDY S CHARACTER CANDIES	Pacific Telephone

## FINDINGS

### 3219 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	HACKER HOME EQUIPMENT CO	The Pacific Telephone & Telegraph Co.

### 3222 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	HART S INC SHOES	Pacific Telephone

### 3223 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	NARA S FLOWERS	Pacific Telephone

### 3224 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	MARTIN S BEAUTY SALON	The Pacific Telephone & Telegraph Co.

### 3225 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	VAN BUREN JACK R	The Pacific Telephone & Telegraph Co.

### 3226 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	OWL DRUG CO THE	Pacific Telephone

### 3232 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	GRAND LAKE RESTAURANT	The Pacific Telephone & Telegraph Co.

### 3233 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	ROYAL LIQUORS	The Pacific Telephone & Telegraph Co.
1950	ROYAL LIQUORS	The Pacific Telephone & Telegraph Co.
1945	ROYAL LIQUORS	The Pacific Telephone & Telegraph Co.

### 3235 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	LAKE BEAUTY SALON	Pacific Telephone

## FINDINGS

### 3236 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	LA GRANDE BAKERY	Pacific Telephone

### 3241 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Steccone Bros P G Steceone gro	R.L. Polk and Co of California

### 3242 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	AMERICAN TRUST COMPANY ALAMEDA	The Pacific Telephone & Telegraph Co.
1950	AFTER 5 PM & SAT AFTER 1 PM CALL	The Pacific Telephone & Telegraph Co.
1945	AMERICAN TRUST COMPANY	The Pacific Telephone & Telegraph Co.
1938	AMERICAN TRUST CO	Pacific Telephone

### 3245 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	FRAHM DELICA TESSEN	Pacific Telephone
	MERLINO CHRIS FRUIT	Pacific Telephone

### 3247 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	MILLER HAZEL R	The Pacific Telephone & Telegraph Co.
1943	Bosw ell Harry A Cecelia electn h	R. L. Polk & Co.

### 3249 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	RAIBLE S FLWRS	The Pacific Telephone & Telegraph Co.
1945	RAIBLE S HWRS	The Pacific Telephone & Telegraph Co.
1938	CLUB CLEANERS & DYERS	Pacific Telephone

### 3251 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	BUILDERS REALTY CO	The Pacific Telephone & Telegraph Co.
1938	SMITH S GIFTS	Pacific Telephone

## FINDINGS

### 3253 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	BROWN V L R	The Pacific Telephone & Telegraph Co.

### 3264 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	MERRITT BAKERY	The Pacific Telephone & Telegraph Co.
1945	GEMMELL S BAKE SHOP	The Pacific Telephone & Telegraph Co.

### 3268 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	CHRISNEY IRENE LAKE BEAUTY SALON	The Pacific Telephone & Telegraph Co.
1945	CHRISNEY IRENE LAKE BEAUTY SALON	The Pacific Telephone & Telegraph Co.
1938	SCHWALEN S	Pacific Telephone

### 3300 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	SCHEINBERG C & SONS DEPT STORE	Pacific Telephone

### 3301 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	FEDERAL DRUG CO NO 1	The Pacific Telephone & Telegraph Co.

### 3302 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1962	Ideal Barber Shop	Pacific Telephone
1955	IDEAL BARBER SHOP	The Pacific Telephone & Telegraph Co.
1950	IDEAL BARBER SHOP	The Pacific Telephone & Telegraph Co.
1945	IDEAL BARBER SHOP	The Pacific Telephone & Telegraph Co.
1938	IDEAL BARBER SHOP	Pacific Telephone

### 3304 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	ZUYDER ZEE DO-NUT SHOP	Pacific Telephone
1928	Santa Frank E Gertrude elec supplies	R.L. Polk and Co of California

## FINDINGS

### 3305 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	YALE S DELICA TESSEN	The Pacific Telephone & Telegraph Co.
1938	YALE S DELICA TESSEN	Pacific Telephone

### 3307 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	GRAND AV HARDWARE STORE	Pacific Telephone

### 3308 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	CHICKEN PIE SHOP	Pacific Telephone
	MURDOCH J C CHICKEN PIE SHOP	Pacific Telephone

### 3315 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	EDY S GRAND ICE CREAM CO	The Pacific Telephone & Telegraph Co.
1938	EDY S GRAND ICE CREAM CO	Pacific Telephone

### 3316 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	GRAND LAKE HARDWARE	The Pacific Telephone & Telegraph Co.
1938	JOHNSON WARREN L R	Pacific Telephone

### 3319 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Earl L Ida K clk L K Liggott Co H	R.L. Polk and Co of California

### 3320 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	WOOLWORTH F W CO	The Pacific Telephone & Telegraph Co.
1945	WOOLWORTH F W CO 5-10-15C STORES	The Pacific Telephone & Telegraph Co.
1938	WOOLWORTH F W CO 5-10-15C STORES	Pacific Telephone

### 3321 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	MYHRE EVELYN R	The Pacific Telephone & Telegraph Co.

## FINDINGS

### 3332 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	MANHATTAN CLUB	The Pacific Telephone & Telegraph Co.
1950	MANHATTAN CLUB	The Pacific Telephone & Telegraph Co.

### 3335 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	RUSSIAN WAR RELIEF INC	The Pacific Telephone & Telegraph Co.

### 3336 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	DEPPEN HARDWARE STORE	Pacific Telephone

### 3342 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	ODELL LOIS R	Pacific Telephone
1928	Co Helen E bkpr Thorsted Floral Co R	R.L. Polk and Co of California

### 3343 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	h John P diet mgr E B Water Co H	R.L. Polk and Co of California

### 3349 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	FELHELMAN WM J	The Pacific Telephone & Telegraph Co.
1945	FEIBELMAN WM J	The Pacific Telephone & Telegraph Co.

### 3353 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	RUBENSTEIN M HAIR DRESSING	Pacific Telephone

### 3354 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	GRAND AVE LIQUOR STORE	The Pacific Telephone & Telegraph Co.

### 3363 GRAND ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	DICKSON IM J DICKSON REALTY	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	BLEUEL MAURY JR DICKSON REALTY	The Pacific Telephone & Telegraph Co.
	DELL R V DICKSON REALTY	The Pacific Telephone & Telegraph Co.
	DICKSON M J DICKSON REALTY	The Pacific Telephone & Telegraph Co.
	DICKSON REALTY	The Pacific Telephone & Telegraph Co.
	LAWYER HARRY R DICKSON REALTY	The Pacific Telephone & Telegraph Co.
	MANARY FRANCES DICKSON REALTY	The Pacific Telephone & Telegraph Co.
	MORGAN TEX DICKSON REALTY	The Pacific Telephone & Telegraph Co.
<b>3401 GRAND ST</b>		
<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	MARTHA S CAKE SHOP	Pacific Telephone
<b>3409 GRAND ST</b>		
<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	GUTHRIDGE RALPH W DENTIST	Pacific Telephone
<b>3411 GRAND ST</b>		
<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	GRAND LAKE PLUMBING CO	The Pacific Telephone & Telegraph Co.
	HODES H A GRAND AV PLUMBING CO	The Pacific Telephone & Telegraph Co.
1938	LAKEVIEW MARKET	Pacific Telephone
<b>3415 GRAND ST</b>		
<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	PARKS HARRY A RL EST	The Pacific Telephone & Telegraph Co.
<b>3425 GRAND ST</b>		
<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	BELSWICK DU PUIS BEAUTY SALON	The Pacific Telephone & Telegraph Co.
1938	BELSWICK-DU PUIS BEAUTY SALON	Pacific Telephone
<b>3500 GRAND ST</b>		
<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	STANDARD STATIONS INC	Pacific Telephone

## FINDINGS

### GRANT AVE

#### 3428 GRANT AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Folsom Emma C Mrs clk r	R. L. Polk & Co.

### SANTA CLARA AVE

#### 326 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	DAVID LE	EDR Digital Archive
2017	LEAH ROMANELLI	Cole Information
2014	DAVID LE	Cole Information
2010	DAVID LE	Cole Information
	LURA BEAUMONT	Cole Information
2006	EDELSON Gregory	Haines Company, Inc.
	LE David	Haines Company, Inc.
2005	DAVID LE	Cole Information
2000	OCCUPANT UNKNOWN	Cole Information
1995	OCCUPANT UNKNOWNN	Cole Information
1991	Law rence Athena	PACIFIC BELL WHITE PAGES
1970	OBERNDOERFER WARNER B	Pacific Telephone Directory
	SASSON LANA	Pacific Telephone Directory
1967	OBERNDOERFER WARNER B P	R. L. Polk Co.
1962	Cryer Robt E	Pacific Telephone
	Jensen Kenneth Willard	Pacific Telephone
	Nelson Geo W	Pacific Telephone
1955	GOLBERT SAM S ALAMEDA	The Pacific Telephone & Telegraph Co.
	RICKARD GLENN	The Pacific Telephone & Telegraph Co.
1950	HAGEN CARL R	The Pacific Telephone & Telegraph Co.
1945	HERCHE LUELLE R ALAMEDA	The Pacific Telephone & Telegraph Co.
1943	Dunlop Ina M sten r	R. L. Polk & Co.
	Dunlop Maurine M nurse r	R. L. Polk & Co.

## FINDINGS

### 328 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	LEE HONG VUNG	Pacific Telephone

### 330 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	AVIDEH ZAHEDI	EDR Digital Archive
2017	AVIDEH ZAHEDI	Cole Information
2014	AVIDEH ZAHEDI	Cole Information
2006	ZAHEDIAvidah	Haines Company, Inc.
2005	VITO ESPOSITO	Cole Information
2000	LINDA LESTER	Cole Information
	DALE SWINNEY	Cole Information
1995	LESTER, LINDA A	Cole Information
1991	Sw inney Dale W	PACIFIC BELL WHITE PAGES
1986	Lester L A	PACIFIC BELL WHITE PAGES
	Lester Larry	PACIFIC BELL WHITE PAGES
	Sw inney Dale W	PACIFIC BELL WHITE PAGES
1980	Lester L A	Pacific Telephone
	Sw inney Dale W	Pacific Telephone
1970	FISCHER CONSTANCE	Pacific Telephone Directory
1967	DANIEL MURRAY	R. L. Polk Co.
1962	Collins Bill E	Pacific Telephone
	Hearns Erw in A	Pacific Telephone
1955	HERRMANN CARL G	The Pacific Telephone & Telegraph Co.
1950	HERRMANN CARL G R	The Pacific Telephone & Telegraph Co.
1945	CUNNINGHAM WALKER R	The Pacific Telephone & Telegraph Co.
1943	Cunningham Peter L eng r	R. L. Polk & Co.
	Cunningham Walker Eliz R barber h	R. L. Polk & Co.
1933	BELL VERIL L (RUBY) USHER H	R. L. Polk & Co.
	HELM ROBT (MARGT) H	R. L. Polk & Co.
1928	H Maude Mrs slsw mn R	R.L. Polk and Co of California
	av Harry C Della A H	R.L. Polk and Co of California

## FINDINGS

### 332 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	LAURA MCKAY	EDR Digital Archive
2017	LAURA MCKAY	Cole Information
2014	LAURA ANGEL-BERMUDEZ	Cole Information
2010	LAURA ANGEL-BERMUDEZ	Cole Information
2006	a YOUNG Sandra	Haines Company, Inc.
2005	SANDRA YOUNG	Cole Information
2000	SANDRA YOUNG	Cole Information
1980	Beam Walter F	Pacific Telephone
1975	CAUBLE RONALD L	Pacific Telephone
1970	ARRANTS RODNEY	Pacific Telephone Directory
	FALSTREAU ALAN	Pacific Telephone Directory
1967	YOUNG ANDREW G	R. L. Polk Co.
1962	Young Andrew	Pacific Telephone
1955	JOHNSTON HUGH B	The Pacific Telephone & Telegraph Co.
	POTHRON EMILE R ALAMEDA	The Pacific Telephone & Telegraph Co.
1950	DOOMS LEE A R	The Pacific Telephone & Telegraph Co.
	POORE THELMA R	The Pacific Telephone & Telegraph Co.
1943	Hyams Jos J Anita M slsmn Shields Harper & Co h	R. L. Polk & Co.
1933	HYAMS JOS J (ANITA) SLSMN PENNZOIL CO H	R. L. Polk & Co.
	PICKRELL JOHN H (MARGT) CARP H ALAMEDA	R. L. Polk & Co.
	PICKRELL THELMA CLK R ALAMEDA	R. L. Polk & Co.

### 336 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	WHITE GLENN (CARRIE) OILWKR H	R. L. Polk & Co.

### 337 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1995	OCCUPANT UNKNOWNN	Cole Information
1970	MCMULLEN WM K ALAMEDA	Pacific Telephone Directory
1967	NO RETURN	R. L. Polk Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	NIELSEN ERIC A ALAMEDA	The Pacific Telephone & Telegraph Co.
1945	SACHS BEN C R ALAMEDA	The Pacific Telephone & Telegraph Co.
1933	HANBRIDGE FRANK B (GERTRUDE) H ALAMEDA	R. L. Polk & Co.

### 338 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	PERONA MARGARET ALAMEDA	Pacific Telephone Directory
1955	PERONA S J R ALAMEDA	The Pacific Telephone & Telegraph Co.
1945	PERONA S J R ALAMEDA	The Pacific Telephone & Telegraph Co.
1933	PERONA STEVE J (MARGT) ELECTN H ALAMEDA	R. L. Polk & Co.

### 339 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	TIMM ZYWNA	EDR Digital Archive
2010	TIMM ZYWNA	Cole Information
2006	TA Bdan	Haines Company, Inc.
2005	OCCUPANT UNKNOWN	Cole Information
2000	CHARLES GO	Cole Information
1995	DAWSON, TERRY	Cole Information
1967	DOVALA AUGUSTINE D	R. L. Polk Co.
1962	Dovala Augustin D	Pacific Telephone
1955	SIMS ALEX	The Pacific Telephone & Telegraph Co.
1950	SHAFTER LELAND R	The Pacific Telephone & Telegraph Co.
1945	SHAFTER LELAND R	The Pacific Telephone & Telegraph Co.
1943	Shafter Leland L Clara slsmn Fuller Brush Co h	R. L. Polk & Co.
1933	HUMPHREYS EVAN G (CATH) TAILOR H	R. L. Polk & Co.
1928	av Evan G Cath J tailor R	R.L. Polk and Co of California

### 340 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	LEE TUNG	EDR Digital Archive
2017	BRITTA WILLIAMS	Cole Information
2014	CINDY TUNG	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2010	WING TUNG	Cole Information
2006	TUNGWn lg	Haines Company, Inc.
2005	OCCUPANT UNKNOWN	Cole Information
2000	WATKINS KORY D	Pacific Bell
	MOUTON MOSETTE	Pacific Bell
	SINGH SANJAY	Pacific Bell
	WILLIAMS MICHELLE N	Pacific Bell
	RONALD ALLEN	Cole Information
	HERMAN FUNGULA	Cole Information
	JOHNSON, L	Cole Information
1980	Tung Cheung Kan	Pacific Telephone
1975	CARLTON RUSSELL W	Pacific Telephone
	LEW HATSUYE	Pacific Telephone
1970	CARLTON RUSSELL W	Pacific Telephone Directory
	HERMANN J A ALAMEDA	Pacific Telephone Directory
1967	CARLTON RUSSELL W	R. L. Polk Co.
1962	Carlton Russell W	Pacific Telephone
1955	MORGAN MALCOLM D ALAMEDA	The Pacific Telephone & Telegraph Co.
1945	WILSON GEORGIA R ALAMEDA	The Pacific Telephone & Telegraph Co.
1933	CARLTON EDW A (ESTHER A) AUTO REPR H	R. L. Polk & Co.
1928	av H	R.L. Polk and Co of California
	Canrton Edw M Esther auto eng H	R.L. Polk and Co of California

### 342 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	LILY KIMURA	EDR Digital Archive
2017	KATHY KIMURA	Cole Information
2014	LILY KIMURA	Cole Information
2010	LILY KIMURA	Cole Information
2006	a KIMURA Uiy	Haines Company, Inc.
2000	LILY KIMURA	Cole Information
1995	OCCUPANT UNKNOWNN	Cole Information
1992	KIMURA, LILY	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Kimura L	Pacific Telephone
1970	ANGELO RICO ALAMEDA	Pacific Telephone Directory
1967	MATTHEWs I MRS	R. L. Polk Co.
1955	ANGELO RICO R ALAMEDA	The Pacific Telephone & Telegraph Co.
	WONG CHESTER R	The Pacific Telephone & Telegraph Co.
1950	WANG CHESTER R	The Pacific Telephone & Telegraph Co.
1945	WRIGHT ROBERT R ALAMEDA	The Pacific Telephone & Telegraph Co.
1943	Williams Mavis h	R. L. Polk & Co.
1938	WRIGHT ROBERT R	Pacific Telephone
1933	JACOBSON WALTER L (KATH) SLSMN H	R. L. Polk & Co.
	JOHNSON WM C (PEARL) SLSMN H	R. L. Polk & Co.
	LIEBER WM A (AMELIA) H ALAMEDA	R. L. Polk & Co.
1928	Gosselin Marc W slsmn Golden State Aircraft Co R	R.L. Polk and Co of California
	Pablo Edith M stdt R	R.L. Polk and Co of California
	Lieber Marion R	R.L. Polk and Co of California
	Edw L sec treas Golden State Aalcraft Co R	R.L. Polk and Co of California
	Law rence Fannie D H	R.L. Polk and Co of California

### 343 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	BANTA G L ALAMEDA	Pacific Telephone Directory
1955	BANTA GERTRUDE L ALAMEDA	The Pacific Telephone & Telegraph Co.
1933	BANTA FRANK W (GERTRUDE L) MECH H ALAMEDA	R. L. Polk & Co.

### 345 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	MARGARET STJOHN	EDR Digital Archive
2017	LISA MARTIN	Cole Information
2014	DAN MARTIN	Cole Information
2010	DAN MARTIN	Cole Information
2006	a MARTIN Dan	Haines Company, Inc.
	e MARTIN Llsa	Haines Company, Inc.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	DAN MARTIN	Cole Information
2000	MARTIN DAN & LISA	Pacific Bell
	DAN MARTIN	Cole Information
1995	OCCUPANT UNKNOWNN	Cole Information
1992	RUDE PAUL A	PACIFIC BELL DIRECTORY
	RUDE, PAUL A	Cole Information
1970	NG EDYTHE L	Pacific Telephone Directory
1967	VARLETA LOPE M	R. L. Polk Co.
1962	Ng Edythe L	Pacific Telephone
1955	NG EDYTHE L	The Pacific Telephone & Telegraph Co.
1950	MANN FRANK D R	The Pacific Telephone & Telegraph Co.
1945	MANN FRANK D R	The Pacific Telephone & Telegraph Co.
1943	Cramer Roger Irene USA r	R. L. Polk & Co.
	Hickman Jas R Lorene r	R. L. Polk & Co.
	Trevethick Edren June shipydw kr h	R. L. Polk & Co.
1933	GRIFFIN KENNETH S (ISABELLE) SL SMN NATHANIEL IRVINE H	R. L. Polk & Co.
1928	Ceo John Anna mech ens H	R.L. Polk and Co of California
	Clara Margt J clk UOCo R	R.L. Polk and Co of California

### 346 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ALEXANDRA FEINSTEINWIKE	EDR Digital Archive
2014	CHRISTOPHER WIKE	Cole Information
2010	ALEXANDRA FEINSTEINWIKE	Cole Information
2006	WIKE Christopher	Haines Company, Inc.
2005	CHRISTOPHER WIKE	Cole Information
1995	KEBEE, SEYOUM	Cole Information
1970	MANNING CLAYBURN	Pacific Telephone Directory
	VALDEZ JAS E	Pacific Telephone Directory
1967	PERKINS GLORIA MRS	R. L. Polk Co.
1955	HEADRICK R W	The Pacific Telephone & Telegraph Co.
	MAST R ELIZABETH R	The Pacific Telephone & Telegraph Co.
1950	MAST R ELIZSBETH R	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	REMERR JAS E R	The Pacific Telephone & Telegraph Co.
1945	MAST R ELIZABETH R	The Pacific Telephone & Telegraph Co.
1943	Mast Eliz V r	R. L. Polk & Co.
	Mast Lynn sten r	R. L. Polk & Co.
	Mast Raymond E Eliz V rancher h	R. L. Polk & Co.
	Mast Ray E jr USN r	R. L. Polk & Co.
	WEBSTER Henry Joyce USN h	R. L. Polk & Co.
1933	GLASCOCK HELEN F MRS REAL EST	R. L. Polk & Co.
	GLASCOCK WML (HELEN F) H	R. L. Polk & Co.
	O NEIL HELEN F REAL EST	R. L. Polk & Co.
	O NEIL HELEN F REAL EST	R. L. Polk & Co.

### 348 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	LOUIS BOLANOS	EDR Digital Archive
	PAULINE WAN	EDR Digital Archive
	RAYMOND WAN	EDR Digital Archive
2017	CHARLES WAN	Cole Information
2014	RAYMOND WAN	Cole Information
2010	WAN RAYMOND & ASSOC INC	Cole Information
	RAYMOND WAN	Cole Information
2006	WAN Raymond	Haines Company, Inc.
2005	RAYMOND WAN AND ASSOCIATES INC	Cole Information
	RAYMOND WAN	Cole Information
2000	RAYMOND WAN	Cole Information
1995	WAN, RAYMOND	Cole Information
1992	WAN, RAYMOND	Cole Information
1991	Wan Raymond & Vicky	PACIFIC BELL WHITE PAGES
1970	HAWKINS JOS A	Pacific Telephone Directory
1967	TUCKER FLOYD A O I	R. L. Polk Co.
1955	HAMPEL S J R	The Pacific Telephone & Telegraph Co.
1950	HAMPEL S J R	The Pacific Telephone & Telegraph Co.
1943	Bankston Geo W Mozeal welder h	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	H	R.L. Polk and Co of California
	av Thos M Alma N real est	R.L. Polk and Co of California

### 349 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	MARGARET MONTGOMERY	EDR Digital Archive
	TYLER MONTGOMERY	EDR Digital Archive
	BILLIE LONGLEY	EDR Digital Archive
	TONI LONGLEY	EDR Digital Archive
2014	BRIAN LONGLEY	Cole Information
2010	BRIAN LONGLEY	Cole Information
2006	JORDAN Michele	Haines Company, Inc.
	LONGLEY Brian	Haines Company, Inc.
2005	BRIAN LONGLEY	Cole Information
2000	LONGLEY BRIAN	Pacific Bell
	BRIAN LONGLEY	Cole Information
	MICHELE JORDAN	Cole Information
1996	LONGLEY BRIAN	PACIFIC BELL DIRECTORY
1995	LONGLEY , BRIAN	Cole Information
	JORDAN, MICHELE	Cole Information
1992	LONGLEY BRIAN	PACIFIC BELL DIRECTORY
	LONGLEY , BRIAN	Cole Information
	JORDAN, MICHELE	Cole Information
1991	Jordan Michele	PACIFIC BELL WHITE PAGES
1986	Lew is Gene P	PACIFIC BELL WHITE PAGES
1970	VAN NIEUWENHUYSEN HENRI M	Pacific Telephone Directory
1962	Van Nieuw enhuysen Henri M	Pacific Telephone
1955	VAN NIEUWENHUYSEN HENRI M	The Pacific Telephone & Telegraph Co.
1950	VAN NIEUWENHUYSEN HENRI M R	The Pacific Telephone & Telegraph Co.
1945	VAN NIEUWENHUYSEN HENRI M R	The Pacific Telephone & Telegraph Co.
1938	STOCKMAN M M R	Pacific Telephone
1933	ADAMS ELIZ G MRS R	R. L. Polk & Co.
	ADAMS LAURENCE S JR (ISABELLE) H	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Gsell Elen M cashr F J Lyman R	R.L. Polk and Co of California

### 350 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ANTONINA ESPOSO	EDR Digital Archive
2014	KAREN THOMPSON	Cole Information
2010	KAREN THOMPSON	Cole Information
2006	m AUSTIN Cathy	Haines Company, Inc.
2005	OCCUPANT UNKNOWN	Cole Information
2000	OCCUPANT UNKNOWN	Cole Information
1995	OCCUPANT UNKNOWN	Cole Information
1980	Jensen Catherine C	Pacific Telephone
	Roth David M & Catherine C	Pacific Telephone
1975	HECK C H	Pacific Telephone
1970	TURNEY GERALD E	Pacific Telephone Directory
1967	LOPEZ HECTOR E	R. L. Polk Co.
1962	Murray Keith	Pacific Telephone
1955	EMMONS R O	The Pacific Telephone & Telegraph Co.
1945	BAKALIAN M N R	The Pacific Telephone & Telegraph Co.
1943	Lewis Undine sec Mayor of Oakland r	R. L. Polk & Co.
	Bakalian Minas N Agavny M electn h	R. L. Polk & Co.
	Grimes Elwin J Edith P shipftr h	R. L. Polk & Co.
	Grimes Owen shipftr r	R. L. Polk & Co.
1928	Callwell Fanny S wid Geo H	R.L. Polk and Co of California
	Eyre Matilda wid Dudley R	R.L. Polk and Co of California

### 351 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	PAUL CISKE	EDR Digital Archive
	THOMAS RUDDEROW	EDR Digital Archive
2017	PAUL CISKE	Cole Information
2014	LAURA WELLS	Cole Information
2010	OCCUPANT UNKNOWN	Cole Information
2006	CISKE Paul	Haines Company, Inc.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	MAHOSADHA Raven	Haines Company, Inc.
	Starw of	Haines Company, Inc.
2005	RICHARD CISKE	Cole Information
2000	PETERSON KIRK	Pacific Bell
	CISKE PAUL	Pacific Bell
	PAUL CISKE	Cole Information
1996	CISKE PAUL	PACIFIC BELL DIRECTORY
	RAO FERREL	PACIFIC BELL DIRECTORY
1995	RAO, FERREL	Cole Information
	CISKE, PAUL	Cole Information
	SCHAFFER, JANET	Cole Information
1992	WOOD C	PACIFIC BELL DIRECTORY
	CISKE PAUL	PACIFIC BELL DIRECTORY
	RAO FERREL	PACIFIC BELL DIRECTORY
	RAO, FERREL	Cole Information
	WOOD, C	Cole Information
	CISKE, PAUL	Cole Information
1991	Ciske Paul	PACIFIC BELL WHITE PAGES
	Wood C	PACIFIC BELL WHITE PAGES
1980	Lau C Y	Pacific Telephone
	Lau Norma Ng	Pacific Telephone
1975	LAS C Y	Pacific Telephone
1970	LAU C Y	Pacific Telephone Directory
1967	LOAU CHRISTOPHER	R. L. Polk Co.
	KAY NG	R. L. Polk Co.
1962	Kay N S Mrs	Pacific Telephone
	Lau C Y	Pacific Telephone
	Ng Kay	Pacific Telephone
1955	LAU C Y	The Pacific Telephone & Telegraph Co.
1943	Spaan Donald W r	R. L. Polk & Co.
	Spaan Ethel E Mrs r	R. L. Polk & Co.
	Spaan Harry C Sophie B h	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	RICHARDS ULYSSES G H	R. L. Polk & Co.

### 353 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	MARK LINTON	EDR Digital Archive
2017	PETER COWAN	Cole Information
2014	MARK SCHMIDT	Cole Information
2010	JESSE HOULDING	Cole Information
2006	HOULDING Jessie	Haines Company, Inc.
	STEINER Amanda	Haines Company, Inc.
2005	JESSE HOULDING	Cole Information
2000	OTTOLIA MICHEL	Pacific Bell
	MICHEL OTTOLIA	Cole Information
1996	WALTERS MARY D	PACIFIC BELL DIRECTORY
1995	WALTERS, MARY	Cole Information
1992	CAIN M	PACIFIC BELL DIRECTORY
	CAIN, MARTHA	Cole Information
1967	SCHWAB J E H	R. L. Polk Co.
1962	Edelenbos Albert	Pacific Telephone
1955	KAY N S MRS R	The Pacific Telephone & Telegraph Co.
	NG KAY R	The Pacific Telephone & Telegraph Co.
1950	KAY N S MRS R	The Pacific Telephone & Telegraph Co.
1945	KAY N S MRS R	The Pacific Telephone & Telegraph Co.
1943	Davis La Grand Florence welder h	R. L. Polk & Co.
1933	SPAAN HARRY C (SOPHIE B) MGR WESTERN STATES GRO CO H	R. L. Polk & Co.
1928	Spaan Harry C Sophie mgr Western States ro Co H	R.L. Polk and Co of California

### 354 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	LAWRENCE WOODS	EDR Digital Archive
2014	STEPHANIE WOLPER	Cole Information
2010	ERIN BURTON	Cole Information
2006	a WOODS Law rence	Haines Company, Inc.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	OCCUPANT UNKNOWN	Cole Information
1995	BARTELL, DANIEL	Cole Information
1992	BARTELL DANIEL	PACIFIC BELL DIRECTORY
	BARTELL, DANIEL	Cole Information
1991	Bartell Daniel	PACIFIC BELL WHITE PAGES
1986	Davis Lee	PACIFIC BELL WHITE PAGES
1975	MYERS KCA THERINE J	Pacific Telephone
1970	MYERS KATHERINE J	Pacific Telephone Directory
1967	TURNER JOSEPH D	R. L. Polk Co.
1955	MARTELL ALBERT E	The Pacific Telephone & Telegraph Co.
1950	OLWELL HARI Y R	The Pacific Telephone & Telegraph Co.
1945	OLWELL HARRY R	The Pacific Telephone & Telegraph Co.
1943	Olwell Mary J Mrs h	R. L. Polk & Co.
1938	OLWELL HARRY R	Pacific Telephone
1933	CURTISS WILSON G (FLORENCE) H	R. L. Polk & Co.

### 355 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	JOEY TYQUIENGCO	EDR Digital Archive
	ALI NAVAY	EDR Digital Archive
2017	STEPHANIE CASTANEDA	Cole Information
	LECIA FINNEY	Cole Information
	KIMBERLIE LEJON	Cole Information
2014	SHANNA CONNOR	Cole Information
	LECIA FINNEY	Cole Information
	KIMBERLIE LEJON	Cole Information
2010	MAIA HUANG	Cole Information
	BETH ALVEY	Cole Information
	CARL BERNSTEIN	Cole Information
	MYRON TWEED	Cole Information
2006	No Current Listing	Haines Company, Inc.
2005	JOEY TYQUIENGCO	Cole Information
	EDWARD YTUARTE	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	HAROLD WYLIE	Cole Information
2000	REAR OSIKOMAIYA FRANCIS K	Pacific Bell
	FRANCIS OSIKOMAIYA	Cole Information
1995	GARRETT, CARLA	Cole Information
	WYLIE, HAROLD	Cole Information
1992	WYLIE HAROLD	PACIFIC BELL DIRECTORY
	5 JONES C M	PACIFIC BELL DIRECTORY
	JONES, C M	Cole Information
	WYLIE, HAROLD	Cole Information
1991	Jones CM	PACIFIC BELL WHITE PAGES
	Jones CR	PACIFIC BELL WHITE PAGES
	Wylie Harold	PACIFIC BELL WHITE PAGES
1986	Conrad Dana A	PACIFIC BELL WHITE PAGES
	Fisher Brian K	PACIFIC BELL WHITE PAGES
	Karcher Steven M	PACIFIC BELL WHITE PAGES
	Vilen Jimmie	PACIFIC BELL WHITE PAGES
	Viles C	PACIFIC BELL WHITE PAGES
	Viles M P	PACIFIC BELL WHITE PAGES
	Wylie Harold	PACIFIC BELL WHITE PAGES
	Wyle L	PACIFIC BELL WHITE PAGES
	Wylie M	PACIFIC BELL WHITE PAGES
1980	Ormerod Robt	Pacific Telephone
	Rogers Valerie A	Pacific Telephone
	Trimble Berry	Pacific Telephone
	Vilen Jimmie	Pacific Telephone
	Wylie Gertrude & Harold	Pacific Telephone
1975	GRIMM RAYMOND	Pacific Telephone
1970	KWONG DAISY	Pacific Telephone Directory
	SAGE EDW WAYNE	Pacific Telephone Directory
	TOUMA ADNAN	Pacific Telephone Directory
	WYLIE GERTRUDE	Pacific Telephone Directory
	WYLIE HAROLD P	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	APARTMENTS	R. L. Polk Co.
	00 NEIL MARGT E MRS	R. L. Polk Co.
	WYLIE GERTRUDE MRS	R. L. Polk Co.
	MAYER KENNETH E	R. L. Polk Co.
	MC LEOD GERTRUDE A PRS	R. L. Polk Co.
1962	Beasom Wm F Jr	Pacific Telephone
	Hickey Jas	Pacific Telephone
	ONeil M	Pacific Telephone
	Wylie Gertrude	Pacific Telephone
1955	BLACKBURN RAE	The Pacific Telephone & Telegraph Co.
	EAST BERTHA	The Pacific Telephone & Telegraph Co.
	O NEIL MARGARET E	The Pacific Telephone & Telegraph Co.
	WYLIE HAROLD	The Pacific Telephone & Telegraph Co.
1943	Edmonston Ninian J clk Paraffine Cos r	R. L. Polk & Co.
	Fees Raleigh Ruth r	R. L. Polk & Co.
	La Senay Trefle R Sadie Amusement Associates h	R. L. Polk & Co.
	Tuttle Helen M glassw kr r	R. L. Polk & Co.
	Vincent Beatrice welder r	R. L. Polk & Co.
1933	GOW LEW G H	R. L. Polk & Co.

### 357 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ARTIFEX CONSTRUCTION INC	EDR Digital Archive
	LAURA SLATTERY	EDR Digital Archive
	IRMA CHAVEZ	EDR Digital Archive
	LUCILE BEATTY	EDR Digital Archive
	PAUL BACKHURST	EDR Digital Archive
2017	MICHAEL MILLER	Cole Information
	PAUL BACKHURST	Cole Information
	LUCILE BEATTY	Cole Information
2014	ARTIFEX CONSTRUCTION INC	Cole Information
	MICHAEL MILLER	Cole Information
	PAUL BACKHURST	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	LUCILE BEATTY	Cole Information
2010	MICHAEL MILLER	Cole Information
	JANE LEE	Cole Information
2006	KOTDouglas	Haines Company, Inc.
	MILLER L Michael	Haines Company, Inc.
2005	SWAY CLOTHING	Cole Information
	SUSAN BURGESS	Cole Information
2000	MYRON WADE	Cole Information
1996	3 GEEHAN K	PACIFIC BELL DIRECTORY
1995	OCCUPANT UNKNOWNN	Cole Information
1986	Tai Ernest Esq	PACIFIC BELL WHITE PAGES
1980	Finnie Laird	Pacific Telephone
	Posner Ed	Pacific Telephone
	Washington I Y	Pacific Telephone
1975	LANDER S	Pacific Telephone
	PANSES ED	Pacific Telephone
1967	DAY EARL M	R. L. Polk Co.
	GMUR FRANK	R. L. Polk Co.
1962	Dollar Stanley H	Pacific Telephone
1955	HU EDNA	The Pacific Telephone & Telegraph Co.
	OLANDER LARS B R	The Pacific Telephone & Telegraph Co.
1950	OLANDER LARS B R	The Pacific Telephone & Telegraph Co.
1943	Anderson Edith tchr r	R. L. Polk & Co.
	Barrett Lou M nurse r	R. L. Polk & Co.
	HOWARD King T Fanita M tow ermn SPCo h	R. L. Polk & Co.
	SOUSA Emily defensew kr r	R. L. Polk & Co.
1938	CUNNINGHAM BROTHERS REFRIGERATOR SERVICE	Pacific Telephone
1933	SPENCER THEO R CHAUF R	R. L. Polk & Co.
	WELCH WALTER H CIV ENG R	R. L. Polk & Co.
	WELDEN FRANCES C MRS H	R. L. Polk & Co.

## FINDINGS

### 358 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	LILLIAN FONG	EDR Digital Archive
	ANNIE WONG	EDR Digital Archive
2017	MANISHA PATEL	Cole Information
2014	JACK WONG	Cole Information
2010	JACK WONG	Cole Information
2006	WONG Jack	Haines Company, Inc.
2005	JACK WONG	Cole Information
2000	MARVIN WONG	Cole Information
1995	WONG, JACK	Cole Information
1967	WONG JACK	R. L. Polk Co.
1955	TRIMBLE FRANK A R	The Pacific Telephone & Telegraph Co.
1950	TRINBLE FRANK A R	The Pacific Telephone & Telegraph Co.
1945	TRIMBLE FRANK A R	The Pacific Telephone & Telegraph Co.
1943	Trimble Frank A Theresa M marine eng h	R. L. Polk & Co.
1938	TRIMBLE FRANK A R	Pacific Telephone
	TRIMBLE MURIEL T R	Pacific Telephone
1933	MCDEVITT SHERMAN A (GERTRUDE) SWITCHBD REPRMIN H	R. L. Polk & Co.
1928	Co Wm C Louise M H	R.L. Polk and Co of California
	Fishel Carolyn E Mrs sec Tucker Mc Ehinney Co R	R.L. Polk and Co of California

### 359 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	FIONA TANG	EDR Digital Archive
	TED GRUBB	EDR Digital Archive
2017	CHRISTOPHER MOLLATH	Cole Information
2014	MICHAEL PIERRE	Cole Information
2010	FRANK ELLEARD	Cole Information
2006	a ELLEARD Frank	Haines Company, Inc.
2005	FRANK & CHARLENE ELLEARD	Cole Information
2000	FRANK ELLEARD	Cole Information
1995	ELLEARD, FRANK M	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Kikes Frank J	Pacific Telephone
1975	KIE CS FRANK J	Pacific Telephone
1970	KIKES FRANK J	Pacific Telephone Directory
1967	KIKES FRANK J	R. L. Polk Co.
1962	Olander Lars B	Pacific Telephone
1955	RIESER ROBT E R	The Pacific Telephone & Telegraph Co.
1950	RIESER ROBT E R	The Pacific Telephone & Telegraph Co.
1943	Burr Edw in G Lydia Meng h Burr Low ell G r Reis John B clk r	R. L. Polk & Co. R. L. Polk & Co. R. L. Polk & Co.
1933	WELCH EMMA (WID W M) H	R. L. Polk & Co.
1928	Wm M Emma A H	R.L. Polk and Co of California

### 360 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	HATSUYE LEW	EDR Digital Archive
2017	HATSUYE LEW	Cole Information
2014	HATSUYE LEW	Cole Information
2010	HATSUYE LEW	Cole Information
2006	LEWHatsuye	Haines Company, Inc.
2005	HATSUYE LEW	Cole Information
2000	HATSUYE LEW	Cole Information
1995	OCCUPANT UNKNOWNN	Cole Information
1980	Lew Hatsuye	Pacific Telephone
1970	LEW HATSUYE LEW JAS	Pacific Telephone Directory Pacific Telephone Directory
1967	LEW JAMES O 451 d	R. L. Polk Co.
1962	Costello Rodney B	Pacific Telephone
1943	Costello Jack A r Costello John A Nettie M h	R. L. Polk & Co. R. L. Polk & Co.
1933	BERGREN CHAS T (ANN) MFRS AGT BERGREN CLEONE (WID C T) H	R. L. Polk & Co. R. L. Polk & Co.
1928	Bergren Chas T Ann G H	R.L. Polk and Co of California

## FINDINGS

### 361 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	SAMUEL MCINTYRE	EDR Digital Archive
	LUCY MCINTYRE	EDR Digital Archive
	CHUCK MCINTYRE	EDR Digital Archive
2017	SAMUEL MCINTYRE	Cole Information
2014	CHUCK MCINTYRE	Cole Information
2010	OCCUPANT UNKNOWN	Cole Information
2006	e LEW Robert	Haines Company, Inc.
2005	DERRICK SOO CONSTRUCTION	Cole Information
2000	ROBERT LEW	Cole Information
1995	CHAO, FRANCES	Cole Information
1970	LEW THOS G	Pacific Telephone Directory
	TOM KATHERINE MRS	Pacific Telephone Directory
1967	LEW THOS G	R. L. Polk Co.
1962	Lew Thos G r	Pacific Telephone
	Tom Katherine Mrs	Pacific Telephone
1955	LEW THOS G R	The Pacific Telephone & Telegraph Co.
	TOM KATHERINE MRS R	The Pacific Telephone & Telegraph Co.
1950	LEW THOS G R	The Pacific Telephone & Telegraph Co.
	TOM HARVEY MRS R	The Pacific Telephone & Telegraph Co.
1943	Lane Wanda r	R. L. Polk & Co.
	Lane Wm L Viola B h	R. L. Polk & Co.
1933	SINAI LAURA CLK R	R. L. Polk & Co.
	SINAI NAOMI (WID JOS) H	R. L. Polk & Co.
	SINAI WM W DENTIST	R. L. Polk & Co.
1928	Sinai Allen R	R.L. Polk and Co of California
	Sinai Jos Naomi H	R.L. Polk and Co of California
	Sinai Laura clk Sw ans R	R.L. Polk and Co of California

### 362 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	SUE FONG	EDR Digital Archive
2017	SUE FONG	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2010	SHUI FONG	Cole Information
2006	No Current Listing	Haines Company, Inc.
2005	KING FONG	Cole Information
2000	KING FONG	Cole Information
1995	OCCUPANT UNKNOWN	Cole Information
1970	BUCKLEY M J	Pacific Telephone Directory
1967	BUCKLEY MICHL J	R. L. Polk Co.
1962	Buckley M J r	Pacific Telephone
1955	BUCKLEY M J R	The Pacific Telephone & Telegraph Co.
1950	BUCKLEY M J R	The Pacific Telephone & Telegraph Co.
1933	DICKIE GEO M (MIRIAM) SLSMN H	R. L. Polk & Co.
1928	Grand Wm H Lillian E electn H	R.L. Polk and Co of California

### 363 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	DAVID TOBIS	Cole Information
2014	MILVIA SHAH	Cole Information
	DAVID TOBIS	Cole Information
2010	SHADY SHAHID	Cole Information
2006	No Current Listing	Haines Company, Inc.
2005	JAN GILBRECHT	Cole Information
2000	2 STEPHENS CIARA M	Pacific Bell
	3 ELBAUM MAX S	Pacific Bell
	CIARA STEPHENS	Cole Information
	J WHEELER	Cole Information
	ANDREW NELSEN	Cole Information
	MAX ELBAUM	Cole Information
1996	3 ELBAUM MAX S	PACIFIC BELL DIRECTORY
1995	ELBAUM, MAX S	Cole Information
1992	1 NORIEGA JUAN A	PACIFIC BELL DIRECTORY
	3 ELBAUM MAX S	PACIFIC BELL DIRECTORY
1991	Elbaum Max S	PACIFIC BELL WHITE PAGES
	Noriega Juan A	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Morita B	PACIFIC BELL WHITE PAGES
	Otake Ray	PACIFIC BELL WHITE PAGES
	Otani E	PACIFIC BELL WHITE PAGES
	Otani E K	PACIFIC BELL WHITE PAGES
	Wake Steven K	PACIFIC BELL WHITE PAGES
	Wake V	PACIFIC BELL WHITE PAGES
1980	Alexander Vicki A	Pacific Telephone
	Morita B	Pacific Telephone
	Otake Ray	Pacific Telephone
1975	ASHTON MARILYN R	Pacific Telephone
	MURPHY TIMOTHY	Pacific Telephone
1970	GOOLSBY JAS	Pacific Telephone Directory
1967	VACANT	R. L. Polk Co.
1962	Davies Nina L	Pacific Telephone
1955	GREENE A J	The Pacific Telephone & Telegraph Co.
1950	COZZO SAM E R	The Pacific Telephone & Telegraph Co.
1945	COZZO SAM E R	The Pacific Telephone & Telegraph Co.
1943	Austin Louise C clk r	R. L. Polk & Co.
	GORDON Margt clk r	R. L. Polk & Co.
	Renner Aleen beauty opr r	R. L. Polk & Co.
	Renner Arthada M sten r	R. L. Polk & Co.
	Renner Ralph T lida J rancher h	R. L. Polk & Co.
1933	WEINTROB ABR (DORA) CLO CLNR	R. L. Polk & Co.
	WEINTROB HARRY CLO CLNR BERKELEY	R. L. Polk & Co.
	WEINTROB JOS CLK R	R. L. Polk & Co.
	WEINTROB SALLIE STEN H L HAGAN R	R. L. Polk & Co.
1928	Jacobovich Simon R	R.L. Polk and Co of California
	h Pearl wid Mendel H	R.L. Polk and Co of California
	av Douglas W slsmf L Arthur Ramage Co R	R.L. Polk and Co of California

### 364 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	IAN BRITTON	EDR Digital Archive

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	CAITLIN SWEENEY	EDR Digital Archive
2017	IAN BRITTON	Cole Information
2014	IAN BRITTON	Cole Information
2010	IAN BRITTON	Cole Information
2006	e BRITTON Ian	Haines Company, Inc.
2005	IAN BRITTON	Cole Information
2000	IAN BRITTON	Cole Information
1996	CONNIFF WM J	PACIFIC BELL DIRECTORY
1995	CONNIFF, WILLIAM J	Cole Information
1992	CONNIFF WM J	PACIFIC BELL DIRECTORY
	CONNIFF, WILLIAM J	Cole Information
1991	Conniff Wm J	PACIFIC BELL WHITE PAGES
1986	Conniff Wm J	PACIFIC BELL WHITE PAGES
1980	Conniff Wm J	Pacific Telephone
1975	CONNIFF WM J	Pacific Telephone
1970	CONNIFF WM J	Pacific Telephone Directory
1962	Conniff Wm J	Pacific Telephone
1955	CONNIFF WM J	The Pacific Telephone & Telegraph Co.
1943	Conniff Jos F r	R. L. Polk & Co.
	Conniff Patk J Winifred A clk SP Co h	R. L. Polk & Co.
	Conniff Wm J r	R. L. Polk & Co.
1933	CONNIFF JOS F CLK SPCO R ALAMEDA	R. L. Polk & Co.
	CONNIFF PATK J (WINIFRED A) CLK SPCO H ALAMEDA	R. L. Polk & Co.
	MCNALLY PETER T CHF CLK ALA BELT LINE RY R	R. L. Polk & Co.
1928	Francis T clk SPCo R	R.L. Polk and Co of California
	Francis Jos T clk SPCo R	R.L. Polk and Co of California
	Francis Patk J Winifred A clk H	R.L. Polk and Co of California
	Corniff T J clk SPCo R	R.L. Polk and Co of California

### 365 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	DIANNE ARANCIBIA	EDR Digital Archive

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	ROSEMARY GRIFFITHS	Cole Information
	BRIAN MCMAHON	Cole Information
	JEANNINE GASSON	Cole Information
	SARA TAYLOR	Cole Information
2014	ROSEMARY GRIFFITHS	Cole Information
	PHILLIP MILLER	Cole Information
	BRIAN MCMAHON	Cole Information
	SARA TAYLOR	Cole Information
2010	ANDREA MEDINA	Cole Information
	JASON WARD	Cole Information
	JONATHAN SCHOENFELD	Cole Information
2006	No Current Listing	Haines Company, Inc.
2005	A TO Z GLASS WORKS	Cole Information
	BRENNA YOUNG	Cole Information
	ALI BALCI	Cole Information
	GRACIELLA NGUYEN	Cole Information
2000	A BALCI ALI	Pacific Bell
	D FORMAN KARA J	Pacific Bell
	SHARLA ANSORGE	Cole Information
	B DEBERRY	Cole Information
	ALI BALCI	Cole Information
	PUAL WEISMANN	Cole Information
1996	A MCPHERON JAMES	PACIFIC BELL DIRECTORY
1995	MCPHERON, JAMES	Cole Information
1992	A MCPHERON JAMES	PACIFIC BELL DIRECTORY
	B RLZZO PHILIP	PACIFIC BELL DIRECTORY
	MCPHERON, JAMES	Cole Information
	RIZZO, PHILIP	Cole Information
1991	Mc Pheron James	PACIFIC BELL WHITE PAGES
1986	Jenkins A	PACIFIC BELL WHITE PAGES
	Jenkins A Dean	PACIFIC BELL WHITE PAGES
	Mack Kim I	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Whitney S C	PACIFIC BELL WHITE PAGES
	Whitney Sally & Ken	PACIFIC BELL WHITE PAGES
	Williams L S	PACIFIC BELL WHITE PAGES
	Williams LT T	PACIFIC BELL WHITE PAGES
1980	Collins Sherri Lynn	Pacific Telephone
1975	KALBAUGH ED	Pacific Telephone
1970	YASSIN MOHAMMAD	Pacific Telephone Directory
1967	NIEVES DIANA M	R. L. Polk Co.
	A LOPEZ MARCEL V	R. L. Polk Co.
	B CALAPIFI THEO	R. L. Polk Co.
	C ROPER MARILYN	R. L. Polk Co.
1962	Cady A L	Pacific Telephone
	Cady Edna	Pacific Telephone
	Krausz Tibor	Pacific Telephone
1955	FIALDINI AL	The Pacific Telephone & Telegraph Co.
1950	LEPSIC LARRY R	The Pacific Telephone & Telegraph Co.
	MAJORS WM A R	The Pacific Telephone & Telegraph Co.
1945	BIGGAR R B R	The Pacific Telephone & Telegraph Co.
1943	Biggar Robt B Blanche S h	R. L. Polk & Co.
1938	BIGGAR R B R	Pacific Telephone
1933	WILEY WILLARD J (MAY F) H	R. L. Polk & Co.
1928	Larison Lloyd H Eleanor traffic mgr H	R.L. Polk and Co of California
	Maizlin Chas E H	R.L. Polk and Co of California
	Marslin Chas B br mgr Owl Drug Co H	R.L. Polk and Co of California
	h Willard J May P aud Tw ohy Bros Co H	R.L. Polk and Co of California
	Wrede Aug A Ela F elk H	R.L. Polk and Co of California

### 366 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	STEVEN STAHLER	EDR Digital Archive
2017	ROBIN KRISTY	Cole Information
2014	STEVEN STAHLER	Cole Information
2010	ROBIN KRISTY	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	ROBIN KRISTY	Cole Information
2000	THOMPSON KAREN L	Pacific Bell
	JOHNSON KAREN M	Pacific Bell
	KAREN THOMPSON	Cole Information
1996	THOMPSON KAREN L	PACIFIC BELL DIRECTORY
	MCNULTY A J	PACIFIC BELL DIRECTORY
1995	MCNULTY, A	Cole Information
1992	ALBER NICOLE	PACIFIC BELL DIRECTORY
	ALBER, NICOLE	Cole Information
1986	Beier Ellen	PACIFIC BELL WHITE PAGES
	Godnick Edw	PACIFIC BELL WHITE PAGES
1980	Beier Ellen	Pacific Telephone
	BEIER & GUNDERSON OF OAKLAND INC	Pacific Telephone
	Demayo D	Pacific Telephone
1975	EILERMAN IVA	Pacific Telephone
	FERDIG IVA	Pacific Telephone
	NAWAA G L	Pacific Telephone
1970	EILERMAN IVA	Pacific Telephone Directory
	FERDIG IVA	Pacific Telephone Directory
1967	MC NEAL BART	R. L. Polk Co.
	EILERMAN JOHN H	R. L. Polk Co.
1962	Eierman Iva J	Pacific Telephone
	Ferdig Iva J	Pacific Telephone
1950	HANSEN EDNA LOUISE R	The Pacific Telephone & Telegraph Co.
1945	PALMER A M DR R	The Pacific Telephone & Telegraph Co.
1943	Palmer Alf M Lora B phys h	R. L. Polk & Co.
	Palmer Jack A r	R. L. Polk & Co.
1933	PALMER ALF M (LORA) PHYS	R. L. Polk & Co.
	PALMER WM R	R. L. Polk & Co.

### 367 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1962	Boggs Joni	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	BOGGS HOWARD R	The Pacific Telephone & Telegraph Co.
1950	BOGGS HOWARD R	The Pacific Telephone & Telegraph Co.
1943	Forthaus Frank A Julia shipydw kr h	R. L. Polk & Co.
1933	FORTHAUS FRANK (JULIA) RVETER H	R. L. Polk & Co.
1928	r Cyril Grace R	R.L. Polk and Co of California
	Mabel Earl J R	R.L. Polk and Co of California
	Forthaus Frank A Julia H	R.L. Polk and Co of California

### 368 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	DANA NELSON	EDR Digital Archive
	SUSAN PAE	EDR Digital Archive
2017	JULYETAH HAKIM	Cole Information
2014	SUSAN PAE	Cole Information
2010	OCCUPANT UNKNOWN	Cole Information
2006	DUNHAM Troy	Haines Company, Inc.
2000	TAMIKO EVANS	Cole Information
1995	OCCUPANT UNKNOWNN	Cole Information
1980	Brow n Reba	Pacific Telephone
1975	KERN GARY	Pacific Telephone
1970	HEARNS ERWIN A	Pacific Telephone Directory
1967	HEARNS ERWIN	R. L. Polk Co.
1962	Slettum Leon A	Pacific Telephone
	Slettum Leon A ins	Pacific Telephone
1955	SLETTUM LEON A INS	The Pacific Telephone & Telegraph Co.
1950	POPPER DAVE R	The Pacific Telephone & Telegraph Co.
1945	POPPER DAVE R	The Pacific Telephone & Telegraph Co.
	POPPER JAMES M R	The Pacific Telephone & Telegraph Co.
1943	Popper David Fannie h	R. L. Polk & Co.
	Popper Jas M law yer r	R. L. Polk & Co.
1933	ROSS BENJ B BR MGR WUT CO R	R. L. Polk & Co.
	ROSS LOUIS (KATIE) MEATS H	R. L. Polk & Co.

## FINDINGS

### 370 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	BARBARA CAMACHO	EDR Digital Archive
	MARIE CARNEY	EDR Digital Archive
	HERBERT YEE	EDR Digital Archive
	ERIC WALTON	EDR Digital Archive
	TRENT DEHART	EDR Digital Archive
	JOHN CALLOWAY	EDR Digital Archive
	KARA VASSILY	EDR Digital Archive
	SUE FONG	EDR Digital Archive
2017	LUCY BRANDAUER	Cole Information
	MARIE CARNEY	Cole Information
	HERBERT YEE	Cole Information
	MATTHEW BLAIR	Cole Information
	JEREMY WADE	Cole Information
2014	BARBARA CAMACHO	Cole Information
	MARIE CARNEY	Cole Information
	KAREN MORAN	Cole Information
2010	JENNIFER OLSON	Cole Information
	BARBARA CAMACHO	Cole Information
	LILLIAN OWYANG	Cole Information
	SUE FONG	Cole Information
2006	CAMACHO Barbara	Haines Company, Inc.
	KALBCharies	Haines Company, Inc.
	OLSON Kad	Haines Company, Inc.
2005	BARBARA CAMACHO	Cole Information
	LILLIAN OWYANG	Cole Information
	KARL OLSON	Cole Information
	SUE FONG	Cole Information
2000	5 OWYANG L	Pacific Bell
	6 CLUCK CHARLEY L MRS	Pacific Bell
	AGNES KO	Cole Information
	CHARLEY CLUCK	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	CASIMIR KOCUR	Cole Information
	ROBERT OWYANG	Cole Information
	REBECCA SAUNDERS	Cole Information
1996	3 FULMER LEO D	PACIFIC BELL DIRECTORY
	5 KOCUR C L	PACIFIC BELL DIRECTORY
	6 CLUCK CHARLEY L MRS	PACIFIC BELL DIRECTORY
1995	FULMER, LEO	Cole Information
	KOCUR, CHARLES L	Cole Information
	FONG, SUE M	Cole Information
	CLUCK, CHARLEY L	Cole Information
	SAUNDERS, REBECCA A	Cole Information
1992	3 FULMER LEO D	PACIFIC BELL DIRECTORY
	5 KOCUR C L	PACIFIC BELL DIRECTORY
	6 CLUCK CHARLEY L MRS	PACIFIC BELL DIRECTORY
	FULMER, LEO D	Cole Information
1991	Cluck Charley L Mrs	PACIFIC BELL WHITE PAGES
	Fowler E M	PACIFIC BELL WHITE PAGES
	Fulmer Leo D	PACIFIC BELL WHITE PAGES
	Fulmer Megan	PACIFIC BELL WHITE PAGES
	Fulmer Pam	PACIFIC BELL WHITE PAGES
	Kocur CL	PACIFIC BELL WHITE PAGES
1986	Cluck Charley L Mrs	PACIFIC BELL WHITE PAGES
	Fowler E I	PACIFIC BELL WHITE PAGES
	Fulmer Leo D	PACIFIC BELL WHITE PAGES
	Kocur C L	PACIFIC BELL WHITE PAGES
1980	Cluck Charley L Mrs	Pacific Telephone
	Fowler E M	Pacific Telephone
	Fulmer Leo D	Pacific Telephone
	Kocur C L	Pacific Telephone
1975	CLUCK CHARLEY L MRS	Pacific Telephone
	FOWLER E M	Pacific Telephone
	HAWORTH RICHARD R REV	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	KOCUR CL	Pacific Telephone
	NEAL URA	Pacific Telephone
1970	HEZMALL EVERETT F REV	Pacific Telephone Directory
	HUFF L G	Pacific Telephone Directory
	MICHAELS GEO D MRS	Pacific Telephone Directory
	SCHETTLER BERNHERD HERMAN	Pacific Telephone Directory
	YUEN MARGARET C P	Pacific Telephone Directory
1967	MEGLIOZZI RALPH E	R. L. Polk Co.
1955	STEFFENSEN J P R	The Pacific Telephone & Telegraph Co.
1950	STEFFEMSEN J P R	The Pacific Telephone & Telegraph Co.
1945	STEFFENSEN J P R	The Pacific Telephone & Telegraph Co.
1943	Steffensen Jas P Martine h	R. L. Polk & Co.
1938	POTTOL R F MRS R	Pacific Telephone
1928	Winsor F Loring clk R	R.L. Polk and Co of California
	H Fredk W Mabel E H	R.L. Polk and Co of California
	bldg How ard B stdt R	R.L. Polk and Co of California

### 371 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	WILLIS GRACE	The Pacific Telephone & Telegraph Co.
1943	Stetson Edith O Mrs librn Okld Pub Libry h	R. L. Polk & Co.
1933	STETSON EDITH O CHF CATALOGUER OKLD LIBRARY DEPT H	R. L. Polk & Co.
1928	Soc Margt M wid Chas H H	R.L. Polk and Co of California

### 372 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	BRITT SAYLES	EDR Digital Archive
2017	COLEMAN FRICK	Cole Information
	JAMIE NESSEL	Cole Information
2014	TAMARA LEI	Cole Information
	JAMIE NESSEL	Cole Information
2010	KEITH LYDON	Cole Information
2006	GREEN Michael	Haines Company, Inc.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	JENNIFER GREEN	Cole Information
2000	FITZGERALD L B	Pacific Bell
	LISA FITZGERALD	Cole Information
1995	LITTLE, A	Cole Information
1980	Donaldson G O	Pacific Telephone
1970	DONALDSON G O	Pacific Telephone Directory
1967	DONALDSON GLADYS MRS	R. L. Polk Co.
1962	Donaldson Gladys O	Pacific Telephone
1955	DONALDSON GLADYS O R	The Pacific Telephone & Telegraph Co.
1943	Sherman Max M Rose dry gds h	R. L. Polk & Co.
1933	SHERMAN MAX (ROSE) DRY GDS BERKELEY	R. L. Polk & Co.
1928	H	R.L. Polk and Co of California
	Mbuntain Max Rose dry gds	R.L. Polk and Co of California

### 373 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	MILNER RICHARD J R	The Pacific Telephone & Telegraph Co.
1943	Peterson Otto Marian h	R. L. Polk & Co.
1933	BUCKNER H DE WITT PRINTER	R. L. Polk & Co.
	BUCKNER HOMER G H (ANNA) PRINTER H D BUCKNER H	R. L. Polk & Co.
1928	H lan M Adelaide W H	R.L. Polk and Co of California

### 374 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	DOUGLAS SPURR	EDR Digital Archive
2017	DOUGLAS SPURR	Cole Information
2014	OCCUPANT UNKNOWN	Cole Information

### 375 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	FERREE EDNA MAE	The Pacific Telephone & Telegraph Co.
	PATE ROY M	The Pacific Telephone & Telegraph Co.
1950	LOWRIE A N R	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	LOWRIE A N R	The Pacific Telephone & Telegraph Co.
1943	Low rie A N Evalyn h	R. L. Polk & Co.
	Mathison La Verne h	R. L. Polk & Co.
	Wobbenhorst Marvis h	R. L. Polk & Co.
1938	RAPPORT THEODORE R	Pacific Telephone
1933	BOZDECK CLIFFORD A H	R. L. Polk & Co.
	HICKS CLAUDE C (RUTH D) WAITER H	R. L. Polk & Co.
	HICKS RUTH CLK R	R. L. Polk & Co.
	RUMETSCH EARL R (ELIZ) CHAUF H	R. L. Polk & Co.
1928	g Anne Mrs H	R.L. Polk and Co of California
	Irene Joye H	R.L. Polk and Co of California

### 376 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	BRADLEY CLEVELAND	EDR Digital Archive
	DIANE WARD	EDR Digital Archive
	HOLLY BEATRICE	EDR Digital Archive
2017	HOLLY BEATRICE	Cole Information
2014	FRANK ZEIDAN	Cole Information
	JOHN DANIELS	Cole Information
2010	ROBERT SETES	Cole Information
	LAURA CALLEN	Cole Information
	FRANK ZEIDAN	Cole Information
	JOHN DANIELS	Cole Information
	CLAUDIA VENN	Cole Information
2006	SETES Robert	Haines Company, Inc.
	a ZEIDAN Frank	Haines Company, Inc.
2005	FRANK ZEIDAN	Cole Information
	JULIA MASS	Cole Information
	AARON BURGNER	Cole Information
2000	J KUIPER	Cole Information
1995	BOYD, ROBERT	Cole Information
	STIER, DARYN	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1992	STIER DARYN & DAVID	PACIFIC BELL DIRECTORY
	MEREDITH EILEEN	PACIFIC BELL DIRECTORY
	BOYD, ROBERT	Cole Information
1991	Stier Daryn & David	PACIFIC BELL WHITE PAGES
1986	Garnero Edw ard J	PACIFIC BELL WHITE PAGES
	Guinan Christopher	PACIFIC BELL WHITE PAGES
	Page Christopher	PACIFIC BELL WHITE PAGES
	Page David R	PACIFIC BELL WHITE PAGES
	Page Dexter	PACIFIC BELL WHITE PAGES
1980	Bent Chas & Lucile	Pacific Telephone
1967	WOODBURY CHARLES W	R. L. Polk Co.
1955	WELTON FLOYD M R	The Pacific Telephone & Telegraph Co.
1950	WELTOLS FLOYD M R	The Pacific Telephone & Telegraph Co.
1945	JARDIN AVON R	The Pacific Telephone & Telegraph Co.
	WELTON FLOYD M R	The Pacific Telephone & Telegraph Co.
1943	Welton Floyd M Kathryn E eng Merritt Hosp h	R. L. Polk & Co.
1938	WELTON FLOYD M R	Pacific Telephone
1933	GREEN CHAS H CLK R	R. L. Polk & Co.
	GREEN ELIZ L (WID J E) H	R. L. Polk & Co.
1928	H	R.L. Polk and Co of California
	r J Floyd Anna C bldg contr	R.L. Polk and Co of California

### 377 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	FELISHA MOORE	EDR Digital Archive
	SHAWN THOMPSON	EDR Digital Archive
	ANDREW DEBERRY	EDR Digital Archive
	MATTHEW GOULD	EDR Digital Archive
	CAROLYN POE	EDR Digital Archive
	RISA HERNANDEZ	EDR Digital Archive
	TERESITA ARCIAGA	EDR Digital Archive
	MATTHEW STARK	EDR Digital Archive
	ELVIN HAYNES	EDR Digital Archive

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	DANIEL MOORE	EDR Digital Archive
	ABIMBOLA SANGOSANYA	EDR Digital Archive
	LESLEY HALE	EDR Digital Archive
	KAREN BROWN	EDR Digital Archive
	JOANNE DEBERRY	EDR Digital Archive
2017	BYRON FORTUNE	Cole Information
	JASMIN HALLORAN	Cole Information
	CARLOS HERNANDEZ	Cole Information
	JOANNA ORR	Cole Information
	JACQUELINE SMITH	Cole Information
	LEONIS WORD	Cole Information
	CRAIG BEROLD	Cole Information
	BILL DENTINO	Cole Information
	SANDY HOBSON	Cole Information
	THOMAS JOHNSON	Cole Information
	EDWARD LESTER	Cole Information
	RAMESE LOWERY	Cole Information
	LISA MOORE	Cole Information
	SARAH ALPER	Cole Information
	ANDREW DEBERRY	Cole Information
	ELIZABETH PROCTOR	Cole Information
	MATTHEW STARK	Cole Information
	WHITNEY WARREN	Cole Information
	TERESITA ARCIAGA	Cole Information
	EDWARD BAIS	Cole Information
	ELISEO HERNANDEZ	Cole Information
	BECKY KIRBY	Cole Information
	ABIMDOLA SANGOSANYA	Cole Information
	KERRI CAMPBELL	Cole Information
	JASON FITCH	Cole Information
	KELLI JONES	Cole Information
	OLUFISAYO OSITELU	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	ANNA CHRISTMAS	Cole Information
	LESLEY HALE	Cole Information
	BRIAN LEE	Cole Information
	JOHN NIXON	Cole Information
	CARMEN THOMPSON	Cole Information
	DAVID TRAUTZ	Cole Information
	METTE MADSEN	Cole Information
	ROLAND BELLO	Cole Information
2014	JACQUELINE SMITH	Cole Information
	LEONIS WORD	Cole Information
	ADAM BROWN	Cole Information
	DAVID DWONCH	Cole Information
	JULIE OW	Cole Information
	SHAWN THOMPSON	Cole Information
	TERESITA ARCIAGA	Cole Information
	EDWARD BAIS	Cole Information
	ANDREW DEBERRY	Cole Information
	RISA HERNANDEZ	Cole Information
	SAMANTHA JOHNSTON	Cole Information
	MATTHEW STARK	Cole Information
	JESSICA INGERSOLL-COPE	Cole Information
	KERRI CAMPBELL	Cole Information
	ELISEO HERNANDEZ	Cole Information
	BECKY KIRBY	Cole Information
	ABIMDOLA SANGOSANYA	Cole Information
	NELINDA SIEVERT	Cole Information
	BRYAN TOLENTINO	Cole Information
	JASMINE HALLORAN	Cole Information
	CASSANDRA LOVE	Cole Information
	OLUFISAYO OSITELU	Cole Information
	ANASENI SAVUA	Cole Information
	ANNA CHRISTMAS	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	LESLEY HALE	Cole Information
	BRIAN LEE	Cole Information
	JOHN NIXON	Cole Information
	CARMEN THOMPSON	Cole Information
	SOSKITA GREEN	Cole Information
	PHILIP STERNBERG	Cole Information
	ANNETTE JENKINS	Cole Information
	METTE MADSEN	Cole Information
2010	YVONNE QUARLES	Cole Information
	CRAIG BEROLD	Cole Information
	DAVID ROBINSON	Cole Information
	VERGIA MASON	Cole Information
	SHEREE TAFT	Cole Information
	LUMIN TAN	Cole Information
	THOMAS JOHNSON	Cole Information
	TERESITA ARCHIAGA	Cole Information
	SORELIZ ASCANIO	Cole Information
	THUY DANG	Cole Information
	WHITNEY WARREN	Cole Information
	MATTHEW STARK	Cole Information
	ANDREW DEBERRY	Cole Information
	CAROLYN POE	Cole Information
	BECKY KIRBY	Cole Information
	RONALD BUTTS	Cole Information
	ABIMDOLA SANGOSANYA	Cole Information
	NANCY IACONO	Cole Information
	CASSANDRA LOVE	Cole Information
	DEBORAH CARVALHO	Cole Information
BARBARA NOON	Cole Information	
DENICIA BROWN	Cole Information	
MICHAEL MEENDERINK	Cole Information	
LARRY MOORE	Cole Information	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2010	JOHN HAMAMURA	Cole Information
	ANNETTE JENKINS	Cole Information
	MEEGHAN PETERSEN	Cole Information
2006	APARTMENTS	Haines Company, Inc.
	ASCANIOSorel Oz	Haines Company, Inc.
	CCHATMANS	Haines Company, Inc.
	CURRY Stad	Haines Company, Inc.
	FOUNTAINETerry	Haines Company, Inc.
	HENNESSYAlison	Haines Company, Inc.
	KIRBY Becky	Haines Company, Inc.
	SHEPPARD CD	Haines Company, Inc.
	STARK Matthew	Haines Company, Inc.
2005	VANORDEN Vanessa	Haines Company, Inc.
	PILLOWS N THINGS	Cole Information
	PILLOWS NTHINGS	Cole Information
	SUN SPIRIT MSG & ENRGY HLNG	Cole Information
	SUN SPIRIT MASSAGE & ENERGY HEALING	Cole Information
	SUN SPIRIT MASSAGE & HEALING	Cole Information
	ROBIN ESKEW	Cole Information
	ANNE ELVIN	Cole Information
	MURRAY BAELLY	Cole Information
	TIARA BILLUPS	Cole Information
	JEAN HUCKABY	Cole Information
	MARA LARSEN	Cole Information
	ADDOW BRENYAH	Cole Information
	MARIAM ROGERS	Cole Information
	ALLISON HENNESSY	Cole Information
	ALEJANDRO GIORDANO	Cole Information
	DAVONDA HOLLINS	Cole Information
	RYAN HOWARD	Cole Information
	THOMAS WALKER	Cole Information
	DEBORAH CARVALHO	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	LESLEY HALE	Cole Information
	PHYLLIS HUDSON	Cole Information
	PELIN ETGU	Cole Information
	JULIAN ROBINSON	Cole Information
	SHIRLEY CHATMAN	Cole Information
	THORA CAILLECH	Cole Information
	STACI CURRY	Cole Information
	BARBARA NOON	Cole Information
	JOHN HAMAMURA	Cole Information
	CHERYL BOYCE	Cole Information
AMY MARTINEZ	Cole Information	
2000	101 PONS MONICA J	Pacific Bell
	203 KLICKSTEIN B & J	Pacific Bell
	213 SAMMEL CHELSEA K	Pacific Bell
	303 SHEPPARD C D	Pacific Bell
	304 YANT J T	Pacific Bell
	308 TAYLOR CHERYL L	Pacific Bell
	314 CHATMAN S	Pacific Bell
	PENT SPIRER JEFFREY	Pacific Bell
	LESLIE TONG	Cole Information
	ROBIN ESKEW	Cole Information
	J YANT	Cole Information
	KEVIN LY	Cole Information
	MATT GOULD	Cole Information
	B KLICKSTEIN	Cole Information
	JOHNNY MANO	Cole Information
	RACHEL DISARIO	Cole Information
	ROBERT NEWELL	Cole Information
	EMILIO GARCIA	Cole Information
	CHERYL TAYLOR	Cole Information
	JEFFREY SPIRER	Cole Information
J SMITH	Cole Information	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	S CHATMAN	Cole Information
	C NOON	Cole Information
	JOHN HAMAMURA	Cole Information
	JAMES BUNCY	Cole Information
1996	111 REESE GORDON B	PACIFIC BELL DIRECTORY
	115 STEELE J ALAN	PACIFIC BELL DIRECTORY
	304 YANT J T	PACIFIC BELL DIRECTORY
	306 COOPER ANGIE	PACIFIC BELL DIRECTORY
	307 KOO DAVID	PACIFIC BELL DIRECTORY
	314 CHATMAN S	PACIFIC BELL DIRECTORY
	315 FITT J	PACIFIC BELL DIRECTORY
1995	PENT SPIRER JEFFREY	PACIFIC BELL DIRECTORY
	MILES, C	Cole Information
	KING, THERESA	Cole Information
	SPIRER, JEFFREY	Cole Information
	OLIVER, ROGER P	Cole Information
	BEACHUM, PENNY	Cole Information
	LANGGUTH, M E	Cole Information
	STEELE, JULES A	Cole Information
	YANT, JOHN T	Cole Information
	KOO, DAVID	Cole Information
	EVANSTAYLOR, LAVIDI	Cole Information
	REESE, GORDON	Cole Information
	MEARS, ED F	Cole Information
	LEWIS, F D	Cole Information
	REES, GORDON B	Cole Information
	CHATMAN, S	Cole Information
BUNCY, JAMES	Cole Information	
1992	RIESTENBERG JOHN M ATTY	PACIFIC BELL DIRECTORY
	BENJAMINSON EVAN	PACIFIC BELL DIRECTORY
	106 KOLB BROOKS R	PACIFIC BELL DIRECTORY
	111 REESE GORDON B	PACIFIC BELL DIRECTORY

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1992	112 STEELE J ALAN	PACIFIC BELL DIRECTORY
	209 MAH EDMUND	PACIFIC BELL DIRECTORY
	210 P & P NAILS	PACIFIC BELL DIRECTORY
	213 MEARS ED F	PACIFIC BELL DIRECTORY
	216 STRAUSS DANIEL	PACIFIC BELL DIRECTORY
	302 YOUNG IRMA MRS	PACIFIC BELL DIRECTORY
	304 YANT J T	PACIFIC BELL DIRECTORY
	306 SPIRER JEFFREY	PACIFIC BELL DIRECTORY
	306 SPIRER JEFFREY	PACIFIC BELL DIRECTORY
	307 ENGLE ELIZABETH	PACIFIC BELL DIRECTORY
	310 LANGGUTH M E	PACIFIC BELL DIRECTORY
	315 DICKEY DENNIS JAMES	PACIFIC BELL DIRECTORY
	316 SMITH LARRY R & DIANE	PACIFIC BELL DIRECTORY
	YANT, J T	Cole Information
	KING, NATHAN	Cole Information
	MAH, EDMUND	Cole Information
	LANGGUTH, M E	Cole Information
	DICKEY, D J	Cole Information
	BENJAMINSON, EVAN	Cole Information
	MEARS, ED F	Cole Information
STEELE, J A	Cole Information	
1991	Boyd J	PACIFIC BELL WHITE PAGES
	Boyd JB	PACIFIC BELL WHITE PAGES
	Bozrkurt Umur	PACIFIC BELL WHITE PAGES
	Engle Elizabeth	PACIFIC BELL WHITE PAGES
	Engle Frank W	PACIFIC BELL WHITE PAGES
	Engle J&B	PACIFIC BELL WHITE PAGES
	Kolb Brooks R	PACIFIC BELL WHITE PAGES
	Langguth ME	PACIFIC BELL WHITE PAGES
	Langguth Thomas & Paulette	PACIFIC BELL WHITE PAGES
	Langham D	PACIFIC BELL WHITE PAGES
	Mah Edmund	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1991	Mah Floyd & Susan Dr	PACIFIC BELL WHITE PAGES
	Marcellius Freya M	PACIFIC BELL WHITE PAGES
	Oliver Roger P Rev	PACIFIC BELL WHITE PAGES
	Riestenberg John M Atty	PACIFIC BELL WHITE PAGES
	Schneider Helene	PACIFIC BELL WHITE PAGES
	Sclhrader VP	PACIFIC BELL WHITE PAGES
	Simon Jeff	PACIFIC BELL WHITE PAGES
	Simon Jeff media prodctns	PACIFIC BELL WHITE PAGES
	Simon Jeff & Dana	PACIFIC BELL WHITE PAGES
	Steele J Alan	PACIFIC BELL WHITE PAGES
	Strauss Daniel	PACIFIC BELL WHITE PAGES
	Tecele Tedros	PACIFIC BELL WHITE PAGES
	Yant J T	PACIFIC BELL WHITE PAGES
	Yao Chia Tung	PACIFIC BELL WHITE PAGES
	Young Irma Mrs	PACIFIC BELL WHITE PAGES
	Young J	PACIFIC BELL WHITE PAGES
	Young J	PACIFIC BELL WHITE PAGES
Young J	PACIFIC BELL WHITE PAGES	
1986	Aubry E	PACIFIC BELL WHITE PAGES
	Burley Estelle	PACIFIC BELL WHITE PAGES
	Burns Jessie L	PACIFIC BELL WHITE PAGES
	Frohman Alta M	PACIFIC BELL WHITE PAGES
	Gibson Eaton R	PACIFIC BELL WHITE PAGES
	Gutsche Allan	PACIFIC BELL WHITE PAGES
	Gutstadt How ard	PACIFIC BELL WHITE PAGES
	Hogan Stephen	PACIFIC BELL WHITE PAGES
	Janosik Margit	PACIFIC BELL WHITE PAGES
	Janoski Marcus	PACIFIC BELL WHITE PAGES
	Janoski Richard & Apryl	PACIFIC BELL WHITE PAGES
	Janosko John & Terry	PACIFIC BELL WHITE PAGES
	Kaun T D	PACIFIC BELL WHITE PAGES
	Kolb Brooks R	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Langguth ME	PACIFIC BELL WHITE PAGES
	Leventhal Nancy	PACIFIC BELL WHITE PAGES
	Mondini G F	PACIFIC BELL WHITE PAGES
	Mondragon Francis X	PACIFIC BELL WHITE PAGES
	Murphy M E	PACIFIC BELL WHITE PAGES
	Nellis H C	PACIFIC BELL WHITE PAGES
	Nellis KG	PACIFIC BELL WHITE PAGES
	Oliver Roger P Rev	PACIFIC BELL WHITE PAGES
	Oliver Roxana	PACIFIC BELL WHITE PAGES
	Shafton A	PACIFIC BELL WHITE PAGES
	Steele J Alan	PACIFIC BELL WHITE PAGES
	Sw inney L	PACIFIC BELL WHITE PAGES
	Sw inney M	PACIFIC BELL WHITE PAGES
	Torres R	PACIFIC BELL WHITE PAGES
	Winett S	PACIFIC BELL WHITE PAGES
Young Irma Mrs	PACIFIC BELL WHITE PAGES	
1980	Afshar Amir	Pacific Telephone
	Aubry E	Pacific Telephone
	Bishop R H	Pacific Telephone
	Burley Estelle	Pacific Telephone
	Burns Jessie L	Pacific Telephone
	Corw in Mitchell DC	Pacific Telephone
	Dickson K	Pacific Telephone
	Erickson L	Pacific Telephone
	Frohman Alta M	Pacific Telephone
	Garber Geo H	Pacific Telephone
	Greig P	Pacific Telephone
	Gutsche Allan	Pacific Telephone
	Hall Monroe	Pacific Telephone
	Janosik Margit	Pacific Telephone
	Johnson Franklin H & Oleta	Pacific Telephone
Langguth ME	Pacific Telephone	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Manger Wm	Pacific Telephone
	Mc Caulley J E	Pacific Telephone
	Mondini G F	Pacific Telephone
	Nellis H C	Pacific Telephone
	Oliver Roger P Rev	Pacific Telephone
	Petersen A M	Pacific Telephone
	Seib Harry	Pacific Telephone
	Shafton A	Pacific Telephone
	Torgersen H W	Pacific Telephone
	Torres R	Pacific Telephone
	Williams W O	Pacific Telephone
	Winett S	Pacific Telephone
	Young Irma Mrs	Pacific Telephone
1975	AUBRY E	Pacific Telephone
	BROWN IRMA FAY MRS	Pacific Telephone
	BURNS JESSIE L	Pacific Telephone
	COLEMAN NORMAN C JR	Pacific Telephone
	GARBER GEO H	Pacific Telephone
	GAVLGAN H F	Pacific Telephone
	GREIG P	Pacific Telephone
	HALL ELIZABETH	Pacific Telephone
	JANOSIK MARGIT	Pacific Telephone
	JOHNSON ALLAN	Pacific Telephone
	JOHNSON EDW J	Pacific Telephone
	MC CAULLEY J E	Pacific Telephone
	MOADINI S F	Pacific Telephone
	NELLIS H C	Pacific Telephone
1970	ADDY WALTER	Pacific Telephone Directory
	BOLING N	Pacific Telephone Directory
	BROWN IRMA FAY MRS	Pacific Telephone Directory
	CARUTH ROBT	Pacific Telephone Directory
	EALLES G	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	FENALD ROCKY S	Pacific Telephone Directory
	GAGNON RONALD E	Pacific Telephone Directory
	GAVIGAN H F	Pacific Telephone Directory
	GREENE AL	Pacific Telephone Directory
	HAFELI ANNA M	Pacific Telephone Directory
	HALL ELIZABETH	Pacific Telephone Directory
	HARRIS JOHN H	Pacific Telephone Directory
	HERSEY M	Pacific Telephone Directory
	HILLIS ROBT L	Pacific Telephone Directory
	HOF C J	Pacific Telephone Directory
	JANOSIK MARGIT	Pacific Telephone Directory
	JENSEN LEX	Pacific Telephone Directory
	JOHNSON ALLAN	Pacific Telephone Directory
	JOHNSON F H	Pacific Telephone Directory
	JOHNSON MILTON D	Pacific Telephone Directory
	KOOPEN JACK	Pacific Telephone Directory
	MEARS E E	Pacific Telephone Directory
	MERSH M J	Pacific Telephone Directory
	MILLER SHARON	Pacific Telephone Directory
	MONDINI G F	Pacific Telephone Directory
	MULLOY DENNIS R	Pacific Telephone Directory
	MUNRO RALPH	Pacific Telephone Directory
	OMMUNDSEN LINDA J	Pacific Telephone Directory
	PARKER MINNIE M	Pacific Telephone Directory
	PLOWMAN ROBT	Pacific Telephone Directory
	RICHARDS PHILLIP A	Pacific Telephone Directory
	SALVETTI A	Pacific Telephone Directory
	SHAFTON A	Pacific Telephone Directory
	SLOUS ALFRED G MRS	Pacific Telephone Directory
	SQUIRES STAN	Pacific Telephone Directory
	STRYKER M C	Pacific Telephone Directory
	WILKINS EILEEN M	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	WILLIAMS W O	Pacific Telephone Directory
	YOUNG IRMA MRS	Pacific Telephone Directory
1967	APARTMENTS	R. L. Polk Co.
	I MADDEN L J	R. L. Polk Co.
	GAVIGAN H F	R. L. Polk Co.
	COAKLEY EVELYN	R. L. Polk Co.
	KORSOLM JULIANA MRS	R. L. Polk Co.
	FULLE GENE S	R. L. Polk Co.
	JOHNSON ALLAN	R. L. Polk Co.
	VACANT	R. L. Polk Co.
	VACANT	R. L. Polk Co.
	DARNELLE RALPH R	R. L. Polk Co.
	MONDINI GERTRUDE F MRS	R. L. Polk Co.
	PARKER MINNIE M	R. L. Polk Co.
	VLAHOS JOHN J	R. L. Polk Co.
	III ROBB JOSEPH	R. L. Polk Co.
	ASHKENAZE SOPHIE MRS	R. L. Polk Co.
	MILLER GARDENER	R. L. Polk Co.
	KAHL HELEN	R. L. Polk Co.
	LAWLOR DANL	R. L. Polk Co.
	MERSH MARIAN	R. L. Polk Co.
	GUSTAFSON SAML	R. L. Polk Co.
	SCHLAMAM EARL	R. L. Polk Co.
	KAO PRISCILLA	R. L. Polk Co.
	WILKINS EILEEN MRS GL	R. L. Polk Co.
	FINNEGAN JAMES H	R. L. Polk Co.
	NO RETURN	R. L. Polk Co.
	MEARS EARL	R. L. Polk Co.
	VACANT	R. L. Polk Co.
	FENOLD ROCKY	R. L. Polk Co.
	VACANT	R. L. Polk Co.
	SLOUS ELSIE	R. L. Polk Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	VACANT	R. L. Polk Co.
	HOLLANDER J	R. L. Polk Co.
	HODES VIVIAN	R. L. Polk Co.
	CHILDERS WM	R. L. Polk Co.
	STONE MITCHELL	R. L. Polk Co.
	CROCE LUCILLE MRS	R. L. Polk Co.
	SCHWARTZ KATH MRS	R. L. Polk Co.
	JANOSIK MARGIT	R. L. Polk Co.
	DILLAHA HUBERT	R. L. Polk Co.
	SHAFTON ABE	R. L. Polk Co.
	STRYKER M C	R. L. Polk Co.
	BROWN IRMA FAY MRS	R. L. Polk Co.
	STANGE JOHN E	R. L. Polk Co.
	VACANT	R. L. Polk Co.
	BARTELS R 08 T	R. L. Polk Co.
	VACANT	R. L. Polk Co.
	CARUTH POBT E	R. L. Polk Co.
	VACANT	R. L. Polk Co.
	315 AREADOS JOSEPH	R. L. Polk Co.
	SICHEL HENRY M	R. L. Polk Co.
1955	CURRAN HELEN R	The Pacific Telephone & Telegraph Co.
1945	LANE FRANK MRS R	The Pacific Telephone & Telegraph Co.
1943	Lane Ada J w id Frank h	R. L. Polk & Co.
1938	LANE FRANK MRS R	Pacific Telephone

### 379 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	SMITH GORDON EDWIN	The Pacific Telephone & Telegraph Co.
1950	DEXTER SADIE MRS R	The Pacific Telephone & Telegraph Co.
1945	DEXTER SADIE MRS R	The Pacific Telephone & Telegraph Co.
1943	Dexter Jas W Sadie N h	R. L. Polk & Co.
1938	DEXTER SADIE MRS R	Pacific Telephone
1933	COLLINS JAS W (ALICE) SUPT UNITED PARCEL SERV H	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	N Wayne B H	R.L. Polk and Co of California

### 384 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	PICCOLO PUPPETS PLAYERS	EDR Digital Archive
2017	ARNOLD WONG	Cole Information
	MATTHEW WOLFF	Cole Information
	HEIDI WOHLWEND	Cole Information
2014	SARA GOLDWARE	Cole Information
	ARNOLD WONG	Cole Information
	AMY CIANCHETTI	Cole Information
2010	K MAAS	Cole Information
	LAURYN LEE	Cole Information
2006	WOHLWEND Heidi 510D 63 7289	Haines Company, Inc.
	WONG Arnold	Haines Company, Inc.
2005	PICCOLO PUPPET PLAYERS	Cole Information
	MACLAREN LANDSCAPE & GARDEN SERVICE	Cole Information
	MACLAREN LANDSCAPE & GRDN SRVC	Cole Information
	LAURYN LEE	Cole Information
	HEIDI WOHLWEND	Cole Information
2000	REAR MUNDORFF EMILY C	Pacific Bell
	REAR KUEHN MIKE	Pacific Bell
	FRONT WOHLWEND HEIDI	Pacific Bell
	EMILY MUNDORFF	Cole Information
	MIKE KUEHN	Cole Information
	HEIDI WOHLWEND	Cole Information
1980	Igoe Byron	Pacific Telephone
1970	COLEMAN FRANK A	Pacific Telephone Directory
1967	COLEMAN FRANK	R. L. Polk Co.
1962	Coleman Frank A	Pacific Telephone
1955	CHOW DALE D DR R	The Pacific Telephone & Telegraph Co.
	KARRIGAN H T	The Pacific Telephone & Telegraph Co.
1950	CHOW DALE D DR R	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	LIN VICTORIA R	The Pacific Telephone & Telegraph Co.
1943	Dun Frank W Jeanette W h	R. L. Polk & Co.
1933	DUN FRANK W (JEANETTE M) UNDRTKR H	R. L. Polk & Co.

### 386 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	HECTOR MENDEZ	Cole Information
2010	HECTOR MENDEZ	Cole Information
	DAMIEN LYNCH	Cole Information
	IDELLA AARON	Cole Information
2006	AARON Lester 00 s	Haines Company, Inc.
	a BRADSHAWLyne Ote	Haines Company, Inc.
	a BUCHANANMary	Haines Company, Inc.
	LYNCH Damien	Haines Company, Inc.
	a MARTINEZ Enrique	Haines Company, Inc.
	a MENDEZ Hector	Haines Company, Inc.
	a NANCE Robyn	Haines Company, Inc.
	PINCUS Michael	Haines Company, Inc.
2005	WALTER NYGAARD	Cole Information
	LYNETTE BRADSHAW	Cole Information
	ENRIQUE MARTINEZ	Cole Information
	DAMIEN LYNCH	Cole Information
2000	JOSEPH EDMONDSON	Cole Information
	ERIC COLLIN	Cole Information
	MIA BARBER	Cole Information
	JULIUS BROWNE	Cole Information
	DEVLIN JACKSON	Cole Information
	MARY BUCHANAN	Cole Information
	LUCAS HELLER	Cole Information
	ANGELA ANCHETA	Cole Information
	LESTER AARON	Cole Information
	CLAUDIA THOMAS	Cole Information
	LYNETTE BRADSHAW	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	JACK EARL	Cole Information
1995	COLLIN, ERIC	Cole Information
1980	Omura Akio	Pacific Telephone
	Rawlins Gerald P	Pacific Telephone
1970	MADSEN CRAIG	Pacific Telephone Directory
	RAWLINS GERALD P	Pacific Telephone Directory
1967	CROTER ANNA LOUISE MRS	R. L. Polk Co.
1943	Croter Jos Annie L agt New York Life Ins Co h	R. L. Polk & Co.
	Croter Sylvia L socialw kr r	R. L. Polk & Co.
1933	CROTER HAROLD L SLSMN R	R. L. Polk & Co.
	CROTER JOS (MINNIE) INS AGT H	R. L. Polk & Co.
	CROTER RUTH B CLK R	R. L. Polk & Co.
1928	Croter Harold L slsmn R	R.L. Polk and Co of California
	Clara Ruth B tchr OPS R	R.L. Polk and Co of California

### 387 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	DES MOINEAUX EMILY MRS	R. L. Polk Co.
1962	Des Moineaux E W	Pacific Telephone
	Mc Kinnon Margaret F	Pacific Telephone
1943	Braybrant Robt shipftr r	R. L. Polk & Co.
	Mc Kinnon Margt F wid C H h	R. L. Polk & Co.
	Souchay Geo clk r	R. L. Polk & Co.
1938	PRESHER RALPH A R	Pacific Telephone
1933	WARD VINCENT J (LILLIAN) H	R. L. Polk & Co.
1928	h Oliver Ruth B clk Oakland Bank H	R.L. Polk and Co of California

### 388 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	JODI LERNER	EDR Digital Archive
	THOMAS WONG	EDR Digital Archive
	LYNETTE BRADSHAW	EDR Digital Archive
	CHRISTOPHER ROLLINS	EDR Digital Archive

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ROBYN NANCE	EDR Digital Archive
	LINDA MENDEZ	EDR Digital Archive
	AMY LIANG	EDR Digital Archive
	HECTOR MENDEZ	EDR Digital Archive
	FANNY ARA	EDR Digital Archive
	ENRIQUE MARTINEZ	EDR Digital Archive
	JOE AAMIDOR	EDR Digital Archive
	JOSEPH COLEMAN	EDR Digital Archive
	MONIN MENDEZ	EDR Digital Archive
	CATHERINE CELLA	EDR Digital Archive
2017	CHRISTOPHER ROLLINS	Cole Information
	THOMAS WONG	Cole Information
	ROBYN NANCE	Cole Information
	JODI PINCUS	Cole Information
	YOLANDA DICKEY	Cole Information
	COLE HARTMAN	Cole Information
	MARTHA PRICE	Cole Information
	FANNY ARA	Cole Information
	JOSEPH AAMIDOR	Cole Information
	KEVIN AARON	Cole Information
	LYNETT BRADSHAW	Cole Information
	MONIN MENDEZ	Cole Information
	CATHERINE CELLA	Cole Information
2014	ROBYN NANCE	Cole Information
	JODI PINCUS	Cole Information
	ANDREW ABRASS	Cole Information
	YOLANDA DICKEY	Cole Information
	COLE HARTMAN	Cole Information
	FANNY ARA	Cole Information
	LESTER AARON	Cole Information
	ENRIQUE MARTINEZ	Cole Information
	LYNETT BRADSHAW	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	MONIN MENDEZ	Cole Information
	CATHERINE CELLA	Cole Information
2010	COMMERCE & MARINE INSURANCE	Cole Information
	CHRISTOPHER ROLLINS	Cole Information
	ROBYN NANCE	Cole Information
	ENRIQUE MARTINEZ	Cole Information
	MICHAEL PINCUS	Cole Information
	ABBY JOSEPH	Cole Information
	MONIN MENDEZ	Cole Information
	JAMES LIVINGSTON	Cole Information
	JACK EARL	Cole Information
2006	a EARL Lelona	Haines Company, Inc.
	GILBERT Jonathan	Haines Company, Inc.
	a HANCOCK Ange	Haines Company, Inc.
	MENDEZ Monin	Haines Company, Inc.
	PINCUS Michael	Haines Company, Inc.
	ROLUINS Christopher	Haines Company, Inc.
2005	DENNIS MORGAN BAIL BONDS	Cole Information
	COMMERCE AND MARINE INSUR SERVICES	Cole Information
	ROBYN NANCE	Cole Information
	EDWARD BUCHANAN	Cole Information
	TAMAYO TANI	Cole Information
	ADAM WILLIAMS	Cole Information
	MICHAEL PINCUS	Cole Information
	JACK EARL	Cole Information
	JAMES LIVINGSTON	Cole Information
2000	206 TREVEJO ROSALIE T	Pacific Bell
	BARBARA RAY	Cole Information
	C WIGGAN	Cole Information
	MORT HANTMAN	Cole Information
	JOSE EDMONDSON	Cole Information
	ANGELA ANCHETA	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	RICHARD WARREN	Cole Information
	GLORIA BRADDOCK	Cole Information
	ALFRED FLECK	Cole Information
	ROSALIE TREVEJO	Cole Information

### 389 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1962	Orr Beryl H	Pacific Telephone
1955	MANNING GEO D R	The Pacific Telephone & Telegraph Co.
	MCCORD HUGH S JR R	The Pacific Telephone & Telegraph Co.
1950	MANNING GEO D R	The Pacific Telephone & Telegraph Co.
	MC CORD HUGH S JR R	The Pacific Telephone & Telegraph Co.
1943	Manning Geo D r	R. L. Polk & Co.
	Manning Rebecca Mrs h	R. L. Polk & Co.
1933	ALBRIGHT AUGUSTA (WID J W) H	R. L. Polk & Co.

### 390 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	ROBIN HOUSE	Cole Information
2010	ROBIN HOUSE	Cole Information
2006	No Current Listing	Haines Company, Inc.
2005	ROBIN HOUSE	Cole Information
2000	HOUSE R	Pacific Bell
	ERIC COLLIN	Cole Information
	R HOUSE	Cole Information
1996	HOUSE R	PACIFIC BELL DIRECTORY
1995	HOUSE, ROBIN	Cole Information
1980	Johnson Paul T	Pacific Telephone
	Wallner Douglas W	Pacific Telephone
1975	ARRANTS B	Pacific Telephone
1967	WEISS JOSEPH	R. L. Polk Co.
1962	Anderson MR	Pacific Telephone
1943	Anderson Melvan Helen USA r	R. L. Polk & Co.
	Weiss Arnold r	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Weiss David Reggie h	R. L. Polk & Co.
	Weiss Jos K cash SPCo r	R. L. Polk & Co.
	Wise Arnold r	R. L. Polk & Co.
	Wise David Rae h	R. L. Polk & Co.
	Wise Jos clk r	R. L. Polk & Co.
1933	WEISS ARNOLD SLSMN R	R. L. Polk & Co.
	WEISS DAVID (RAE) PDLR H	R. L. Polk & Co.
	WEISS JOS CLK R	R. L. Polk & Co.
1928	Weiss Arnold R	R.L. Polk and Co of California
	C David Rae H	R.L. Polk and Co of California
	Ashby Jos olk SPCo R	R.L. Polk and Co of California
	62d Mary sten R	R.L. Polk and Co of California
	62d Sarah R	R.L. Polk and Co of California

### 393 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	KORK LOUIS A R	The Pacific Telephone & Telegraph Co.
1945	KIRK LOUIS A R	The Pacific Telephone & Telegraph Co.
1943	Jessen Jesse E Jeanne S dept hd MW&Co h	R. L. Polk & Co.
1933	KRAGEN GEOFFREY C CLK R	R. L. Polk & Co.
	KRAGEN JULIA STEN R	R. L. Polk & Co.
1928	Cregran E Edw Josephine V mgr Gensler Lee Jew elry Co H	R.L. Polk and Co of California
	Cregran Juliet sten R	R.L. Polk and Co of California

### 396 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	VICTORIA RAMSEY SMITH	EDR Digital Archive
	HUGH SMITH	EDR Digital Archive
	OLIVER SUTTICE	EDR Digital Archive
2017	KURT ENBOM	Cole Information
	SHERICE SUTTICE	Cole Information
2014	KURT ENBOM	Cole Information
	MARY KEOGH	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	SHERICE SUTTICE	Cole Information
	JENNA NIELSON	Cole Information
2010	HUGH SMITH	Cole Information
	MARY KEOGH	Cole Information
	JENNA NIELSON	Cole Information
2006	NIELSENJ	Haines Company, Inc.
2005	JOHN LEWIS	Cole Information
	FATIMA HASSAN	Cole Information
2000	B ENBOM KURT	Pacific Bell
	E JONES BRANDON W	Pacific Bell
	PATRICK DUFFY	Cole Information
	KURT ENBOM	Cole Information
	BRANDON JONES	Cole Information
1996	B ENBOM KURT	PACIFIC BELL DIRECTORY
1995	HOLMAN, KHALIAH C	Cole Information
1992	DIXON, R P	Cole Information
1991	I Fries Craig	PACIFIC BELL WHITE PAGES
	Kurtovich M	PACIFIC BELL WHITE PAGES
	Kurtz AE	PACIFIC BELL WHITE PAGES
	Morgan S	PACIFIC BELL WHITE PAGES
1986	Dixon RP	PACIFIC BELL WHITE PAGES
1980	Hinton Robin	Pacific Telephone
	Randolph J W Sr	Pacific Telephone
	Rodriguez Sandra	Pacific Telephone
	Tyler Tim	Pacific Telephone
	Wasen Ulrich	Pacific Telephone
1975	BROWN SANDI	Pacific Telephone
	FINK MARGARET	Pacific Telephone
1970	PIERCE DEEN	Pacific Telephone Directory
	PIERCE DEEN PAINT CO	Pacific Telephone Directory
1967	APARTMENTS	R. L. Polk Co.
	VACANT	R. L. Polk Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	GODFREY RALEIGH	R. L. Polk Co.
	CONQUEST EDW L	R. L. Polk Co.
	PIERCE DEAN	R. L. Polk Co.
1962	Ogata Ronald	Pacific Telephone
	Parkes Ronald T	Pacific Telephone
1955	BARTLEY WM H	The Pacific Telephone & Telegraph Co.
	ERICKSON LUCILLE	The Pacific Telephone & Telegraph Co.
	KIDDER DUANE E	The Pacific Telephone & Telegraph Co.
	RUF BEN A	The Pacific Telephone & Telegraph Co.
	SAVAGE MARGUERITE	The Pacific Telephone & Telegraph Co.
	WILTON MARIE	The Pacific Telephone & Telegraph Co.

### 397 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1995	OCCUPANT UNKNOWN	Cole Information

### 399 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Hoosier Harold bartndr r	R. L. Polk & Co.

### 400 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ST MARTEN APARTMENTS	EDR Digital Archive
	EILEEN LABERGE	EDR Digital Archive
	LUCIA MATTOX	EDR Digital Archive
	ROBIN BYRD	EDR Digital Archive
	CLARKE MCDUGALD	EDR Digital Archive
	JAMES LESTER	EDR Digital Archive
	DOROTHY ADAM	EDR Digital Archive
	ELAINE FELLOWS	EDR Digital Archive
	ROBERT FELLOWS	EDR Digital Archive
	RACHEL HAMMOND	EDR Digital Archive
	MATTHEW SIMMONS	EDR Digital Archive
2017	ST MARTEN APARTMENTS	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	BILL KING	Cole Information
	JANET SHAW	Cole Information
	ROBIN BYRD	Cole Information
	JENNIFER LESTER	Cole Information
	MICHAEL SMITH	Cole Information
	CHEZKA SOLON	Cole Information
	SHAUN FRAZIER	Cole Information
	CHRISTEN GADD	Cole Information
	DAVID ELLARD	Cole Information
	SAKI SHIMIZU	Cole Information
	MATTHEW SIMMONS	Cole Information
2014	JOHNATHAN VAKNIN	Cole Information
	SAINTMARTEN APARTMENTS	Cole Information
	REBECCA DAVIS	Cole Information
	BENJAMIN GAUNT	Cole Information
	KEVIN NUMOTO	Cole Information
	JANET SHAW	Cole Information
	ROBIN BYRD	Cole Information
	SOLON CHEZKA	Cole Information
	JENNIFER LESTER	Cole Information
	RYAN OTERO	Cole Information
	MICHAEL SMITH	Cole Information
	CHRISTEN GADD	Cole Information
	KALMAN SAUFNAUER	Cole Information
	SARAH BONDICK	Cole Information
	CASEY GONSALVES	Cole Information
	CLARK MCDUGALD	Cole Information
	CHRISTOPHER PENFIELD	Cole Information
	ANDREW DONOVAN	Cole Information
PABLO ORTIZ	Cole Information	
MATTHEW SIMMONS	Cole Information	
2010	ST MAARTEN APARTMENTS	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2010	AILIEN DANG	Cole Information
	JANET SHAW	Cole Information
	KELLEY KEITH	Cole Information
	JENNIFER LESTER	Cole Information
	KALMAN SAUFNAUER	Cole Information
	CHRISTEN GADD	Cole Information
	ELI BROWN	Cole Information
	L FLOWERS	Cole Information
	DAVID ELLARD	Cole Information
	ROBERT LIMAHELU	Cole Information
	WILLIAM WHIPPLE	Cole Information
2006	MATTHEW SIMMONS	Cole Information
	ST MAARTEN APTS	Haines Company, Inc.
	S 10 BROWN EII	Haines Company, Inc.
	LIMAHELU Robert	Haines Company, Inc.
	PACQUET Runaco	Haines Company, Inc.
	SAUFNAUERKalman	Haines Company, Inc.
	SIMMONS Matthew	Haines Company, Inc.
	SIMON Christian	Haines Company, Inc.
	STMAARTEN	Haines Company, Inc.
	STEWART Jenn lfer	Haines Company, Inc.
2005	TRISKA Chiara	Haines Company, Inc.
	WHIPPLE Willam S	Haines Company, Inc.
	SAINT MAARTEN APARTMENTS	Cole Information
	CHRIS JOHNSON	Cole Information
	CHIARA TRISKA	Cole Information
	JEAN CANTRELL	Cole Information
	JENNIFER LESTER	Cole Information
	SANDRA WILLARD	Cole Information
	ANDREW PATTERSON	Cole Information
	KATHLEEN LEONARD	Cole Information
MIKI YAMAMOTO	Cole Information	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	ELI BROWN	Cole Information
	L FLOWERS	Cole Information
	DICARLOS THOMAS	Cole Information
	JOSE LOYOLA	Cole Information
	WILLIAM WHIPPLE	Cole Information
	DENISE CHU	Cole Information
	MICHAEL LAWSON	Cole Information
2000	DAVID BAYER	Cole Information
	7 ALLEN RONALD	Pacific Bell
	8 ST MAARTEN APARTMENTS	Pacific Bell
	8 MCDUGALD CLARKE	Pacific Bell
	24 DAVIS MATTHEW S	Pacific Bell
	36 NAFZIGER KEVIN J	Pacific Bell
	37 WORK PHILLIP B	Pacific Bell
	38 SAUFNAUER KALMAN E	Pacific Bell
	39 CARSON GARY	Pacific Bell
	ST MAARTEN APARTMENTS	Cole Information
	ELVA MITCHELE	Cole Information
	JOSHUA KADERLAN	Cole Information
	JEAN CANTRELL	Cole Information
	SEAN CRUME	Cole Information
	JAMES WAGNER	Cole Information
	MATTHEW DAVIS	Cole Information
	CLARKE MCDUGALD	Cole Information
	KALMAN SAUFNAUER	Cole Information
	PHILLIP WORK	Cole Information
	KEVIN NAFZIGER	Cole Information
1996	8 ST MAARTEN APARTMENTS	PACIFIC BELL DIRECTORY
	34 PRYOR J L	PACIFIC BELL DIRECTORY
	37 WORK PHILLIP B	PACIFIC BELL DIRECTORY
	38 SAUFNAUER KALMAN E	PACIFIC BELL DIRECTORY
	39 CARSON GARY	PACIFIC BELL DIRECTORY

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1995	NAKAMACHI, KATSUHI	Cole Information
	WORK, PHILLIP B	Cole Information
	SAUFNAUER, KALMAN E	Cole Information
	WOODWARD, EMMANUE	Cole Information
	LUCAS, N K	Cole Information
	CARSON, GARY	Cole Information
1992	3 LUCAS N KIRK	PACIFIC BELL DIRECTORY
	22 MICHAEL ENDER	PACIFIC BELL DIRECTORY
	24 CRAIK J	PACIFIC BELL DIRECTORY
	36 SANDOE S	PACIFIC BELL DIRECTORY
	37 WORK PHILLIP B	PACIFIC BELL DIRECTORY
	38 SAUFNAUER KALMAN E	PACIFIC BELL DIRECTORY
	39 CHEN WEI CHIEN	PACIFIC BELL DIRECTORY
	CHEN, W	Cole Information
	MICHAEL, ENDER	Cole Information
	LUCAS, N K	Cole Information
1991	Cocchiarella L	PACIFIC BELL WHITE PAGES
	Michael Ender	PACIFIC BELL WHITE PAGES
	Quady D E	PACIFIC BELL WHITE PAGES
	Quagliano Justine Almda	PACIFIC BELL WHITE PAGES
	Quagliata Narcissus	PACIFIC BELL WHITE PAGES
	Quagliata Narcissus	PACIFIC BELL WHITE PAGES
	Quagliotti C	PACIFIC BELL WHITE PAGES
	Rodman Jim	PACIFIC BELL WHITE PAGES
	Saufnauer Kalman E	PACIFIC BELL WHITE PAGES
	Watkins S & P	PACIFIC BELL WHITE PAGES
	Watkins Sam	PACIFIC BELL WHITE PAGES
Watkins Stefan	PACIFIC BELL WHITE PAGES	
Work Phillip B	PACIFIC BELL WHITE PAGES	
1986	Bansen C A	PACIFIC BELL WHITE PAGES
	Dethier D	PACIFIC BELL WHITE PAGES
	Dethloff A F	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Dethmers G	PACIFIC BELL WHITE PAGES
	Garrison A	PACIFIC BELL WHITE PAGES
	i Houlihan Robt E	PACIFIC BELL WHITE PAGES
	Israels Sarah Hanson	PACIFIC BELL WHITE PAGES
	Kaess Robt	PACIFIC BELL WHITE PAGES
	i Kline Byron	PACIFIC BELL WHITE PAGES
	Kline C	PACIFIC BELL WHITE PAGES
	Kumazaki Tadashiro	PACIFIC BELL WHITE PAGES
	Kumik Joanna	PACIFIC BELL WHITE PAGES
	Kumlachew S	PACIFIC BELL WHITE PAGES
	Kummer Christoph	PACIFIC BELL WHITE PAGES
	Nishimura Terry	PACIFIC BELL WHITE PAGES
	Nishino A	PACIFIC BELL WHITE PAGES
	Saufnauer Kalman E	PACIFIC BELL WHITE PAGES
	Seaman How ard	PACIFIC BELL WHITE PAGES
	Svenson D	PACIFIC BELL WHITE PAGES
	Sze Kim Por	PACIFIC BELL WHITE PAGES
	Walters Barbara Ann	PACIFIC BELL WHITE PAGES
	Warshaw J	PACIFIC BELL WHITE PAGES
	Work Phillip B	PACIFIC BELL WHITE PAGES
1980	Baker Stephen M	Pacific Telephone
	Buschman R W	Pacific Telephone
	Dethier D	Pacific Telephone
	Garrison A	Pacific Telephone
	Gastelum Tricia	Pacific Telephone
	Goldman M	Pacific Telephone
	Gunhouse P	Pacific Telephone
	Haga Y	Pacific Telephone
	Jerman Chris W	Pacific Telephone
	Johnson Barbara Ann	Pacific Telephone
Kaess Robt	Pacific Telephone	
Metz Don L	Pacific Telephone	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Osugi Kazue	Pacific Telephone
	Reichle S	Pacific Telephone
	Ruvkun P	Pacific Telephone
	Saufnauer Kalman E	Pacific Telephone
	Schafer Jack	Pacific Telephone
	Serstad L M	Pacific Telephone
	Skellenger H D	Pacific Telephone
	Skellenger Rose A	Pacific Telephone
	Smith D	Pacific Telephone
	Svenson D	Pacific Telephone
1975	Work Phillip B	Pacific Telephone
	BUSCHMAN R W	Pacific Telephone
	FOWLER M	Pacific Telephone
	HANKINS B	Pacific Telephone
	HAVENS C MRS	Pacific Telephone
	HILL ROBT EJR	Pacific Telephone
	KOPERA KI DAVID	Pacific Telephone
	LOTZ BARRY	Pacific Telephone
1970	PETERSON GEO E	Pacific Telephone
	ARMSTRONG D	Pacific Telephone Directory
	BRINK L H	Pacific Telephone Directory
	DRISKILL P M	Pacific Telephone Directory
	HAVENS C MRS	Pacific Telephone Directory
	JOHNSON ZELIA	Pacific Telephone Directory
	JONAS HERMAN W JR	Pacific Telephone Directory
	LOZENICINS T	Pacific Telephone Directory
	MCGUIRE J L	Pacific Telephone Directory
	PARENT C S	Pacific Telephone Directory
	ROSS R L	Pacific Telephone Directory
	SADOON MOSA	Pacific Telephone Directory
	SAUFNAUER KALMAN E	Pacific Telephone Directory
	SEVERNS ROBT	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	SEVERNS SUZANNE	Pacific Telephone Directory
	SKELLENGER H D	Pacific Telephone Directory
	SKELLENGER ROSE	Pacific Telephone Directory
	SULTAN JAMAL A	Pacific Telephone Directory
	TAYLOR LYNN S	Pacific Telephone Directory
	WELSH ROBT J SR	Pacific Telephone Directory
	1967	APARTMENTS
A BERRIGAN HELEN MRS		R. L. Polk Co.
VACANT		R. L. Polk Co.
SKELLENGER HARPY DOW		R. L. Polk Co.
HAVEMS CARRIE E MRS		R. L. Polk Co.
JOHNSON ZELLA A MRS		R. L. Polk Co.
THOMAS IRVING		R. L. Polk Co.
MACARIO PAUL		R. L. Polk Co.
RUEBEN DAVID		R. L. Polk Co.
LEE ROGER E		R. L. Polk Co.
TAYLOR LYNN S		R. L. Polk Co.
PARENT CLEMIE MRS		R. L. Polk Co.
SIDDELL F E		R. L. Polk Co.
BUCH CHARLES		R. L. Polk Co.
PARTAIN VIRGINIA M		R. L. Polk Co.
BAKER LOUISE		R. L. Polk Co.
SAUFNAUER KALMAN		R. L. Polk Co.
CLEVELAND LIND		R. L. Polk Co.
SALTAN J		R. L. Polk Co.
MARKLAM IREAN C MRS		R. L. Polk Co.
VACANT		R. L. Polk Co.
VACANT		R. L. Polk Co.
BEARDEN STEVEN		R. L. Polk Co.
MAUST DALE E		R. L. Polk Co.
ALCALA DAVID		R. L. Polk Co.
FALK WALTER		R. L. Polk Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	BOCKEL EMILY	R. L. Polk Co.
	BRINK LEOTA H MRS	R. L. Polk Co.
	PERKINS MARJORIE F MRS	R. L. Polk Co.
	PAUL LARRY	R. L. Polk Co.
1962	Aiello G	Pacific Telephone
	Blakeney Philip N	Pacific Telephone
	Choate Chas M	Pacific Telephone
	English Ferne	Pacific Telephone
	Faye Dan	Pacific Telephone
	Guest Saml Jr	Pacific Telephone
	Havens Carrie	Pacific Telephone
	Hussey Jas R	Pacific Telephone
	Johnston F B W	Pacific Telephone
	Manson Norman	Pacific Telephone
	Mitchell Velma	Pacific Telephone
	Skellenger H D	Pacific Telephone
	Taylor Lynn S	Pacific Telephone
White Nancy	Pacific Telephone	
1955	ALLEN JULIAN R	The Pacific Telephone & Telegraph Co.
	ANDERSON WM N	The Pacific Telephone & Telegraph Co.
	BURKE WM	The Pacific Telephone & Telegraph Co.
	DAVIS NORMAN T	The Pacific Telephone & Telegraph Co.
	FAHEY W E	The Pacific Telephone & Telegraph Co.
	GARRISON MARJORIE	The Pacific Telephone & Telegraph Co.
	GIDEO IRENE E	The Pacific Telephone & Telegraph Co.
	HAVEL HARRY R	The Pacific Telephone & Telegraph Co.
	HAVENS HOWARD D	The Pacific Telephone & Telegraph Co.
	HICKS ROGER F	The Pacific Telephone & Telegraph Co.
	KLEIBERG TORGER MRS	The Pacific Telephone & Telegraph Co.
	MULLIGAN VIRGINIA	The Pacific Telephone & Telegraph Co.
	MULLIN MILDRED E	The Pacific Telephone & Telegraph Co.
	PIERCE NORMAN	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	SEABORG DONALD C	The Pacific Telephone & Telegraph Co.
	SEVERSON N	The Pacific Telephone & Telegraph Co.
1950	ALLEN JULIAN R	The Pacific Telephone & Telegraph Co.
	ANDERSON FRANK R	The Pacific Telephone & Telegraph Co.
	BAUTISTA BENNY R	The Pacific Telephone & Telegraph Co.
	DONAHUE R MIRS R	The Pacific Telephone & Telegraph Co.
	DOINNELLY F R	The Pacific Telephone & Telegraph Co.
	DYER JAMES T R	The Pacific Telephone & Telegraph Co.
	FRATES J WALTER R	The Pacific Telephone & Telegraph Co.
	HATFIELD H EDNA R	The Pacific Telephone & Telegraph Co.
	HAVEL HARRY R	The Pacific Telephone & Telegraph Co.
	HOWARD JAS J R	The Pacific Telephone & Telegraph Co.
	LE FEBER LUCILE R	The Pacific Telephone & Telegraph Co.
	MC ELHERRON EDNIA L R	The Pacific Telephone & Telegraph Co.
	MILLER RAYNSOND P R	The Pacific Telephone & Telegraph Co.
	PATTY BETTY R	The Pacific Telephone & Telegraph Co.
	PENRY COLEEN MRS R	The Pacific Telephone & Telegraph Co.
	POWER JOHN R R	The Pacific Telephone & Telegraph Co.
	REXEISEN FRANK R	The Pacific Telephone & Telegraph Co.
	ROBERTS MAXINE E R	The Pacific Telephone & Telegraph Co.
	ROGERS MILDRED MRS R	The Pacific Telephone & Telegraph Co.
	SMITH ADELAIDE R	The Pacific Telephone & Telegraph Co.
SULLIVAN RUTH R	The Pacific Telephone & Telegraph Co.	
1945	FISH S C R	The Pacific Telephone & Telegraph Co.
	HATFIELD H EDNA R	The Pacific Telephone & Telegraph Co.
	HAVEL HARRY R	The Pacific Telephone & Telegraph Co.
	JARRELL TOM R	The Pacific Telephone & Telegraph Co.
	MILLER RAYMOND P R	The Pacific Telephone & Telegraph Co.
	PATTY BETTY R	The Pacific Telephone & Telegraph Co.
	SMITH ADELAIDE R	The Pacific Telephone & Telegraph Co.
	TOBENKIN JOSEPH R	The Pacific Telephone & Telegraph Co.
VAN VALKENBURG LOTTIE R	The Pacific Telephone & Telegraph Co.	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	WHITE LURA B R	The Pacific Telephone & Telegraph Co.
1943	ALLEN Julian Mabel V h	R. L. Polk & Co.
	Bias Jos h	R. L. Polk & Co.
	Davis Eliz h	R. L. Polk & Co.
	Dw yer Margt wid J P r	R. L. Polk & Co.
	Dyer Antoinette Mrs beauty opr r	R. L. Polk & Co.
	Dyer Jas T h	R. L. Polk & Co.
	GILMAN Beatrice I Mrs emp Ray Paxton h	R. L. Polk & Co.
	Harr W C h	R. L. Polk & Co.
	Hauck Donald H Genevieve R h	R. L. Polk & Co.
	Havel Harry Sara slsmn Haas Bros h	R. L. Polk & Co.
	Haverstock Geo F r	R. L. Polk & Co.
	Kimberlin R O Mrs h	R. L. Polk & Co.
	Le Feber H Lucille tchr Pub Sch h	R. L. Polk & Co.
	Miller Raymond P Hazel credit mgr Chanselor & Lyon Co h	R. L. Polk & Co.
	Patty Betty M slsw n Roos Bros h	R. L. Polk & Co.
	Porter R A h	R. L. Polk & Co.
	Reilly Philips A Elnor R USNR h	R. L. Polk & Co.
	Richelieu Apartments	R. L. Polk & Co.
	Rook J A Mrs h	R. L. Polk & Co.
	Soderquist Rune Louella ptrnmkr h	R. L. Polk & Co.
	Taylor Jas H Helen M h	R. L. Polk & Co.
	Tieburg Martin h	R. L. Polk & Co.
	Tobenkin Jos Rose C drugs h	R. L. Polk & Co.
1938	FERGUSON L D R	Pacific Telephone
	GERTRIDGE CHARLES R	Pacific Telephone
	GORMAN MATE MISS NURSE R	Pacific Telephone
	MARION SIBYL R	Pacific Telephone
	MILLER RAYMOND P R	Pacific Telephone
	PATTY BETTY R	Pacific Telephone
1933	AYRES FRANCES DENTAL NURSE H	R. L. Polk & Co.
	BECKETT THEO T SLSMN A O CO H	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	BELFILS ELLEN C MRS MGR RICHELIEU APTS H	R. L. Polk & Co.
	BELFILS LOUIS E (ELLEN C) SLSMN H	R. L. Polk & Co.
	BERG WM (ROSE) PUBLR H	R. L. Polk & Co.
	BERGER LILLIAN MRS STEN CAL STATE AUTO ASSN R	R. L. Polk & Co.
	BERGER WM (LILLIAN) LAWYER H	R. L. Polk & Co.
	CAMP LUCILE BEAUTY OPR H	R. L. Polk & Co.
	DOUGHERTY EDW (MARIE H) PRINTER H	R. L. Polk & Co.
	FLEMING HARRIETT MRS H	R. L. Polk & Co.
	GEARY MAYBELLE TCHR OKLD PUB SCH R	R. L. Polk & Co.
	GILLIAM MARY CLK R	R. L. Polk & Co.
	HELLER CHAS C (FANNIE) SLSMN H	R. L. Polk & Co.
	HILL LEROY M (MAUD) ENG H	R. L. Polk & Co.
	HOBSON COLUMBUS W (CLARA) SLSMN COLVIN TEMPLETON INC H	R. L. Polk & Co.
	HULL EDWIN C (EDNA) BKPR H	R. L. Polk & Co.
	JACKS PAULINE MRS H	R. L. Polk & Co.
	LUCAS CECILIA P CLK R	R. L. Polk & Co.
	LUCAS HENRY M (CECILE) H	R. L. Polk & Co.
	MCCAULEY DEWEY C MGR AIRWAY BRANCH OF OKLD H	R. L. Polk & Co.
	MEIRING HARRY (MARJORIE) COOK H	R. L. Polk & Co.
	PAXTON ALBT MOT PICT OPR H	R. L. Polk & Co.
	RICHELIEU APARTMENTS	R. L. Polk & Co.
	SCOTT JAS W (LOLA) BARBER H	R. L. Polk & Co.
	WELTZ WM F (CATH) INS BROKER	R. L. Polk & Co.
	WETMORE MARVEL CLK R	R. L. Polk & Co.
	WHETMORE FRED H	R. L. Polk & Co.
	WOOD KERSEY J (LUCILE) ASST TELLER AM TR CO H	R. L. Polk & Co.
1928	Airey Marion F asst sec Oakland Assn of Ins Aets H	R.L. Polk and Co of California
	Balny Eug J Rosalie C mgr Richelseu Apts H	R.L. Polk and Co of California
	mont G J H	R.L. Polk and Co of California

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	av Hiram M Cora E H	R.L. Polk and Co of California
	Bade Too L Effitta Ol H	R.L. Polk and Co of California
	P Paul H Helen M slsmn h H	R.L. Polk and Co of California
	av G M H	R.L. Polk and Co of California
	Cherry Lena B tchr OPS R	R.L. Polk and Co of California
	Ermert Albt R	R.L. Polk and Co of California
	W Mason Minnie dept mgr R N Brodie Co H	R.L. Polk and Co of California
	Plymouth Francis sten Marchant Calc Mach Co H	R.L. Polk and Co of California
	rd Robt L H	R.L. Polk and Co of California
	Jarrell Ow en photos H	R.L. Polk and Co of California
	Mc EFayden Helen H	R.L. Polk and Co of California
	Mc Gayden Helen sec Bkly Steel Constr Co R	R.L. Polk and Co of California
	S Christine H	R.L. Polk and Co of California
	Pals Richd E H	R.L. Polk and Co of California
	Glencort John L Doris L H	R.L. Polk and Co of California
	byterian Sami S Mary slsmn H	R.L. Polk and Co of California
	o L nu P Winirofed Bi betatut tyhep	R.L. Polk and Co of California
	H	R.L. Polk and Co of California
	Van Noy Ralph L H	R.L. Polk and Co of California
	h Marion H Ethel H	R.L. Polk and Co of California

### 402 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1995	OCCUPANT UNKNOWN	Cole Information
1992	WILLIAMS, M	Cole Information
1967	OBRIEN LOIS M MRS	R. L. Polk Co.
1933	BUCKNER H DE WITT PRINTER	R. L. Polk & Co.

### 403 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	FERNANDES JOSEPH	R. L. Polk Co.
1955	PHILLIPS P F ALAMEDA	The Pacific Telephone & Telegraph Co.
1945	LARSEN HELEN R ALAMEDA	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	DARLING ELLEN T MRS H ALAMEDA	R. L. Polk & Co.
1928	h Elen T wid Lafayette H	R.L. Polk and Co of California

### 404 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	No Current Listing	Haines Company, Inc.
2005	XAVIER WHITE	Cole Information
1970	BROWN DORIS A	Pacific Telephone Directory
	BROWN VIRGILYN	Pacific Telephone Directory
1967	RAWLINGS CHARLES	R. L. Polk Co.
	BROWN DORIS A MRS	R. L. Polk Co.
1962	Brow n Doris A	Pacific Telephone
	Brow n Virgilyn	Pacific Telephone
1955	BROWN DORIS A	The Pacific Telephone & Telegraph Co.
1950	BROWN V L R	The Pacific Telephone & Telegraph Co.
1943	Dyer Bennet Phyllis M Mrs ofc sec Patterson Bros r	R. L. Polk & Co.
	Dyer Bennet Richd S Phyllis M h	R. L. Polk & Co.
1933	STEWART CHAS F CLK R	R. L. Polk & Co.
	STEWART WM W (MARGT) WTCHMN H	R. L. Polk & Co.
1928	Pac Chas F clk R	R.L. Polk and Co of California
	Etna Eleanor M typist R	R.L. Polk and Co of California
	H Wm W Margt A formn Nati Lead Co H	R.L. Polk and Co of California

### 405 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	GEISHAKER BEATRICE ALAMEDA	Pacific Telephone Directory
1967	DUNMEYER WM P	R. L. Polk Co.
1962	Forbes Elizabeth	Pacific Telephone
	Walter Emilie	Pacific Telephone
1955	OSBURN MARION M	The Pacific Telephone & Telegraph Co.
	TORRICELLI PAULINE R ALAMEDA	The Pacific Telephone & Telegraph Co.
	WALTER EMILIE	The Pacific Telephone & Telegraph Co.
1950	OSBURN MARLION M R	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	WALTER ENILIE MRS R	The Pacific Telephone & Telegraph Co.
1945	WALTER EMILIE MRS R	The Pacific Telephone & Telegraph Co.
1943	Waldrop John W Trena S h	R. L. Polk & Co.
	Walter Emily hskpr r	R. L. Polk & Co.
	Walter Emily wid Jos h	R. L. Polk & Co.
1933	FUNORA ANN R	R. L. Polk & Co.
	HAWKINS THOS M (ELLA) SLSMN H	R. L. Polk & Co.
1928	H Esmond smstrs H	R.L. Polk and Co of California

### 406 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	STEIN HENRY	R. L. Polk Co.

### 407 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	HANBRIDGE FRANK B R ALAMEDA	The Pacific Telephone & Telegraph Co.
1950	HANBRIDGE FRANK B R	The Pacific Telephone & Telegraph Co.
1945	FRULAN ALFRED R	The Pacific Telephone & Telegraph Co.
1943	Frulan Alf driver h	R. L. Polk & Co.
1938	LARSEN LOUIE C R	Pacific Telephone
1933	LARSEN LOUIS C (ANNIE E) DRILLER H ALAMEDA	R. L. Polk & Co.
1928	Mfg Co H	R.L. Polk and Co of California
	H John Mary E mach H	R.L. Polk and Co of California
	Winifred M stdt R	R.L. Polk and Co of California

### 408 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	VERONICA HARO	Cole Information
2014	VERONICA HARO	Cole Information
2010	JESUS SOLORIO	Cole Information
2006	o SOLORIO Jesus	Haines Company, Inc.
2000	CHOW WANG MAMIE	Pacific Bell
	MAMIE CHOW-WANG	Cole Information
1991	Huetteman Thomas	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	HIGHSMITH RICHARD	Pacific Telephone
	MC LAIN ROBT W	Pacific Telephone
1967	LAYNE C DALE	R. L. Polk Co.
1945	RIPLEY CHARLOTTE R	The Pacific Telephone & Telegraph Co.
1943	Laymance David May shipydw kr h	R. L. Polk & Co.
	Laymance Donald shipydw kr r	R. L. Polk & Co.
	Laymance Maxine tel opr r	R. L. Polk & Co.
	RIPLEY Mae C h	R. L. Polk & Co.
1933	AITKEN MINNIE H (WID A M) H	R. L. Polk & Co.
1928	Co Minnie H wid Andw H	R.L. Polk and Co of California
	Hilke W Antoinette R	R.L. Polk and Co of California

### 409 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	ELLISOII JOLHN A R	The Pacific Telephone & Telegraph Co.
1943	Wisshack Ada R emp MCMCo h	R. L. Polk & Co.
1928	Kintsel Ruth K Mrs H	R.L. Polk and Co of California

### 410 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	JEAN NELSON	Cole Information
1970	HOKIT CHAS ALAMEDA	Pacific Telephone Directory
	VANGUNDY KEITH ALAMEDA	Pacific Telephone Directory
1955	BYRD W M ALAMEDA	The Pacific Telephone & Telegraph Co.
	LOCKHART DAVID M ALAMEDA	The Pacific Telephone & Telegraph Co.
	WARREN T H ALAMEDA	The Pacific Telephone & Telegraph Co.

### 411 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	SHARON LINDNER	EDR Digital Archive
	IGNASIO MEDRANO	EDR Digital Archive
2017	JENNIFER RAMOS	Cole Information
	JOLEIGH DAVIS	Cole Information
	ANAYA GONDA	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	SHARON LINDNER	Cole Information
	IGNASIO MEDRANO	Cole Information
2014	JENNIFER RAMOS	Cole Information
	JOLEIGH DAVIS	Cole Information
	YASUKO WILKES	Cole Information
	SABAH RID	Cole Information
	IGNASIO MEDRANO	Cole Information
2010	SAGE MALLORY	Cole Information
	JOYCE MONROE	Cole Information
	BRIAN WILKES	Cole Information
	YONAS OGBAGABER	Cole Information
	FITSUM GHEBREEGZIABHER	Cole Information
2006	MONROEJoyce	Haines Company, Inc.
2005	STEVEN WILLIAMS	Cole Information
	DANIELA LOPEZ	Cole Information
	DANNY FITELSON	Cole Information
2000	3 BALLE SHEILA	Pacific Bell
	7 MONROE J M	Pacific Bell
	8 POLITZ KIER	Pacific Bell
	K MUNKANTA	Cole Information
	SHEILA BALLE	Cole Information
	J MONROE	Cole Information
	LEVON MILTON	Cole Information
	MELISSA HA	Cole Information
	KEIR POLITZ	Cole Information
	C BARRY	Cole Information
1996	7 MONROE J M	PACIFIC BELL DIRECTORY
1995	MONROE, J M	Cole Information
	SASHINGTON, ALBERT	Cole Information
	LACEY, DOROTHY	Cole Information
	BROWN, ESTELLE	Cole Information
1992	1 SASHINGTON ALBERT & GLORIA	PACIFIC BELL DIRECTORY

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1992	7 MONROE J M	PACIFIC BELL DIRECTORY
1991	Felder Omar X	PACIFIC BELL WHITE PAGES
	Monroe J M	PACIFIC BELL WHITE PAGES
	Sashington Albert & Gloria	PACIFIC BELL WHITE PAGES
1986	Monroe J M	PACIFIC BELL WHITE PAGES
1980	Moffett E S	Pacific Telephone
	Monroe J M	Pacific Telephone
	Williams J R	Pacific Telephone
1975	KAESS ROBT	Pacific Telephone
1970	BURKE JAS JOS	Pacific Telephone Directory
	CLARK E W	Pacific Telephone Directory
	GUSTAFSON NELS	Pacific Telephone Directory
	KAESS ROBT	Pacific Telephone Directory
	MARLETTE WM G SR	Pacific Telephone Directory
	MCGREEVY OLIVE MRS ALAMEDA	Pacific Telephone Directory
	MENEFEE ALFRED H	Pacific Telephone Directory
	NESS DEAN	Pacific Telephone Directory
	TURNER DAVID	Pacific Telephone Directory
1967	APARTMENTS	R. L. Polk Co.
	GUSTAFSON NELS 9 GL	R. L. Polk Co.
	MENEFEE ALF GLI 6139	R. L. Polk Co.
	VACANT	R. L. Polk Co.
	PITTS BFTTY N MRS	R. L. Polk Co.
	HURST LOYD	R. L. Polk Co.
	VACANT	R. L. Polk Co.
	STARK JOHN	R. L. Polk Co.
1955	MCGREEVY OLIVE MRS R ALAMEDA	The Pacific Telephone & Telegraph Co.
	TOLMAN W	The Pacific Telephone & Telegraph Co.
1943	Berry Ruth E h	R. L. Polk & Co.
1933	BERRY MARY J (WID J B) H	R. L. Polk & Co.
	BERRY RUTH R	R. L. Polk & Co.
1928	r Mary J wid Jas E H	R.L. Polk and Co of California

## FINDINGS

### 412 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	JOHN HEIDEN	Cole Information
2010	SCOTT HAMMER	Cole Information
2006	No Current Listing	Haines Company, Inc.
2005	OCCUPANT UNKNOWN	Cole Information
1995	HAMNER, SCOTT R	Cole Information
1991	Frank Robert	PACIFIC BELL WHITE PAGES
1980	Brow n Darlene E	Pacific Telephone
1970	BOEK CHAS H	Pacific Telephone Directory
1967	BOEK CHARLES H	R. L. Polk Co.
1962	Dornback G W	Pacific Telephone
1933	BOEK CHAS H (MABEL) H	R. L. Polk & Co.
1928	Beak Chas H Mabel formn Times Star Co H	R.L. Polk and Co of California

### 413 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Panell John H	R.L. Polk and Co of California

### 414 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	MOLLY MOYER	Cole Information
	MONICA SANTIAGO	Cole Information
2014	MOLLY MOYER	Cole Information
	MONICA SANTIAGO	Cole Information
2010	JUAN DOMINGO	Cole Information
2000	R G E PUBLISHING	Pacific Bell
	R G E PUBLISHING	Cole Information
1996	R G E PUBLISHING	PACIFIC BELL DIRECTORY
	B RADUSKY R	PACIFIC BELL DIRECTORY
1995	RGE PUBLISHING	Cole Information
	RADUSKY, R	Cole Information
	DUFNER, MICHAEL	Cole Information
1992	R G E PUBLISHING	PACIFIC BELL DIRECTORY
	A LAPKOFF SHELLEY PHD	PACIFIC BELL DIRECTORY

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1992	B RADUSKY R	PACIFIC BELL DIRECTORY
	C DUFNER MICHAEL	PACIFIC BELL DIRECTORY
	R G E PUBLISHING	Cole Information
	RADUSKY, R	Cole Information
	DUFNER, MICHAEL	Cole Information
1991	Lapkoff Sheiley PHD	PACIFIC BELL WHITE PAGES
	Miller Tim	PACIFIC BELL WHITE PAGES
	R G E Publishing	PACIFIC BELL WHITE PAGES
	Radusky R	PACIFIC BELL WHITE PAGES
	B Radw an Farid	PACIFIC BELL WHITE PAGES
1986	Daw son Gary Wim	PACIFIC BELL WHITE PAGES
	Marquette John	PACIFIC BELL WHITE PAGES
1970	RENEE HOUSE OF FASHIONS	Pacific Telephone Directory
1967	BROSE CO THE MFG REP	R. L. Polk Co.
	A SCOTT CLAUDE T	R. L. Polk Co.
	C VACANT	R. L. Polk Co.
1962	Brose Company The	Pacific Telephone
	Bryan Steam Corp	Pacific Telephone
	Imperial Damper Co	Pacific Telephone
	Orr & Sembow er Inc	Pacific Telephone
	Quickdraft Co	Pacific Telephone
	Thrush H A Co	Pacific Telephone
	Wickes Boiler Co	Pacific Telephone
1955	BROSE COMPANY THE	The Pacific Telephone & Telegraph Co.
	BRYAN STEAM CORP	The Pacific Telephone & Telegraph Co.
	D URSO S J ALAMEDA	The Pacific Telephone & Telegraph Co.
	GABRIEL BOILER & FABRICATION CO	The Pacific Telephone & Telegraph Co.
1950	ARMNSTRONG LORAN H R	The Pacific Telephone & Telegraph Co.
	HOULIHAN JAS MRS R	The Pacific Telephone & Telegraph Co.
	JACOBI G MRS R	The Pacific Telephone & Telegraph Co.
	JENKINSON FLORA DI R	The Pacific Telephone & Telegraph Co.
1945	ANDERSON MELVIN L R	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	JACOBI G MRS R ALAMEDA	The Pacific Telephone & Telegraph Co.
	MELCHONIAN A J R	The Pacific Telephone & Telegraph Co.
1943	Anderson Miriam K Louella clk FLB r	R. L. Polk & Co.
	CHONG Wong Indy	R. L. Polk & Co.
1938	HARRIE J W R	Pacific Telephone
1933	CUSHING DANA F BAKERY	R. L. Polk & Co.
	SOMMERS FRED N GRO	R. L. Polk & Co.
	SPIELMAN CARL W (MARGT) MGR MEGLIN DANCE STUDIOS H	R. L. Polk & Co.
1928	gregational Robt G barber R	R.L. Polk and Co of California
	Elinw ood Robt E Cecil law yer H	R.L. Polk and Co of California
	av Hal W Eliz F clk H	R.L. Polk and Co of California
	Perrotti Anthony musician H	R.L. Polk and Co of California

### 415 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	MERTZIG J P ALAMEDA	Pacific Telephone Directory
1955	MERTZIG J P ALAMEDA	The Pacific Telephone & Telegraph Co.
	MERTZIG MARGARETTE ALAMEDA	The Pacific Telephone & Telegraph Co.
	SANDS ISABELL	The Pacific Telephone & Telegraph Co.
1950	CAIVIN JACK MRS R	The Pacific Telephone & Telegraph Co.
	MERTZIG J P R	The Pacific Telephone & Telegraph Co.
	MERTZIG MARGARETTE R	The Pacific Telephone & Telegraph Co.
1945	BAXTER ROY S R	The Pacific Telephone & Telegraph Co.
1943	Cowan Amy wid Austin h	R. L. Polk & Co.
	Cowan Dorothy Mrs r	R. L. Polk & Co.
1933	LINDSAY FRANK S (LOUISE J) SLSMN H	R. L. Polk & Co.
	VOGEL MARGE DEPT MGR I MAGNIN & CO R ALAMEDA	R. L. Polk & Co.
	VOGEL ROLLA R (MARGUERITE) SLSMN F M FERGUSON CO H ALAMEDA	R. L. Polk & Co.
1928	rr Margt Mrs slsw mn R	R.L. Polk and Co of California
	rr Rolla R Marguerite mgr J E Shoemaker Co H	R.L. Polk and Co of California

## FINDINGS

### 416 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	REESE GORDON B REAL ESTATE	Cole Information
1995	OCCUPANT UNKNOWN	Cole Information
1992	REESE GORDON B REAL ESTATE	PACIFIC BELL DIRECTORY
	LOBELLO AL CONTR	Cole Information
1991	I LOBELLO AL CON TRACTOR & BUILDE R	PACIFIC BELL WHITE PAGES
	Mc Dermott Eugene	PACIFIC BELL WHITE PAGES
	Mc Dermott Frank	PACIFIC BELL WHITE PAGES
1980	LOBELLO AL CONTRACTOR & BUILDER	Pacific Telephone
1975	LOBELLO AL CONTRACTOR & BUILOER	Pacific Telephone
1970	LOBELLO AL CONTRACTOR & BUILDER	Pacific Telephone Directory
	MCCAHAN JOHN R ALAMEDA	Pacific Telephone Directory
1967	LOKELO AL GENL LDOG COTP	R. L. Polk Co.
1962	LOBELLO AL CONTRACTOR & BUILDER	Pacific Telephone
1955	LOBELLO AL GENL CONTR & BLDR	The Pacific Telephone & Telegraph Co.
1943	Clifford Esther A Mrs beauty shop	R. L. Polk & Co.
1933	BROWN ARCENIA STEN R ALAMEDA	R. L. Polk & Co.
	BROWN FOREST CLK R ALAMEDA	R. L. Polk & Co.
	BROWN MADINE STEN R ALAMEDA	R. L. Polk & Co.
	BROWN RALPH SL SMN R ALAMEDA	R. L. Polk & Co.
	BROWN THEO E (VENNIE) CARP H ALAMEDA	R. L. Polk & Co.
	DUNNE LEONA G MRS BEAUTY SHOP	R. L. Polk & Co.
1928	Brow n Acinia sten R	R.L. Polk and Co of California
	ER Ralph slsmn R	R.L. Polk and Co of California
	o L nu P Winiroifed Bi betatut tyhep	R.L. Polk and Co of California

### 417 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	GAREGHTY MATT ALAMEDA	Pacific Telephone Directory
1955	GAREGHTY MATT R ALAMEDA	The Pacific Telephone & Telegraph Co.
1950	GAREGHTY MATT R	The Pacific Telephone & Telegraph Co.
1933	BADE CHRIS G (ALLIE) PORTER H ALAMEDA	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Bade Chris Alhe H	R.L. Polk and Co of California

### 418 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	DIANE COUSINS	EDR Digital Archive
	JEREMY STOCKAMP	EDR Digital Archive
2017	JEREMY STOCKAMP	Cole Information
2014	OCCUPANT UNKNOWN	Cole Information
2010	PATRICK GALLAGHER	Cole Information
2006	o GALLAGHER Patrick	Haines Company, Inc.
2000	WADEBAXTER C	Pacific Bell
	C WADEBAXTER	Cole Information
1995	OCCUPANT UNKNOWNN	Cole Information
1992	REESE GORDON III	PACIFIC BELL DIRECTORY
1991	Hoglund Karl Anders	PACIFIC BELL WHITE PAGES
	Hoglund Mitch	PACIFIC BELL WHITE PAGES
	Reese Gordon i II	PACIFIC BELL WHITE PAGES
1986	Felt Bruce Sir	PACIFIC BELL WHITE PAGES
	FE LT E F CO IN C	PACIFIC BELL WHITE PAGES
	Reese Gordon III	PACIFIC BELL WHITE PAGES
1970	BRISSETTE RONALD F	Pacific Telephone Directory
1967	ISAKI PAUL	R. L. Polk Co.
1962	Bosio Louis M	Pacific Telephone
1955	BOSIO LOUIS M R	The Pacific Telephone & Telegraph Co.
	HAYES CHAS W R	The Pacific Telephone & Telegraph Co.
	SMITH DONALD C R ALAMEDA	The Pacific Telephone & Telegraph Co.
1950	BNSLO LOUIS M R	The Pacific Telephone & Telegraph Co.
	HAYES AINA J R	The Pacific Telephone & Telegraph Co.
	HAYES CHAS W R	The Pacific Telephone & Telegraph Co.
1945	CLINE FRED A R ALAMEDA	The Pacific Telephone & Telegraph Co.
1933	HUDSON OLIVER B JR (ANTOINETTE) SLSMN H	R. L. Polk & Co.
	PINELLA JOHN TAILOR R	R. L. Polk & Co.

## FINDINGS

### 419 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	LOVE ELIN M ALAMEDA	Pacific Telephone Directory
	LOVE HERBERT E ALAMEDA	Pacific Telephone Directory
1955	LANDI RUSSELL	The Pacific Telephone & Telegraph Co.
	WASHBURN MYRTLE S R ALAMEDA	The Pacific Telephone & Telegraph Co.
1950	JOHNSON EVANGELINE R	The Pacific Telephone & Telegraph Co.
1943	Roche Imogene clk EBMUD r	R. L. Polk & Co.
	Roche J h	R. L. Polk & Co.
1933	PAGE JOS (ELSIE) BEAUTY SHOP	R. L. Polk & Co.
1928	Webster Hollis D Bess tchr PPS H	R.L. Polk and Co of California
	h Jos Elsie H	R.L. Polk and Co of California

### 420 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	JOYSMITH BRENDA	Cole Information
1950	MESUSARN HARVEY L R	The Pacific Telephone & Telegraph Co.
1933	MACDONALD RUFUS C (MARTHA) PHYS H ALAMEDA	R. L. Polk & Co.
1928	Fleming Rufus E Martha phys	R.L. Polk and Co of California

### 421 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	ROBINSON KENNETH N ALAMEDA	Pacific Telephone Directory
1955	DE CELLE L W MRS R ALAMEDA	The Pacific Telephone & Telegraph Co.
	RONEY JESSE	The Pacific Telephone & Telegraph Co.
1950	RONEY JESSE R	The Pacific Telephone & Telegraph Co.
1943	Jones Grace L Mrs slsw n HCC Co r	R. L. Polk & Co.

### 423 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	MURPHY ELIZABETH CAPPS ALAMEDA	Pacific Telephone Directory
1955	NOBLE IDELL ALAMEDA	The Pacific Telephone & Telegraph Co.
1933	GHELFI DANL (HENRIETTA) H ALAMEDA	R. L. Polk & Co.

## FINDINGS

### 424 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	MACLEAN J M R	Pacific Telephone
1933	ALLEN MARION (WID SAML) H ALAMEDA	R. L. Polk & Co.
	JOHNSON ALBT BARBER R ALAMEDA	R. L. Polk & Co.
	JOHNSON ARTH A (ERMA) BARBER ALAMEDA	R. L. Polk & Co.
1928	Clemens Marion wid Saml H	R.L. Polk and Co of California

### 425 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	TAYLOR ELEANOR L MRS ALAMEDA	Pacific Telephone Directory
1955	RICHEY THOS M ALAMEDA	The Pacific Telephone & Telegraph Co.

### 427 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	THODE R CHAS ALAMEDA	Pacific Telephone Directory
1955	CHATHAM WM III ALAMEDA	The Pacific Telephone & Telegraph Co.

### 428 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Chavez Fernando Mr & Mrs	PACIFIC BELL WHITE PAGES
1955	WALLRAVEN GEO A ALAMEDA	The Pacific Telephone & Telegraph Co.
1950	FURTNEY R C R	The Pacific Telephone & Telegraph Co.
1933	BELT GEO R ALAMEDA	R. L. Polk & Co.
	BELT JOS SLSMN R ALAMEDA	R. L. Polk & Co.
	BELT ROBT SLSMN H ALAMEDA	R. L. Polk & Co.
1928	Co Wilbur Carrie lab H	R.L. Polk and Co of California

### 429 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	WATSON ARLA ALAMEDA	Pacific Telephone Directory
1955	BAPST JOHN R ALAMEDA	The Pacific Telephone & Telegraph Co.

### 430 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	DAVIS FRANCES R ALAMEDA	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	John electn H	R.L. Polk and Co of California
	n Robt Madeline H	R.L. Polk and Co of California

### 431 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	LEE ROBIN ALAMEDA	Pacific Telephone Directory
1955	BARRON RUFUS B ALAMEDA	The Pacific Telephone & Telegraph Co.

### 432 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	OCCUPANT UNKNOWN	Cole Information
1996	BECI ELECTRIC	PACIFIC BELL DIRECTORY
	RITZY	PACIFIC BELL DIRECTORY
1995	BECI ELECTRIC	Cole Information
	RITZY	Cole Information
	WAGGENER, JOHN D JR	Cole Information
1992	BECI ELECTRIC	PACIFIC BELL DIRECTORY
	RITZY	PACIFIC BELL DIRECTORY
	BECI ELECTRIC	Cole Information
	RITZY	Cole Information
1991	Bedi Electric	PACIFIC BELL WHITE PAGES
1986	Ann Maurice impoarts	PACIFIC BELL WHITE PAGES
	AN N A K DE S IGN S	PACIFIC BELL WHITE PAGES
	Maurice Ann Imports	PACIFIC BELL WHITE PAGES
1980	Ann Maurice African Imports	Pacific Telephone
	Maurice Ann African Imports	Pacific Telephone
1970	O CONNELL WM ALAMEDA	Pacific Telephone Directory
1950	VICKROY LINOTYPE SERVICE	The Pacific Telephone & Telegraph Co.
1945	SCHUGREN E Q R ALAMEDA	The Pacific Telephone & Telegraph Co.
	VICKROY LINOTYPE SERVICE	The Pacific Telephone & Telegraph Co.
1943	Vickroy Wm O printer	R. L. Polk & Co.
1938	JOHNSON I M R	Pacific Telephone
1933	HUNT CLARE (NORMA) CONCRETEWKR R ALAMEDA	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	HUNT WM W (KATH C) CONCRETEWKR H ALAMEDA	R. L. Polk & Co.
1928	tack J Roderick stdt R  61st Lyle W clk R	R.L. Polk and Co of California  R.L. Polk and Co of California

### 433 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	NORBERG FORREST	Pacific Telephone
1970	NORBERG FORREST ALAMEDA	Pacific Telephone Directory
1955	NORBERG FORREST R ALAMEDA	The Pacific Telephone & Telegraph Co.
1950	NORBERG ETHELDA R	The Pacific Telephone & Telegraph Co.

### 435 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	VINCENT H W REV ALAMEDA	Pacific Telephone Directory
1955	SMITH DONALD G REV ALAMEDA	The Pacific Telephone & Telegraph Co.
1950	REED DONALD R	The Pacific Telephone & Telegraph Co.
1933	REESE FANNIE D (WID W H) H ALAMEDA	R. L. Polk & Co.
1928	H Fannie Mrs H	R.L. Polk and Co of California

### 436 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	MEUTER FRANCES V ALAMEDA	Pacific Telephone Directory
1955	MEUTER FRANCES V R ALAMEDA	The Pacific Telephone & Telegraph Co.
1945	ABBAY PRESS	The Pacific Telephone & Telegraph Co.
1943	ABBAY PRESS THE Chas H Kleiser A Complete Creative Printing Service	R. L. Polk & Co.
1933	MEUTER FRANCES TEL OPR R ALAMEDA	R. L. Polk & Co.
	MEUTER HOMER G FORMN ALA CITY SUPT OF STREETS H ALAMEDA	R. L. Polk & Co.

### 437 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	MERTZIG EMMA M ALAMEDA	Pacific Telephone Directory
	MERTZIG JAS J ALAMEDA	Pacific Telephone Directory
1955	SUTTON CARL R ALAMEDA	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	SUTTON CARL R	The Pacific Telephone & Telegraph Co.
1933	PARKER R GORDON (ETHEL A) CLK H ALAMEDA	R. L. Polk & Co.

### 438 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	MACARIO ROBT ALAMEDA	Pacific Telephone Directory
1955	MACARIO ROBT R ALAMEDA	The Pacific Telephone & Telegraph Co.
1938	GRAND LAKE PRINTERS	Pacific Telephone
	LUKING W W R	Pacific Telephone
1933	MAUTINO ORESTE (MARIE) H ALAMEDA	R. L. Polk & Co.
1928	Hillegass Geo W Margt clk H	R.L. Polk and Co of California

### 439 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	HULSEY W F ALAMEDA	Pacific Telephone Directory
1933	DE LANCEY JOHN J (EMILY) H ALAMEDA	R. L. Polk & Co.
1928	Phone John J Emily H	R.L. Polk and Co of California

### 440 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	CELESE COOK	EDR Digital Archive
2017	OAKLAND PARENTS TOGETHER	Cole Information
2014	OAKLAND PARENTS TOGETHER	Cole Information
2010	OAKLAND PARENTS TOGETHER	Cole Information
	STRIKE A CHORD GUITAR PROGRAM	Cole Information
2000	JOYSMITH STUDIO	Cole Information
1995	GRAND AVENUE GLASS & LOCK	Cole Information
1992	GRAND AVE LOCK & GLASS	PACIFIC BELL DIRECTORY
	GRAND AVE GLASS & LOCK	PACIFIC BELL DIRECTORY
	GRAND AVE GLASS&LCK	Cole Information
1991	Grand Ave Lock & Glass	PACIFIC BELL WHITE PAGES
1986	Lakeshore Bar Stools N Things	PACIFIC BELL WHITE PAGES
	Lakeshore Glass & Mirror	PACIFIC BELL WHITE PAGES
1970	MAILHES BEATRICE L ALAMEDA	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	MAURICE S DISTINCTIVE COIFFEURS	Pacific Telephone Directory
1967	MAURICES DISTINCTIVE COIFFEURS	R. L. Polk Co.
	BEAUTY SALON	R. L. Polk Co.
1962	Maurices Distinctive Coiffeurs	Pacific Telephone
	Maurices & Rays	Pacific Telephone
1955	EAST BAY TRADE PRESS	The Pacific Telephone & Telegraph Co.
	KENNEDY BEN L ABBEY PRESS	The Pacific Telephone & Telegraph Co.
1945	HOWE TOOL & DRILL CO	The Pacific Telephone & Telegraph Co.
1943	HOWE David D Lucy L tools	R. L. Polk & Co.
1933	MACKENZIE ALEX D (R CLEO) PLMBR H ALAMEDA	R. L. Polk & Co.
1928	Gehman Fannie R	R.L. Polk and Co of California

### 441 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	MELGAR ROBT S	Pacific Telephone
1970	FAILS W M ALAMEDA	Pacific Telephone Directory
1955	RODENBORN HAROLD E R ALAMEDA	The Pacific Telephone & Telegraph Co.
1945	HIGBY RUSSELL R ALAMEDA	The Pacific Telephone & Telegraph Co.

### 443 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	LENCI E ALAMEDA	Pacific Telephone Directory
1955	LENCI E R ALAMEDA	The Pacific Telephone & Telegraph Co.
1950	LENCI E R	The Pacific Telephone & Telegraph Co.
1945	LENCI E R ALAMEDA	The Pacific Telephone & Telegraph Co.

### 448 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	BAKER ROBT G ALAMEDA	Pacific Telephone Directory
1955	HOLBERT WM H ALAMEDA	The Pacific Telephone & Telegraph Co.
	SEAGLE CHAS W ALAMEDA	The Pacific Telephone & Telegraph Co.

## FINDINGS

### 450 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	ANNE RISSO INC	Cole Information
1996	MY UNIVERSE ANTIQUES & COLLECTIBLES	PACIFIC BELL DIRECTORY
1995	BLACK EARTH	Cole Information
1992	BLACK EARTH THE	PACIFIC BELL DIRECTORY
	BLACK EARTH THE	Cole Information
1991	Santelli Cynthia A DC	PACIFIC BELL WHITE PAGES
	Santero E	PACIFIC BELL WHITE PAGES
	Santi C	PACIFIC BELL WHITE PAGES
1986	Wingsong	PACIFIC BELL WHITE PAGES
1980	Piedmont Pet Shop	Pacific Telephone
1975	CREATIVE CONSCIOUSNESS	Pacific Telephone
1970	CIME COLOR LAB	Pacific Telephone Directory
	ZECH LYLE L ALAMEDA	Pacific Telephone Directory
1967	BISHOPS STUDIO PHOTOG	R. L. Polk Co.
1962	Bishops of California	Pacific Telephone
1955	COLLINS FLOOR COVERINGS	The Pacific Telephone & Telegraph Co.
	GARRETT FERN MRS ALAMEDA	The Pacific Telephone & Telegraph Co.
1950	COLLINS FLOOR COVERINGS	The Pacific Telephone & Telegraph Co.
1945	FAUCIT SCHOOL OF THE THEATRE	The Pacific Telephone & Telegraph Co.

### 452 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	BOXING FOR HEALTH	EDR Digital Archive
	KILATAINMENT LLC	EDR Digital Archive
2017	BOXING FOR HEALTH	Cole Information
2014	BOXING FOR HEALTH	Cole Information
2010	IKEBANA ARTS STUDIO	Cole Information
2005	IKEBANA ARTS STUDIO	Cole Information
2000	ACADEMY OF CLASSICAL BALLET	Pacific Bell
	ACADEMY OF CLASSICAL BALLET	Cole Information
1996	ACADEMY OF CLASSICAL BALLET	PACIFIC BELL DIRECTORY
	A CURRAN MARY PHD	PACIFIC BELL DIRECTORY

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1996	A LARVIERE PETER MD	PACIFIC BELL DIRECTORY
	A COOPER J J	PACIFIC BELL DIRECTORY
1995	STAINED GLASS JOURNEYS	Cole Information
	PETER LA RIVIERE MD	Cole Information
	ACADEMY OF CLASSICAL BALLET	Cole Information
	COOPER, J	Cole Information
1992	LARVIERE PETER MD	PACIFIC BELL DIRECTORY
	STAINED GLASS JOURNEYS	PACIFIC BELL DIRECTORY
	GRACE MANN BALLET CENTER	PACIFIC BELL DIRECTORY
	A CURRAN MARY PHD	PACIFIC BELL DIRECTORY
	A COOPER J J	PACIFIC BELL DIRECTORY
	GRACE MANN BALLET	Cole Information
	STAINED GLASS JRNYS	Cole Information
1991	Cooper JJ	PACIFIC BELL WHITE PAGES
	Cooper J&O	PACIFIC BELL WHITE PAGES
	Curran Mary Ph D	PACIFIC BELL WHITE PAGES
	Curran Maureen	PACIFIC BELL WHITE PAGES
	Curran N A	PACIFIC BELL WHITE PAGES
	i Grace Mann Ballet Center	PACIFIC BELL WHITE PAGES
	Grace Marian	PACIFIC BELL WHITE PAGES
	La Riviere Peter MD	PACIFIC BELL WHITE PAGES
	La Riviere W Atty	PACIFIC BELL WHITE PAGES
1986	Grace Mann Ballet Center	PACIFIC BELL WHITE PAGES
	Mann Grace Grace Mann Ballet Center	PACIFIC BELL WHITE PAGES
1980	Grace Mann Ballet Center	Pacific Telephone
	Mann Grace Grace Mann Ballet Center	Pacific Telephone
1975	GRACE MANN BALLET CENTER	Pacific Telephone
	MANN GRACE GRACE MANN BALLET CENTER	Pacific Telephone
	MAURICE ANN AFRICAN IMPORTS	Pacific Telephone
1970	GRACE MANN STUDIO OF DANCE ART	Pacific Telephone Directory
	HUNTINGTON & ASSOCIATES	Pacific Telephone Directory
	KOHL HARRY S AIA	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	MANN GRACE GRACE MANN STUDIO OF DANCE ART	Pacific Telephone Directory
	STEWART WM M ALAMEDA	Pacific Telephone Directory
1967	STUDIO OF DANCE	R. L. Polk Co.
	HUNTINGTON t ASSOCIATES ENG	R. L. Polk Co.
	STRUCTURAL	R. L. Polk Co.
1962	Grace Mann Studio of Dance Art	Pacific Telephone
	Huntington & Associates	Pacific Telephone
	Mann Grace Grace Mann Studio of Dance Art	Pacific Telephone
1955	GRACE MANN STUDIO OF DANCE ART	The Pacific Telephone & Telegraph Co.
	MANN GRACE GRACE MANN STUDIO OF DANCE ART	The Pacific Telephone & Telegraph Co.
1950	GEARY GLADYS STUDIO OF THE DANCE	The Pacific Telephone & Telegraph Co.
1945	GEARY GLADYS STUDIO OF THE DANCE	The Pacific Telephone & Telegraph Co.
1938	GEARY GLADYS STUDIO OF THE DANCE	Pacific Telephone
1933	FULTON GEO M JR WITH AM TR CO R ALAMEDA	R. L. Polk & Co.
	FULTON ROSA MRS (WID G M) H ALAMEDA	R. L. Polk & Co.
	JORDON CHESTER (ALTA) CLK R ALAMEDA	R. L. Polk & Co.
1928	Geo jr ilk R	R.L. Polk and Co of California
	H Rosa H	R.L. Polk and Co of California
	av Chester Alta H	R.L. Polk and Co of California
	lines Sibyl dancing tch R	R.L. Polk and Co of California

### 454 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2010	ACB BALLROOM DANCE SCHOOL	Cole Information
2006	ACB BALLROOM	Haines Company, Inc.
	DANCE SCHOOL	Haines Company, Inc.
2005	ACB BALLROOM DANCE SCHOOL	Cole Information
2000	ACB BALLROOM DANCE SCHOOL	Pacific Bell
	ACB BALLROOM DANCE SCHOOL	Cole Information
	ACB BALLROOM DANCE SCHOOL STUDIO	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1996	BERKELEY SOLAR GROUP	PACIFIC BELL DIRECTORY
1992	BERKELEY SOLAR GROUP	PACIFIC BELL DIRECTORY
	BERKLY SOLAR GROUP	Cole Information
1991	Berkeley Solar Group	PACIFIC BELL WHITE PAGES
1962	Linn N Kent desgrn	Pacific Telephone
1955	LANG ROSEMARY ALAMEDA	The Pacific Telephone & Telegraph Co.
1945	BRADFORD ROME E R ALAMEDA	The Pacific Telephone & Telegraph Co.
1933	PHILLIPS LOUISE MRS NURSE H ALAMEDA	R. L. Polk & Co.

### 455 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	GILBO G J ALAMEDA	Pacific Telephone Directory
	TAFEL MERLIN ALAMEDA	Pacific Telephone Directory
1955	MATTHEW MARGARET ALAMEDA	The Pacific Telephone & Telegraph Co.
1945	WALKUP JOHN E R ALAMEDA	The Pacific Telephone & Telegraph Co.
1938	WEBSTER RUBY R	Pacific Telephone
1928	Walkup John H	R.L. Polk and Co of California
	Wm D R	R.L. Polk and Co of California

### 456 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	POINT OF VIEW SALON	EDR Digital Archive
2017	POINT OF VIEW SALON	Cole Information
2014	POINT OF VIEW SALON	Cole Information
	STUDIO HAIR	Cole Information
2010	POINT OF VIEW SALON	Cole Information
	STUDIO HAIR	Cole Information
2006	COMPLETE NAIL	Haines Company, Inc.
	CARE BY LEE	Haines Company, Inc.
	KAYS COLLECTIVES	Haines Company, Inc.
	POINTOFVIEW	Haines Company, Inc.
	SALON	Haines Company, Inc.
2005	RELAXATION STATION	Cole Information
	POINT OF VIEW SALON	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	COMPLETE NAIL CARE BY LEE	Pacific Bell
	COMPLETE NAIL CARE BY LEE	Cole Information
	KAYS COLLECTIVES	Cole Information
	WONG LELAND HAIR DESIGN	Cole Information
	POINT OF VIEW SALON	Cole Information
1996	ELECTROLYSIS BY FELICIA	PACIFIC BELL DIRECTORY
	COMPLETE NAIL CARE BY LEE	PACIFIC BELL DIRECTORY
1995	COMPLETE NAIL CARE BY LEE	Cole Information
	KAYS COLLECTIVE HAIR DESIGN	Cole Information
1992	COMPLETE NAIL CARE BY LEE	PACIFIC BELL DIRECTORY
	COMPLETE NAIL CARE	Cole Information
	P S C FORUM	Cole Information
1991	Kays Collective Hair Design	PACIFIC BELL WHITE PAGES
	PS C Forum Kays Collective Makeup And Hairstyling	PACIFIC BELL WHITE PAGES
1986	N E W MOON THE	PACIFIC BELL WHITE PAGES
1980	New Moon	Pacific Telephone
	The New Moon Womens Apparel	Pacific Telephone
	P S C Forum	Pacific Telephone
	PSC NEW CAR SALES & LEASING	Pacific Telephone
1975	BRIGHTON LTD	Pacific Telephone
	CLOUD FOUR	Pacific Telephone
	COUNTERPART	Pacific Telephone
	KAY S COLLECTIVE BTY SIN	Pacific Telephone
	NEW MOON BOUTIQUE	Pacific Telephone
1970	PIERCE GALLERIES THE	Pacific Telephone Directory
1967	DONS GALLERY PICTURE FRAMING	R. L. Polk Co.
1955	GOLDMAN S OF CALIF COSTUME JEWELRY INC	The Pacific Telephone & Telegraph Co.
	TRAGER GEO ALAMEDA	The Pacific Telephone & Telegraph Co.
1950	CANILLE DONMAYE CAMILLE DONTIAYE FASHIONL MODELING SCHOOL	The Pacific Telephone & Telegraph Co.
	DOINAYE CAMILLE DANCING SCHOOL	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	DONNAYE CARNILLE FASHION MODELING SCHOOL	The Pacific Telephone & Telegraph Co.
	GORDON JEAN DONNAYE CAMILLE DANCING SCHOOL	The Pacific Telephone & Telegraph Co.
1945	LE ROI DANCE STUDIO	The Pacific Telephone & Telegraph Co.
1943	Faucit Ursula Mrs elocution tchr	R. L. Polk & Co.
1938	FANCHON & MARCO SCHOOL OF THE THEATRE	Pacific Telephone

### 457 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	FREITAS PHILLIP	Pacific Telephone
1970	BETZNER ELVIRA ALAMEDA	Pacific Telephone Directory
1955	BROWN CHAS H ALAMEDA	The Pacific Telephone & Telegraph Co.
1943	Betzner John E Elvira S electn h	R. L. Polk & Co.
1933	BETZNER JOHN E (ELVERA) CLO CLNR	R. L. Polk & Co.
	WHITAKER JOHN W CLO CLNR ALAMEDA	R. L. Polk & Co.
1928	H Ener clk R	R.L. Polk and Co of California
	42d Evelyn sten R	R.L. Polk and Co of California
	Buena Victor E eng R	R.L. Polk and Co of California

### 458 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	SOLEIL TANNING SALONS	EDR Digital Archive
2017	SOLEIL TANNING SALONS	Cole Information
2014	SOLEIL TANNING SALONS	Cole Information
2010	SOLEIL TANNING SALONS	Cole Information
2006	SOLEIL TANNING SALONS	Haines Company, Inc.
	SALONS	Haines Company, Inc.
2005	READING REVOLUTION	Cole Information
2000	POINT OF VIEW SALON	Pacific Bell
	SUSE INC	Pacific Bell
	KAMILI ORIENTAL RUGS	Pacific Bell
	SUSE INCORPORATED	Cole Information
1996	KAY S COLLECTIVE HAIR DESIGN	PACIFIC BELL DIRECTORY

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1996	L & L ANTIQUES & GIFT	PACIFIC BELL DIRECTORY
1995	PERSONAL STYLE COUNSELORS	Cole Information
	FASHION CONSULTANT	Cole Information
1992	KAY S COLLECTIVE HAIR DESIGN	PACIFIC BELL DIRECTORY
	NEW MOON THE	Cole Information
	FASHION CONSULTANT	Cole Information
	PSC COLOR STUDIO	Cole Information
1991	Fashion Consultant	PACIFIC BELL WHITE PAGES
	NEW MOON	PACIFIC BELL WHITE PAGES
	PSC Color Studio	PACIFIC BELL WHITE PAGES
	The New Moon Womens Apparel	PACIFIC BELL WHITE PAGES
	PERSONAL STYLE COUNSELORS	PACIFIC BELL WHITE PAGES
1986	Kays Collective bty sin	PACIFIC BELL WHITE PAGES
	PSC Forum Kays Collective Makeup And Hairstyling	PACIFIC BELL WHITE PAGES
	PSC Color Studio	PACIFIC BELL WHITE PAGES
	PERSONAL STYLE COUNSELORS	PACIFIC BELL WHITE PAGES
	Personal Wardrobe Consultant	PACIFIC BELL WHITE PAGES
1980	Kays Collective bty sin	Pacific Telephone
	PERSONAL STYLE COUNSELORS	Pacific Telephone
1975	KARATE WAYS MONK S FIGHTING ARTS	Pacific Telephone
	MONK S FIGHTING ARTS	Pacific Telephone
1970	KARATE WAYS	Pacific Telephone Directory
	POTTS W G ALAMEDA	Pacific Telephone Directory
1967	VACANT	R. L. Polk Co.
1955	COLLINGS CHAS L ALAMEDA	The Pacific Telephone & Telegraph Co.
1950	SMITH RAY CO RL EST	The Pacific Telephone & Telegraph Co.
1945	BRAZELTON LAVELLE C RAY SMITH CO RL EST	The Pacific Telephone & Telegraph Co.
	BRYAN HERBERT L RAY SMITH CO RL ST	The Pacific Telephone & Telegraph Co.
	HUDSON W J RAY SMITH CO RL EST	The Pacific Telephone & Telegraph Co.
	SMITH ALBERT R RAY SMITH CO RL EST	The Pacific Telephone & Telegraph Co.
	SMITH RAY RAY SMITH CO RL EST	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	SMITH RAY CO RL EST	The Pacific Telephone & Telegraph Co.
	SMITH SIDNEY RAY SMITH CO RL EST	The Pacific Telephone & Telegraph Co.
1943	Collingwood Thos Jean furn	R. L. Polk & Co.

### 460 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ATM	EDR Digital Archive
	FOLLICLES	EDR Digital Archive
	FACE & BODY	EDR Digital Archive
2017	FOLLICLES	Cole Information
	LA DORA LLC	Cole Information
	FACE & BODY BY TAYLOR	Cole Information
2014	FOLLICLES	Cole Information
	FACE & BODY BY TAYLOR	Cole Information
2010	KANDILLS SALON & DAY SPA	Cole Information
	AEBRA ADAMS HAIR & FASHION	Cole Information
2006	KANDILLS SALON	Haines Company, Inc.
	DAY SPA	Haines Company, Inc.
	WARDLAW DONALD	Haines Company, Inc.
2005	KANDILLS SALON & DAY SPA	Cole Information
	MORE THAN CONSTRUCTION INC	Cole Information
	KANDILLS INC	Cole Information
2000	MOODS & ATTITUDE	Pacific Bell
	A WARDLAW DONALD AIA	Pacific Bell
	A WARDLAW DONALD AIA	Pacific Bell
	MOODS & ATTITUDE	Cole Information
	WARDLAW DONALD AIA	Cole Information
1996	A WARDLAW DONALD AIA	PACIFIC BELL DIRECTORY
1995	DONALD ROSS WARDLAW	Cole Information
	WARDLAW, DONALD	Cole Information
1992	PROFILES	Cole Information
1980	Erlam Roger Interiors	Pacific Telephone
	ROGER ERLAM INTERIORS	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	ERLAM ROGER INTERIORS	Pacific Telephone
	HALL DAVID W INC INTR DECRTN	Pacific Telephone
1970	HALL DAVID W INC INTR DECRTN	Pacific Telephone Directory
1967	HALL DAVID N INC INT DEC	R. L. Polk Co.
1962	David W Hall Inc	Pacific Telephone
	HALL DAVID W INC intr decrtn	Pacific Telephone
	Winifred Gray Wise Inc see David W Hall Inc	Pacific Telephone
1950	WISE WINIFRED GRAY INTERIOR DECORATION	The Pacific Telephone & Telegraph Co.
1943	Wise Winifred G Mrs int dec	R. L. Polk & Co.
1933	TUCKER SHOPS INC WINIFRED G WISE PRES INT DEC	R. L. Polk & Co.

### 461 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	ARNETT NEIL W ALAMEDA	Pacific Telephone Directory
1933	FISHER ANDW E SERV STA OPR R ALAMEDA	R. L. Polk & Co.
	FISHER EDW J SAILMKR H ALAMEDA	R. L. Polk & Co.
1928	av Andw E clk R	R.L. Polk and Co of California
	rr Edw J sailmkr H	R.L. Polk and Co of California

### 462 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	LA DORA	Cole Information
2014	LADORA	Cole Information
2010	MIMOSA CAFE	Cole Information
2006	MIMOSA CAFE	Haines Company, Inc.
2005	MIMOSA CAFE	Cole Information
2000	MIMOSA CAFE	Pacific Bell
	MIMOSA CAFE	Cole Information
1996	MIMOSA CAFE	PACIFIC BELL DIRECTORY
1995	MIMOSA CAFE	Cole Information
1992	MIMOSA CAFE	PACIFIC BELL DIRECTORY
	MIMOSA CAFE	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1991	MIMOS A CAFE	PACIFIC BELL WHITE PAGES
1986	MIMOS A CAFE	PACIFIC BELL WHITE PAGES
	Mims A	PACIFIC BELL WHITE PAGES
	Mims A & K	PACIFIC BELL WHITE PAGES
1980	Kafana	Pacific Telephone
1975	LINN N KENT ARCHT	Pacific Telephone
1970	CENTRAL MEDICAL CORP	Pacific Telephone Directory
	CENTRAL PHARMACAL CO THE CENTRAL MEDICAL CORP	Pacific Telephone Directory
	LINN N KENT DESGNR	Pacific Telephone Directory
	PARKER BRUCE D ALAMEDA	Pacific Telephone Directory
	SALINAS JACK P ALAMEDA	Pacific Telephone Directory
	SEIMS KENNETH L ALAMEDA	Pacific Telephone Directory
1967	LINN N KENT ARCHT	R. L. Polk Co.
	CENTRAL MEDICAL CORP	R. L. Polk Co.
1962	Central Medical Corp	Pacific Telephone
	Central Pharmacal Co The Central Medcl Corp	Pacific Telephone
	MEDICAL DENTAL PLACEMENT AGCY	Pacific Telephone
1955	DO ANN PEGGY STUDIO	The Pacific Telephone & Telegraph Co.
	MOEHRING C W ALAMEDA	The Pacific Telephone & Telegraph Co.
	RIVERS BUD ALAMEDA	The Pacific Telephone & Telegraph Co.
1945	DALRYMPLE GRAEME H ALAMEDA	The Pacific Telephone & Telegraph Co.
1943	Dalrymple Graeme Emma h	R. L. Polk & Co.
1933	BAKER FREDK F (KATH) MACH H ALAMEDA	R. L. Polk & Co.
1928	mer Fredk F Cath mach H	R.L. Polk and Co of California

### 463 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	PENMAN H VADELLA MRS R ALAMEDA	R. L. Polk & Co.
	PENMAN LEROY (HARRIETT) CARP R ALAMEDA	R. L. Polk & Co.
	RENEVAN JOHN (AUDREY) LINEMN H ALAMEDA	R. L. Polk & Co.

## FINDINGS

### 464 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2010	FEMME	Cole Information
2000	PRECIOUS GIFTS AND ART	Pacific Bell
	PRECIOUS GIFTS AND ART	Cole Information
1995	FLOWERS DESIGN BY CINDY	Cole Information
	DEKORS CUSTOM SHUTTERS & WALL	Cole Information
1992	PROFILES	PACIFIC BELL DIRECTORY
	DEKOR S CUSTOM SHUTTERS AND WALL SYSTEMS	PACIFIC BELL DIRECTORY
	DEKORS CUSTOM SHTRR	Cole Information
1991	Profiles	PACIFIC BELL WHITE PAGES
	Profiles	PACIFIC BELL WHITE PAGES
	Profiles Unlimited Corp	PACIFIC BELL WHITE PAGES
1986	Masten Designs	PACIFIC BELL WHITE PAGES
	Masten G	PACIFIC BELL WHITE PAGES
	Masten J	PACIFIC BELL WHITE PAGES
	Masten S	PACIFIC BELL WHITE PAGES
	Masten Suzanne J	PACIFIC BELL WHITE PAGES
	Master Business Machines Inc	PACIFIC BELL WHITE PAGES
	Profiles	PACIFIC BELL WHITE PAGES
	Profiles	PACIFIC BELL WHITE PAGES
	PROFILES	Pacific Bell
1984	PROFILES	Pacific Bell
1982	PROFILES OAKLAND	Pacific Telephone
1980	Profiles Makeup Nails & Skin Care Appts	Pacific Telephone
	Profiles	Pacific Telephone
1975	ATKINS WILLIAM T	Pacific Telephone
	CARR & ASSOCIATES PRODUCTS CENTER	Pacific Telephone
	MERCHANTS ASSOCIATED SUPPLY SERVICES	Pacific Telephone
	OAKSJAND SHOWROOM	Pacific Telephone
	POST MART	Pacific Telephone
1970	PYLE NATIONAL	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	GULISTAN CARPET CO CARPETS	R. L. Polk Co.
1962	Bailey Furniture & Floor Covering	Pacific Telephone
1955	DRAPERY & CARPET STUDIO THE	The Pacific Telephone & Telegraph Co.
1950	COLLINGWOOD S UPHOLSTERY STUDIO	The Pacific Telephone & Telegraph Co.
1945	COLLINGWOOD S UPHOLSTERY STUDIO	The Pacific Telephone & Telegraph Co.
1943	Williams Malcolm L Dell bicycles	R. L. Polk & Co.

### 465 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1995	OCCUPANT UNKNOWN	Cole Information
1970	NICOLA ROBT W MRS ALAMEDA	Pacific Telephone Directory
1955	NICOLA ROBT W MRS ALAMEDA	The Pacific Telephone & Telegraph Co.
1950	MACCANI M R	The Pacific Telephone & Telegraph Co.
1928	Bertelsen Adolph H	R.L. Polk and Co of California
	Claus Frieda dental nurse H	R.L. Polk and Co of California

### 466 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	SANTELLI CYNTHIA A DC	EDR Digital Archive
2017	DAVID M RITTINGER DC	Cole Information
	CYNTHIA A SANTELLI DC	Cole Information
2014	SANTELLI CYNTHIA A DC	Cole Information
	RITTINGER DAVID M DC	Cole Information
2010	RITTINGER DAVID M DC	Cole Information
	CORNUCOPIA OF HEALTH CHIRO CTR	Cole Information
	LEAVE A LEGACY	Cole Information
2000	220 SANTELLI CYNTHIA A DC	Pacific Bell
	310 LEAVE A LEGACY	Pacific Bell
	SANTELLI CYNTHIA A DC	Cole Information
1996	220 SANTELLI CYNTHIA A DC	PACIFIC BELL DIRECTORY
1995	MARY LEE PETERSON DC	Cole Information
	CHURCH OF SCIENTOLOGY MISSION	Cole Information
	CORNUCOPIA OF HEALTH CHIRO CTR	Cole Information
1992	220 SANTELLI CYNTHIA A DC	PACIFIC BELL DIRECTORY

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1992	CORNUCOPIA CHIRO CT	Cole Information
1991	DIVORCE CE N T E R	PACIFIC BELL WHITE PAGES
	In Pro Per Legal Clinic	PACIFIC BELL WHITE PAGES
	In Psych Corp	PACIFIC BELL WHITE PAGES
1986	Divorce Center Do Your Ow n	PACIFIC BELL WHITE PAGES
	Paralegal Journal The	PACIFIC BELL WHITE PAGES
	Paralegal Placement Office St Marys College	PACIFIC BELL WHITE PAGES
	Porter Reid Consultants	PACIFIC BELL WHITE PAGES
	Stephensons Scenic Tours	PACIFIC BELL WHITE PAGES
1980	Dancercise Michelle	Pacific Telephone
	Michelle Dancercise Michelle	Pacific Telephone
1955	FOX SANFORD W MECHL ENGR	The Pacific Telephone & Telegraph Co.
	HENRY INTERIORS	The Pacific Telephone & Telegraph Co.
1950	GERHARDY LOUIS P INS	The Pacific Telephone & Telegraph Co.
	LA SENAY TREFFLE R TREFFLE LA SENAY ASSOCIATES AGCY	The Pacific Telephone & Telegraph Co.
	OLSON GEO B PUB ACCT	The Pacific Telephone & Telegraph Co.
	TREFFLE LA SENAY ASSOCIATES AGCY	The Pacific Telephone & Telegraph Co.
1943	Bogard Gertrude Mrs music tchr	R. L. Polk & Co.
	Calder J Roland Marion S photog	R. L. Polk & Co.
1928	Quinge Ednah A Mrs conf R	R.L. Polk and Co of California

### 467 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	MOLL FREDERICK A ALAMEDA	Pacific Telephone Directory
1955	OAKS NANCY ALAMEDA	The Pacific Telephone & Telegraph Co.
1945	BROWN KENNETH W R ALAMEDA	The Pacific Telephone & Telegraph Co.
1938	BERNAL T E R	Pacific Telephone
1933	MELOTTE MARCELINE MRS H ALAMEDA	R. L. Polk & Co.

### 468 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	PITT'S MARTIAL ARTS ACADEMY	EDR Digital Archive
2006	ROCKSHOPGIFTS	Haines Company, Inc.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	FROM THE EARTH	Haines Company, Inc.
2005	ROCK SHOP GIFTS FROM THE EARTH	Cole Information
2000	ROCK SHOP GIFTS FROM THE EARTH	Pacific Bell
	ROCK SHOP GIFTS FROM THE EA	Cole Information
1996	ROCK SHOP-GIFTS FROM THE EARTH	PACIFIC BELL DIRECTORY
1995	ROCK SHOP	Cole Information
1992	ROCK SHOP GIFTS FROM THE EARTH	PACIFIC BELL DIRECTORY
	ROCK SHOP THE	Cole Information
1991	Rock Shop Gifts From The Earth	PACIFIC BELL WHITE PAGES
1986	Rock Shop The	PACIFIC BELL WHITE PAGES
1980	Rock Shop The	Pacific Telephone
1970	ROCK SHOP THE	Pacific Telephone Directory
1967	ROCK SHOP THE LAPIDARY	R. L. Polk Co.
	TWEEDIE LOLA S MRS	R. L. Polk Co.
1962	INSULATION PRODUCTS CO	Pacific Telephone
1955	COGSWELL J L JEWELER	The Pacific Telephone & Telegraph Co.
1950	COGSWELL J L JEWELER	The Pacific Telephone & Telegraph Co.
1943	Cogsw ell J Leslie Leone jw lr	R. L. Polk & Co.
1933	ALBRIGHT GEO E (CLAUDINE M) CLO CLNR	R. L. Polk & Co.

### 469 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	CRESTETTO FRANK R ALAMEDA	The Pacific Telephone & Telegraph Co.

### 470 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Eileens	Pacific Telephone

### 472 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1991	Ritzzy	PACIFIC BELL WHITE PAGES
1986	Beci Electric	PACIFIC BELL WHITE PAGES
	Ritzzy	PACIFIC BELL WHITE PAGES
	Riusaki Reiko	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	NORDBY S UPHOLSTERY STUDIO	Pacific Telephone Directory
1967	NOROBYS UPHOLSTERY STUDIO	R. L. Polk Co.
1962	Nordbys Upholstery Studio	Pacific Telephone
1955	K-D BEAUTY SALON	The Pacific Telephone & Telegraph Co.
	ZELPHA BEAUTY SHOP	The Pacific Telephone & Telegraph Co.
1950	K D BEAUTY SALON	The Pacific Telephone & Telegraph Co.
1945	LA BONITA BEAUTY STUDIO	The Pacific Telephone & Telegraph Co.
1943	Ellithorpe Ruby beauty shop	R. L. Polk & Co.
1938	LA BONITA BEAUTY STUDIO	Pacific Telephone
1933	WILLIAMS MAL BICYCLES	R. L. Polk & Co.
1928	NEnnis Ernest Margt D meats	R.L. Polk and Co of California

### 474 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	PERMANANCE ELECTROLYSIS	EDR Digital Archive
	NEWFANGLES FOR TALL WOMEN	EDR Digital Archive
2017	SKIN & TONIC	Cole Information
2014	SKIN & TONIC	Cole Information
2010	ELLEN OLSON ESTHETICS	Cole Information
2006	New f ANGLES FOR	Haines Company, Inc.
	TALL WOMEN	Haines Company, Inc.
	FASHIONSNew f AN	Haines Company, Inc.
2005	TALL FASHIONS NEWFANGLES	Cole Information
	TALLLIKEME COM	Cole Information
2000	NEWFANGLES FOR TALL WOMEN	Pacific Bell
	NEWFANGLES FOR TALL WOMEN	Cole Information
	TALL FASHIONS NEWFANGLES	Cole Information
1996	NEWFANGLES FOR TALL WOMEN	PACIFIC BELL DIRECTORY
1995	NEWFANGLES FOR TALL WOMEN	Cole Information
1992	NEWFANGLES FOR TALL WOMEN	PACIFIC BELL DIRECTORY
	NEWFANGLES TALL WMN	Cole Information
1991	New fangles For Tall Women	PACIFIC BELL WHITE PAGES
	New federer P	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1991	New field L M	PACIFIC BELL WHITE PAGES
	New garden P	PACIFIC BELL WHITE PAGES
	New hall Henry	PACIFIC BELL WHITE PAGES
	New hall Jonathan	PACIFIC BELL WHITE PAGES
	Tal Fsin hy	PACIFIC BELL WHITE PAGES
	Tall Fashions Shellys	PACIFIC BELL WHITE PAGES
1986	Nellas Dressmaking Boutique	PACIFIC BELL WHITE PAGES
1980	Nellas Dressmaking Boutique	Pacific Telephone
1975	COSELIAN DICK CUSTM TLR	Pacific Telephone
	COSELIAN LAVERNE PIANO STUDIO	Pacific Telephone
1970	COSELIAN DICK	Pacific Telephone Directory
	COSELIAN LAVERNE PIANO STUDIO	Pacific Telephone Directory
1967	COSELIAN RICH O TAILOR	R. L. Polk Co.
1962	Kustom Cleaners	Pacific Telephone
1955	KUSTOM CLEANERS	The Pacific Telephone & Telegraph Co.
1950	CUSTOM CLEANERS MAIN OFC & PLANT	The Pacific Telephone & Telegraph Co.
1945	GLENVIEW LAUNDRY MAIN OFC	The Pacific Telephone & Telegraph Co.
1938	GLENVIEW LAUNDRY	Pacific Telephone
1933	GLEN VIEW LAUNDRY	R. L. Polk & Co.

### 475 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	SANTOS STEP SAVER GROCRS ALAMEDA	Pacific Telephone Directory
	STEP SAVER GROCERY ALAMEDA	Pacific Telephone Directory
1955	O RILLEY S STEP SAVER GROCRS ALAMEDA	The Pacific Telephone & Telegraph Co.
1945	PIEMONT MARKET ALAMEDA	The Pacific Telephone & Telegraph Co.
1933	MCDONALD JAS T (HAZEL) SLSMN H ALAMEDA	R. L. Polk & Co.
	REIS OSCAR (BESSIE) GRO ALAMEDA	R. L. Polk & Co.

### 476 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Black Earth The	PACIFIC BELL WHITE PAGES

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Pecurary Nick uphol	R. L. Polk & Co.
1933	ANDERSON LEE G FURRIER	R. L. Polk & Co.
1928	Clement Feix stdt H	R.L. Polk and Co of California
	66th Thos M waiter R	R.L. Polk and Co of California

### 478 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	BIKRAM YOGA	EDR Digital Archive
	E M PILATES	EDR Digital Archive
	YOGA COLLEGE-INDIA IN OAKLAND	EDR Digital Archive
	MOSAIC PROJECT	EDR Digital Archive
2017	MOSAIC PROJECT	Cole Information
	YOGA COLLEGE OF INDIA IN OAKLAND	Cole Information
2014	UPAYA CENTER FOR WELLBEING	Cole Information
	YOGA COLLEGE OF INDIA IN OAKLAND	Cole Information
2010	YOGA COLLEGE OF INDIA OAKLAND	Cole Information
	UPAYA CENTER FOR WELLBEING	Cole Information
2006	RAYTIS MAUREEN L	Haines Company, Inc.
	UPAYA CENTER	Haines Company, Inc.
	FOR WELLBEING	Haines Company, Inc.
	NO JAMES Rosa	Haines Company, Inc.
2005	THE GOOSE SISTERS HEALING CENTER	Cole Information
2000	RESOURCE DEVELOPMENT ASSOCIATES	Pacific Bell
	RESOURCE DEVELOPMENT ASSOCIATES	Cole Information
1996	200 RESOURCE DEVELOPMENT ASSOCIATES	PACIFIC BELL DIRECTORY
1995	DAVID S JOHNSON	Cole Information
	GENE ST ONGE & ASSOC	Cole Information
	BALTIC LINEN CO	Cole Information
	PICTURE FRAMING STUDIO & THNGS	Cole Information
	KAHN MORTIMER ASSOC	Cole Information
1992	200 JOHNSON DAVID STENHOUSE AIA	PACIFIC BELL DIRECTORY
	200 KAHN MORTIMER ASSOCIATES	PACIFIC BELL DIRECTORY
	202 ST ONGE GENE & ASSOCIATES	PACIFIC BELL DIRECTORY

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1992	210 FINE ARTS RESTORATION & FRAMING STUDIO	PACIFIC BELL DIRECTORY
	KAHN MORTIMER ASCTS	Cole Information
	STONGE GENE&ASSOCTS	Cole Information
	FINE ARTS RESTORATN	Cole Information
	JOHNSON DAVID S AIA	Cole Information
1991	Johnson David Stenhouse AIA	PACIFIC BELL WHITE PAGES
	Johnson David And Susan	PACIFIC BELL WHITE PAGES
	Johnson David T	PACIFIC BELL WHITE PAGES
	Kahn Mortimer Associates	PACIFIC BELL WHITE PAGES
	Kahn N J	PACIFIC BELL WHITE PAGES
	Kahn Nancy	PACIFIC BELL WHITE PAGES
	Mortimer Larry J AIA	PACIFIC BELL WHITE PAGES
	Picture Framing & Oil Painting Restorat Ion Studio	PACIFIC BELL WHITE PAGES
	St Onge Gene & Associates	PACIFIC BELL WHITE PAGES
1986	FREEMAN HELEN A mimgrphng	PACIFIC BELL WHITE PAGES
	Freeman J	PACIFIC BELL WHITE PAGES
	Johnson David Stenhouse AIA	PACIFIC BELL WHITE PAGES
	Johnson David And Susan	PACIFIC BELL WHITE PAGES
	Johnson David T	PACIFIC BELL WHITE PAGES
	Picture Framing Studio & Things	PACIFIC BELL WHITE PAGES
	From Walnut Creek Telephones Call	PACIFIC BELL WHITE PAGES
	Thin Within Administrative Offices	PACIFIC BELL WHITE PAGES
1980	FREEMAN HELEN A mimgrphng	Pacific Telephone
	Imboden Joy Thin Within	Pacific Telephone
	Johnson David Stenhouse AIA	Pacific Telephone
	Picture Framing Studio & Things	Pacific Telephone
	THIN WITHIN	Pacific Telephone
1975	BEAMER-WILKINSON & ASSOCLATES	Pacific Telephone
	CALLOUETTE & ASSOCIATES	Pacific Telephone
	DBW INVESTMENT CO	Pacific Telephone
	HUNTINGTON CALLOUETTE ENGINEERS INC	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	BEAMER-WILKINSON & ASSOCIATES	Pacific Telephone Directory
	CALLOUETTE & ASSOCIATES	Pacific Telephone Directory
	EDUCATIONAL INSTITUTE	Pacific Telephone Directory
	EDUCATIONAL INSTITUTE	Pacific Telephone Directory
	LAKESIDE HIGH SCHOOL	Pacific Telephone Directory
1967	BEAMER SCOTT 6 ASSOCIATES ELEC	R. L. Polk Co.
	UNRUH MUSIC STUDIOS t	R. L. Polk Co.
	PHILHARMONIC CHORUS	R. L. Polk Co.
	CALLOUTTE & ASSOCIATES ENGS	R. L. Polk Co.
	CONSULTING	R. L. Polk Co.
1962	Ayer Lawrence H Bartlett & Ayer archts	Pacific Telephone
	Bartlett & Ayer archts	Pacific Telephone
	Beamer Scott Consulting Engineer	Pacific Telephone
	Fox Sanford W & Associates	Pacific Telephone
	Piano Exchange	Pacific Telephone
	Unruh Music Studios & Philharmonic Chorus	Pacific Telephone
1955	BILLIE GIBSON CUSTM DESGNER	The Pacific Telephone & Telegraph Co.
	GIBSON BILLIE CUSTM DESGNER	The Pacific Telephone & Telegraph Co.
	KNIT-KING PAC SALES CO	The Pacific Telephone & Telegraph Co.
	MYNARD JONES VOICE STUDIO	The Pacific Telephone & Telegraph Co.
	PIANO EXCHANGE	The Pacific Telephone & Telegraph Co.
	UNRUH MUSIC STUDIOS & PHILHARMONIC CHORUS	The Pacific Telephone & Telegraph Co.
1950	UNRUH MUSIC STUDIOS	The Pacific Telephone & Telegraph Co.
1945	CALIF NIGHTINGALES	The Pacific Telephone & Telegraph Co.
	UNRUH MUSIC STUDIOS	The Pacific Telephone & Telegraph Co.
1943	BAKER Chas dancing tchr	R. L. Polk & Co.
	Jones Mynard Mary music tchr	R. L. Polk & Co.
1933	FRANK & VAN HORN CO (FENTON FRANK STANLEY VAN HORN) PRINTERS	R. L. Polk & Co.

### 480 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	birds	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	BROCK JOHN A (BERTHA E) BIRDS	R. L. Polk & Co.

### 482 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	MATTHEWS MAXINE MRS MLNR	R. L. Polk & Co.

### 484 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Otto Wilhelmina C restr	R. L. Polk & Co.
1933	HARLOW MAE E (WID ELDON) LADIES FURN	R. L. Polk & Co.

### 486 SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	RITTINGER DAVID M	Haines Company, Inc.
	SANTELU CYNTHIA	Haines Company, Inc.

### 326A SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	SUTA JOS ALAMEDA	The Pacific Telephone & Telegraph Co.
1945	DAVIS E F R ALAMEDA	The Pacific Telephone & Telegraph Co.

### 365A SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	NIELSEN ANNA STEN H	R. L. Polk & Co.
	YORK MYRTLE L STEN R	R. L. Polk & Co.

### 365B SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	CALARIFI ANITA	Pacific Telephone Directory
	CALARIFI THEODORE	Pacific Telephone Directory
1955	KOHN J	The Pacific Telephone & Telegraph Co.

### 365C SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	LINGEL FRANCIS D	Pacific Telephone Directory
1955	NG WALTER J	The Pacific Telephone & Telegraph Co.

## FINDINGS

### 410A SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	COUCH F W ALAMEDA	Pacific Telephone Directory
1955	MATHEWS DONALD W ALAMEDA	The Pacific Telephone & Telegraph Co.

### 410C SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	MCBRIDE J ALAMEDA	The Pacific Telephone & Telegraph Co.

### 410D SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	JOHNSTON LAWRENCE L ALAMEDA	The Pacific Telephone & Telegraph Co.

### 414A SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	WITMER AMMON A	The Pacific Telephone & Telegraph Co.

### 414B SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	PETERSON G A	Pacific Telephone Directory
1955	GREINER M	The Pacific Telephone & Telegraph Co.
1945	NEILSON J H R	The Pacific Telephone & Telegraph Co.

### 430A SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	DOAN GEO MRS ALAMEDA	The Pacific Telephone & Telegraph Co.
1945	DEITCH CARL R ALAMEDA	The Pacific Telephone & Telegraph Co.

### 447A SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	SOMMERFIELD G J ALAMEDA	Pacific Telephone Directory
1955	PRUSS BRUNO R ALAMEDA	The Pacific Telephone & Telegraph Co.

### 447B SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	BLANKENHEIM JOS P ALAMEDA	Pacific Telephone Directory
	BLANKENHEIM THELMA ALAMEDA	Pacific Telephone Directory

## FINDINGS

### 450A SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	SAWDON G K ALAMEDA	Pacific Telephone Directory
1955	COLLINGS KENNETH H ALAMEDA	The Pacific Telephone & Telegraph Co.

### 455A SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	HICKEY CHAS J ALAMEDA	Pacific Telephone Directory
1955	HAWKER ALMA ALAMEDA	The Pacific Telephone & Telegraph Co.
1945	JOSEPH LOU R ALAMEDA	The Pacific Telephone & Telegraph Co.

### 455B SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	MUNN EUGENE L ALAMEDA	The Pacific Telephone & Telegraph Co.

### 456A SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	HUOT CLARENCE B ALAMEDA	Pacific Telephone Directory
1955	STULGIS CHAS A ALAMEDA	The Pacific Telephone & Telegraph Co.

### 458A SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	MUNGER L M ALAMEDA	Pacific Telephone Directory
	MUNGER STEVE S ALAMEDA	Pacific Telephone Directory
1955	BARBER WM JAS ALAMEDA	The Pacific Telephone & Telegraph Co.

### 469B SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	OWENS ERIS A ALAMEDA	Pacific Telephone Directory
1955	NICLAS R A ALAMEDA	The Pacific Telephone & Telegraph Co.

### 475A SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	DESCHI B ALAMEDA	Pacific Telephone Directory

### 475B SANTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	COLEMAN JOHN C ALAMEDA	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	DESCHI B R ALAMEDA	The Pacific Telephone & Telegraph Co.

### **SANTA CLARA AVE # 204**

#### **386 SANTA CLARA AVE # 204**

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	JOSEPH COLEMAN	EDR Digital Archive
	JONATHAN WASSEI	EDR Digital Archive

### **SANTA CLARA CT**

#### **332 SANTA CLARA CT**

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	FURRER AMBROS R ALAMEDA	The Pacific Telephone & Telegraph Co.

#### **334 SANTA CLARA CT**

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	PICKERSGILL THOS H R ALAMEDA	The Pacific Telephone & Telegraph Co.
1950	PICKERSGILL THOS H R	The Pacific Telephone & Telegraph Co.
1945	PICKERSGILL THOS H R ALAMEDA	The Pacific Telephone & Telegraph Co.

#### **340 SANTA CLARA CT**

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	CARLTON ESTHER A MRS R	The Pacific Telephone & Telegraph Co.
1950	CARLTON ESTHER A MRS R	The Pacific Telephone & Telegraph Co.
1925	CARLTON EDWARD M R	R. L. Polk & Co. of California

#### **342 SANTA CLARA CT**

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	HOOKE MAVIS A R	The Pacific Telephone & Telegraph Co.

#### **343 SANTA CLARA CT**

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	BANTA F W R ALAMEDA	The Pacific Telephone & Telegraph Co.

#### **345 SANTA CLARA CT**

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	TUCKER HARRY R R	The Pacific Telephone & Telegraph Co.

## FINDINGS

### 348 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	ENGLE EDW E R	The Pacific Telephone & Telegraph Co.
1925	LANGRIDGE FRED W R	R. L. Polk & Co. of California

### 351 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	SPAAN H C R	The Pacific Telephone & Telegraph Co.

### 354 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1920	STONE MRS LOUISE S R	R. L. Polk & Co. of California

### 355 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	DUIIOP BUNNY R	The Pacific Telephone & Telegraph Co.
	LA SENAY TREFFLE R R	The Pacific Telephone & Telegraph Co.
1945	LA SENAY TREFFLE R R	The Pacific Telephone & Telegraph Co.
1938	LA SENAY SADIE MRS R	Pacific Telephone

### 357 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	HODGE D R DR	The Pacific Telephone & Telegraph Co.
1925	FERGUSON FRANK M R	R. L. Polk & Co. of California
1920	JOHANNSEN MISS NELLIE R	R. L. Polk & Co. of California

### 360 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	COSTELLO J A MRS R	The Pacific Telephone & Telegraph Co.
1950	COSTELLO J A IMRS R	The Pacific Telephone & Telegraph Co.

### 361 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	FULK JOHN S R	The Pacific Telephone & Telegraph Co.
1938	SINAI WILLIAM W DR R	Pacific Telephone

## FINDINGS

### 363 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	LEARNER J E R	R. L. Polk & Co. of California

### 364 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	CONNFF P J R	The Pacific Telephone & Telegraph Co.

### 365 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	HARMON VELMA R	The Pacific Telephone & Telegraph Co.
	STEPHENS MARK R	The Pacific Telephone & Telegraph Co.
	WALDRON CECILLA D MRS R	The Pacific Telephone & Telegraph Co.

### 366 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	WINDSOR C W	The Pacific Telephone & Telegraph Co.
1920	BAUMGARTNER MRS A F R	R. L. Polk & Co. of California

### 367 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	FORTH AUS FRANK R	Pacific Telephone

### 372 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	SHERMAN MELVIN J DR R	The Pacific Telephone & Telegraph Co.
1920	SHERMAN MRS MAX R	R. L. Polk & Co. of California

### 373 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	PETERSON OTTO L R	The Pacific Telephone & Telegraph Co.

### 375 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	ANDERSON LEONARD R	The Pacific Telephone & Telegraph Co.
1945	ANDERSON LEONARD R	The Pacific Telephone & Telegraph Co.

## FINDINGS

### 377 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	JOHNSON FRANK C	Pacific Telephone
	MARSHALL JAMES	Pacific Telephone

### 384 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	DUN FRANK W R	The Pacific Telephone & Telegraph Co.
1920	GILLILAND MISS LAURA R	R. L. Polk & Co. of California

### 386 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	CROTHER JOS R	The Pacific Telephone & Telegraph Co.

### 387 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	DES MOINEAUX E W R	The Pacific Telephone & Telegraph Co.
	MCKINNON MARGARET F R	The Pacific Telephone & Telegraph Co.
1950	DES MOINEAUX E W R	The Pacific Telephone & Telegraph Co.
	MC KINNON MARGARET F R	The Pacific Telephone & Telegraph Co.
1945	DE MOINEAX E W R	The Pacific Telephone & Telegraph Co.
	MCKINNON MARGARET F R	The Pacific Telephone & Telegraph Co.

### 390 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	WEISS A R	The Pacific Telephone & Telegraph Co.
1950	WEISS A R	The Pacific Telephone & Telegraph Co.

### 393 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	KORK LOUIS A R	The Pacific Telephone & Telegraph Co.

### 400 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	LE FEBER LUCILE R	The Pacific Telephone & Telegraph Co.
1950	FITZPATRICK MAY J R	The Pacific Telephone & Telegraph Co.
1945	DYER JAMES T R	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	FITZPATRICK MAY J R	The Pacific Telephone & Telegraph Co.
	PETERSON MABEL D MRS R	The Pacific Telephone & Telegraph Co.
	ROOK BEULAH MRS R	The Pacific Telephone & Telegraph Co.
	WACHSMAN M R	The Pacific Telephone & Telegraph Co.
1938	BURWELL MADELINE MRS R	Pacific Telephone
<b>407 SANTA CLARA CT</b>		
<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	MATOZA F R	The Pacific Telephone & Telegraph Co.
<b>408 SANTA CLARA CT</b>		
<u>Year</u>	<u>Uses</u>	<u>Source</u>
1920	AITKEN ANDREW MARSH R	R. L. Polk & Co. of California
<b>410 SANTA CLARA CT</b>		
<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	MARY JANE BEAUTY PARLOR	Pacific Telephone
<b>411 SANTA CLARA CT</b>		
<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	BERRY RUTH E MISS R	Pacific Telephone
<b>412 SANTA CLARA CT</b>		
<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	BOEK CHAS H R	The Pacific Telephone & Telegraph Co.
1945	BOEK CHAS H R	The Pacific Telephone & Telegraph Co.
<b>415 SANTA CLARA CT</b>		
<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	OLSON H E R ALAMEDA	The Pacific Telephone & Telegraph Co.
1938	BROWNLEE ARTHUR W R	Pacific Telephone
<b>416 SANTA CLARA CT</b>		
<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	BROWN T E ALAMEDA	The Pacific Telephone & Telegraph Co.
1950	BROWN T E MRS R	The Pacific Telephone & Telegraph Co.
1945	BROWN T E ALAMEDA	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	BROWN T E MRS R ALAMEDA	The Pacific Telephone & Telegraph Co.
<b>417 SANTA CLARA CT</b>		
<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	ULRICKSEN FRED A R ALAMEDA	The Pacific Telephone & Telegraph Co.
1938	ULRICKSEN FRED A R	Pacific Telephone
<b>418 SANTA CLARA CT</b>		
<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	HELWIG EMIL RL EST	The Pacific Telephone & Telegraph Co.
<b>419 SANTA CLARA CT</b>		
<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	PAGE JOSEPH R ALAMEDA	The Pacific Telephone & Telegraph Co.
<b>420 SANTA CLARA CT</b>		
<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	MACDONALD DR R C R	R. L. Polk & Co. of California
<b>421 SANTA CLARA CT</b>		
<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	HARMOLA SELMA R ALAMEDA	The Pacific Telephone & Telegraph Co.
<b>424 SANTA CLARA CT</b>		
<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	ALLEN MARION MRS R ALAMEDA	The Pacific Telephone & Telegraph Co.
1945	ALLEN MARION MRS R ALAMEDA	The Pacific Telephone & Telegraph Co.
1938	ALLEN MARION MRS R	Pacific Telephone
<b>430 SANTA CLARA CT</b>		
<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	THOMAS WILLIAM G R	Pacific Telephone
<b>432 SANTA CLARA CT</b>		
<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	O CONNELL WM R ALAMEDA	The Pacific Telephone & Telegraph Co.

## FINDINGS

### 435 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	REESE FANNIE MRS R ALAMEDA	The Pacific Telephone & Telegraph Co.

### 436 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	MEUTER HOMER G R ALAMEDA	The Pacific Telephone & Telegraph Co.

### 437 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	BARNEY ROBT R ALAMEDA	The Pacific Telephone & Telegraph Co.
	SCHWARTZ ADOLPH C R ALAMEDA	The Pacific Telephone & Telegraph Co.

### 439 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	DE LANCEY J J R ALAMEDA	The Pacific Telephone & Telegraph Co.
1950	DE LANCEY J J R	The Pacific Telephone & Telegraph Co.
1945	DE LANCEY J J R ALAMEDA	The Pacific Telephone & Telegraph Co.

### 440 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	ABBAY PRESS	The Pacific Telephone & Telegraph Co.
	MACKENZIE A D MRS R ALAMEDA	The Pacific Telephone & Telegraph Co.
1950	ABBAY PRESS	The Pacific Telephone & Telegraph Co.
	MAC KENZIE A D MRS R	The Pacific Telephone & Telegraph Co.
1945	MACKENZIE A D MRS R ALAMEDA	The Pacific Telephone & Telegraph Co.
1938	MACKENZIE A D MRS R	Pacific Telephone

### 445 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	PRINCIPIANO ERNEST R ALAMEDA	The Pacific Telephone & Telegraph Co.

### 452 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	GRANGER AGNES MRS R ALAMEDA	The Pacific Telephone & Telegraph Co.
1945	GRANGER AGNES MRS R ALAMEDA	The Pacific Telephone & Telegraph Co.

## FINDINGS

### 455 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	WALKUP JOHN E R	Pacific Telephone

### 456 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	GORDON EMALEEN R	The Pacific Telephone & Telegraph Co.
	RUSSELL HOWARD A CIV ENGR	The Pacific Telephone & Telegraph Co.
	RUSSELL HOWARD A CIV ENGR	The Pacific Telephone & Telegraph Co.

### 457 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	BETZNER J E R	The Pacific Telephone & Telegraph Co.
1945	BETZNER J E R ALAMEDA	The Pacific Telephone & Telegraph Co.

### 458 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	SMNITH RAY RAY SMITH CO RL EST	The Pacific Telephone & Telegraph Co.

### 461 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	FISHER EDWARD J R ALAMEDA	The Pacific Telephone & Telegraph Co.
1945	FISHER EDWARD J R ALAMEDA	The Pacific Telephone & Telegraph Co.

### 462 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	DALRYMPLE GRAEME H R	Pacific Telephone

### 466 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	KREAM OF KREAM STORE	R. L. Polk & Co. of California

### 468 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	JEWELER S REPAIR SERVICE	The Pacific Telephone & Telegraph Co.

## FINDINGS

### 474 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	CLARK FRANK E RL EST	R. L. Polk & Co. of California

### 476 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	MERINO S UPHOLSTERY STUDIO	The Pacific Telephone & Telegraph Co.

### 478 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	BAKER DANCE STUDIOS	The Pacific Telephone & Telegraph Co.
	PHILHARMONIC CHORUS	The Pacific Telephone & Telegraph Co.

### 484 SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	PARADISE FOUNTAIN THE	The Pacific Telephone & Telegraph Co.

### 365A SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	NIELSEN ANNA MISS R	Pacific Telephone

### 430A SANTA CLARA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	SKELLS TOM E R ALAMEDA	The Pacific Telephone & Telegraph Co.

## SANTA CLARA ST

### 326 SANTA CLARA ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Dunlop Geo A Ina MB eng h	R. L. Polk & Co.
	Fawkner Maureen M Mrs nurse r	R. L. Polk & Co.

### 332 SANTA CLARA ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Hyams Anita M clk JB Co r	R. L. Polk & Co.

### 348 SANTA CLARA ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Jenkins Curtis C L Louise K h	R. L. Polk & Co.

## FINDINGS

### 362 SANTA CLARA ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Richardson Robt Lucielle slsmn h	R. L. Polk & Co.

### 372 SANTA CLARA ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Sherman Melvin J dentist r	R. L. Polk & Co.

### 375 SANTA CLARA ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	ANDERSON Leonard Carolyn USA h	R. L. Polk & Co.

### 386 SANTA CLARA ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1962	Croter Jos r	Pacific Telephone

### 390 SANTA CLARA ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1962	Weiss A r	Pacific Telephone

### 393 SANTA CLARA ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1962	Kork Louis A r	Pacific Telephone

### 400 SANTA CLARA ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1991	Lucas N Kirk	PACIFIC BELL WHITE PAGES
1943	Hatfield Hannah E wid L C h	R. L. Polk & Co.
	Mc DONALD J Conw ay Mildred L h	R. L. Polk & Co.
	Smith Winifred J emp IBM Corp h	R. L. Polk & Co.
	Wachsman Doris C wid Moses h	R. L. Polk & Co.

### 412 SANTA CLARA ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1962	Boek Chas H	Pacific Telephone

## FINDINGS

### 451 SANTA CLARA ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Lakeview	R. L. Polk & Co.

### SANTA CLARA WAY

#### 326 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	DUNLOP GEORGE A R	The Pacific Telephone & Telegraph Co.
1938	DUNLOP GEORGE A R	Pacific Telephone
1925	KLINGE M R	R. L. Polk & Co. of California
1920	ULMANN OSCAR R	R. L. Polk & Co. of California

#### 330 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	VAN GELDER FLOYD R	Pacific Telephone
1925	PIERCE WM J R	R. L. Polk & Co. of California
1920	MAYBERRY MRS J L R	R. L. Polk & Co. of California

#### 332 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	HYAMS JOSEPH J R	The Pacific Telephone & Telegraph Co.
1938	FURRER AMBROS R	Pacific Telephone
	HYAMS JOSEPH J R	Pacific Telephone
1928	1 John H Margt bldg cont R	R.L. Polk and Co of California
1925	WHITTON C A R	R. L. Polk & Co. of California
1920	VOSBRINK RICHARD R	R. L. Polk & Co. of California

#### 336 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	CLARKE MRS CHARLOTTE M R	R. L. Polk & Co. of California

#### 337 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	DESIMONE S T R	R. L. Polk & Co. of California
1920	SMYTH MRS J B R	R. L. Polk & Co. of California

## FINDINGS

### 338 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	PERONA S J R	Pacific Telephone
1925	MATHEWS C E R	R. L. Polk & Co. of California

### 339 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	HUMPHREYS E G R	Pacific Telephone
1925	MCKENZIE E H R	R. L. Polk & Co. of California

### 340 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	CARLTON EDWARD M R	The Pacific Telephone & Telegraph Co.
1938	CARLTON EDWARD M R	Pacific Telephone
	MATTSON ARTHUR R	Pacific Telephone
1920	GEARHARD CHAS P R	R. L. Polk & Co. of California

### 342 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	LANG L B DR R	Pacific Telephone
1925	LIEBER WM A R	R. L. Polk & Co. of California
1920	LIEBER WM A R	R. L. Polk & Co. of California

### 343 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	BANTA F W R	Pacific Telephone

### 345 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	SOFRONOFF ALEXANDER R	Pacific Telephone
1925	KUHL JOHN R	R. L. Polk & Co. of California

### 346 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	MAST R ELIZABETH MRS R	Pacific Telephone
1928	h John A Maud G br mar Producers Milk Co H	R.L. Polk and Co of California

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	ARENA MRS JOS R	R. L. Polk & Co. of California

### 348 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	MANNING A J R	Pacific Telephone

### 350 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	CALLWELL FANNY S MRS R	Pacific Telephone

### 351 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	SPAAN H C R	The Pacific Telephone & Telegraph Co.
1938	SPAAN H C R	Pacific Telephone
1925	RICHARDS U G R	R. L. Polk & Co. of California
1920	RICHARDS U G R	R. L. Polk & Co. of California

### 353 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	ADKINS L H R	Pacific Telephone
1925	SPAAN H C R	R. L. Polk & Co. of California
1920	SPAAN H C R	R. L. Polk & Co. of California
	SPAAN PERCY J R	R. L. Polk & Co. of California

### 354 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	h Wilson 0 genl agt WPRR R	R.L. Polk and Co of California
1925	JONES T W WYNN R	R. L. Polk & Co. of California
1920	FRENCH SHEPARD R	R. L. Polk & Co. of California

### 355 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	GOW LEW G R	R. L. Polk & Co. of California
	GOW LEW G R	R. L. Polk & Co. of California
1920	GOW LEW G R	R. L. Polk & Co. of California

## FINDINGS

### 358 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	SUMMERS JOHN C R	R. L. Polk & Co. of California
1920	FRIEDMAN P R	R. L. Polk & Co. of California

### 359 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	BURR EDWIN R	Pacific Telephone
1925	WELCH W M R	R. L. Polk & Co. of California
1920	WELCH W M R	R. L. Polk & Co. of California

### 360 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	COSTELLO J A MRS R	The Pacific Telephone & Telegraph Co.
1938	COSTELLO J A MRS R	Pacific Telephone
1925	PHILLIPS DR W R R	R. L. Polk & Co. of California
1920	PHILLIPS DR W R R	R. L. Polk & Co. of California

### 361 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	SMITH MRS W A R	R. L. Polk & Co. of California
1920	SMITH MRS W A R	R. L. Polk & Co. of California

### 362 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	RICHARDSON R A R	The Pacific Telephone & Telegraph Co.
1938	RICHARDSON R A R	Pacific Telephone
1925	PORTER FRED E R	R. L. Polk & Co. of California
1920	BURLAND H W R	R. L. Polk & Co. of California

### 363 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	FLEGAL FRANK P REV R	Pacific Telephone
1920	LEARNER J E R	R. L. Polk & Co. of California

## FINDINGS

### 364 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	CONNIFF P J R	The Pacific Telephone & Telegraph Co.
1938	CONNIFF P J R	Pacific Telephone
1925	CONNIFF P J R	R. L. Polk & Co. of California

### 365 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	WALDRON C D R	Pacific Telephone

### 366 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	PALMER A M DR R	Pacific Telephone

### 367 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	COLLINS ROY V R	R. L. Polk & Co. of California
1920	FORTHAUS FRANK R	R. L. Polk & Co. of California

### 368 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	CRONIN ARTHUR J R	Pacific Telephone
1925	LUDWIG ALEX R	R. L. Polk & Co. of California
1920	STUART R B R	R. L. Polk & Co. of California

### 370 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	WINSOR F W R	R. L. Polk & Co. of California
1920	SPOTT L H R	R. L. Polk & Co. of California

### 371 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	STETSON E O R	The Pacific Telephone & Telegraph Co.
1938	STETSON E O R	Pacific Telephone
1925	STETSON CHAS R R	R. L. Polk & Co. of California

## FINDINGS

### 372 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	SHERMAN MAX MRS R	The Pacific Telephone & Telegraph Co.
1938	SHERMAN MAX MRS R	Pacific Telephone
1925	SHERMAN MRS MAX R	R. L. Polk & Co. of California

### 373 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	WOLLESEN D N R	Pacific Telephone
1925	STRANGE I M R	R. L. Polk & Co. of California

### 376 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	PERRY J F R	R. L. Polk & Co. of California
1920	KRESS A A R	R. L. Polk & Co. of California

### 379 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	WATERSON ANN R	The Pacific Telephone & Telegraph Co.
1925	VANN J H R	R. L. Polk & Co. of California

### 384 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	DUN FRANK W R	Pacific Telephone
1925	DUN FRANK W R	R. L. Polk & Co. of California
1920	MEYER MELVILLE P R	R. L. Polk & Co. of California

### 386 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	CROTER JOS R	The Pacific Telephone & Telegraph Co.
1938	CROTER JOS R	Pacific Telephone
1925	CROTER JOS R	R. L. Polk & Co. of California
1920	MAGEE H S R	R. L. Polk & Co. of California

### 387 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	ALBRIGHT O R	R. L. Polk & Co. of California

## FINDINGS

### 390 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	WEISS A R	The Pacific Telephone & Telegraph Co.
1938	GIBBS DOROTHY MISS R	Pacific Telephone
	WEISS A R	Pacific Telephone
1925	WEISS A R	R. L. Polk & Co. of California
1920	STEWART DR GEO H R	R. L. Polk & Co. of California

### 393 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1979	SHTABLOW GERALD E	Pacific Telephone
1938	KRAGEN E E R	Pacific Telephone
1933	KRAGEN E EDW (JOSEPHINE V) H	R. L. Polk & Co.
1925	KRAGEN E E R	R. L. Polk & Co. of California

### 400 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	DAVIS ELIZABETH R	The Pacific Telephone & Telegraph Co.
	GILMAN B I MRS R	The Pacific Telephone & Telegraph Co.
	LE FEBER LUCILE R	The Pacific Telephone & Telegraph Co.
1938	AYRES ALFRED R	Pacific Telephone
	CASSELMAN IRENE R	Pacific Telephone
	DAVIS ELIZABETH R	Pacific Telephone
	GILMAN B I MRS R	Pacific Telephone
	LE FEBER LUCILE R	Pacific Telephone
	MCCOY THOMAS P R	Pacific Telephone
	WACHSMAN M R	Pacific Telephone
1933	BLACK FRANK (EDNA) POSTER HNGR R	R. L. Polk & Co.
	CARLSON OSCAR E (LYDIA) AUTO REPR H	R. L. Polk & Co.
	O REILLEY JAS SLSMN OKLD LNDY CO R	R. L. Polk & Co.
	RUHIG JOSEPHINE (WID JACOB) H	R. L. Polk & Co.
	VON TING MURIEL MRS MGR H C CAPWELL CO R	R. L. Polk & Co.
1928	Luchessa Frances B tchr OPS R	R.L. Polk and Co of California
	38th Frank mgr Checker Cab Co R	R.L. Polk and Co of California

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Richelieu Apartments E J Balny mg R	R.L. Polk and Co of California
	Von Essen Carl O Kerstin H	R.L. Polk and Co of California

### 403 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1920	QUINN DR W J R	R. L. Polk & Co. of California

### 404 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	STEWART GRACE R	Pacific Telephone
1925	STEWART GRACE R	R. L. Polk & Co. of California
1920	STEWART W W R	R. L. Polk & Co. of California

### 405 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	RANGE HOWARD J R	R. L. Polk & Co. of California
	REYNOLDS F L R	R. L. Polk & Co. of California

### 407 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	MORRISON HARRY R	R. L. Polk & Co. of California

### 408 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	AITKEN ANDREW M MRS R	Pacific Telephone

### 409 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	ROBERTSON ROBERT R	R. L. Polk & Co. of California

### 410 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Johnson Paul Ward	PACIFIC BELL WHITE PAGES

### 412 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	BOEK CHAS H R	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	BOEK CHAS H R	R. L. Polk & Co. of California
1920	BOEK CHAS H R	R. L. Polk & Co. of California

### 414 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	MUIR ROBT S (MARY F) SLSMN PG & E CO H ALAMEDA	R. L. Polk & Co.
1928	Joe N Virginia musician H	R.L. Polk and Co of California

### 415 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	HALPERN J R	Pacific Telephone
1925	HOLWAY R S R	R. L. Polk & Co. of California

### 416 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	BROWN T E R	Pacific Telephone
1920	BROWN H L R	R. L. Polk & Co. of California

### 417 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	BADE CHRIS R	R. L. Polk & Co. of California

### 418 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	MACDONALD R C DR R	Pacific Telephone
	NEWMAN FRANK R R	Pacific Telephone
1933	PANELLA JOHN B (THERESA) TAILOR H	R. L. Polk & Co.
1925	PANELLA J B R	R. L. Polk & Co. of California

### 419 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	PAGE JOSEPH R	Pacific Telephone
	ROCHE J R	Pacific Telephone

## FINDINGS

### 421 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Wm Wm R checker Paraffene Cos R	R.L. Polk and Co of California
1925	GRANT BARTON S R	R. L. Polk & Co. of California
	LE FAIVRE W M R	R. L. Polk & Co. of California
1920	FITZGERALD J P R	R. L. Polk & Co. of California

### 422 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	NOBLET JAMES E R	R. L. Polk & Co. of California

### 423 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	WARDLOW C E R	R. L. Polk & Co. of California

### 424 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1920	ALLEN ALICE E R	R. L. Polk & Co. of California

### 432 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	HUNT W W R	R. L. Polk & Co. of California

### 435 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	REESE FANNIE MRS R	Pacific Telephone
1925	REESE MRS FANNIE R	R. L. Polk & Co. of California
1920	REESE W H R	R. L. Polk & Co. of California

### 436 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	MEUTER HOMER G R	Pacific Telephone

### 437 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	PARKER R GORDON R	Pacific Telephone

## FINDINGS

### 439 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	DE LANCEY J J R	Pacific Telephone
1920	THORP V E R	R. L. Polk & Co. of California

### 440 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	DAY W R R	R. L. Polk & Co. of California

### 450 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1991	Cornucopia Of Health Chiropractic Center	PACIFIC BELL WHITE PAGES

### 451 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	CITY OFFICES	The Pacific Telephone & Telegraph Co.
1938	CITY OFFICES	Pacific Telephone
1933	OAKLAND FREE LIBRARY BOARD OF DIRECTORS WM J MCCRACKEN PRES CHAS W FISHER M	R. L. Polk & Co.

### 452 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	LEWIS S DUFF R	Pacific Telephone
	RHINARD ETHEL PIANO	Pacific Telephone
1925	FULTON G M R	R. L. Polk & Co. of California
1920	FULTON G M R	R. L. Polk & Co. of California

### 455 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	WALKUP JOHN E R	R. L. Polk & Co. of California

### 457 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	BETZNER J E R	Pacific Telephone
1925	OLSON V E R	R. L. Polk & Co. of California

## FINDINGS

### 458 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1991	Psc Color Studio	PACIFIC BELL WHITE PAGES
	Pscallin	PACIFIC BELL WHITE PAGES
1986	Psc Color Studio	PACIFIC BELL WHITE PAGES
	Pscallin	PACIFIC BELL WHITE PAGES
1938	COLLINGWOOD S UPHOLSTERY STUDIO	Pacific Telephone

### 460 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	HALL DAVID W WINIFRED GRAY WISE INC	The Pacific Telephone & Telegraph Co.
	WISE WINIFRED GRAY INC INTR DECRTN	The Pacific Telephone & Telegraph Co.
1945	WISE WINIFRED GRAY INTERIOR DECORATION	The Pacific Telephone & Telegraph Co.
1938	WISE WINIFRED GRAY INTERIOR DECORATION	Pacific Telephone

### 461 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	FISHER ANDY R	Pacific Telephone
	FISHER EDWARD J R	Pacific Telephone

### 462 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	GREEN ALLEN DRESSES	Pacific Telephone
1925	BAKER MRS FRED R	R. L. Polk & Co. of California

### 464 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	GRAND AVE CYCLERY	Pacific Telephone
	WILLIAMS MAL GRAND AVE CYCLERY	Pacific Telephone

### 465 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	BERTELSEN A F R	R. L. Polk & Co. of California
1920	BERTELSEN A F R	R. L. Polk & Co. of California

## FINDINGS

### 468 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	COGSWELL S WATCH & CLOCK REPAIR	The Pacific Telephone & Telegraph Co.
1938	COGSWELL S WATCH & CLOCK REPAIR	Pacific Telephone
	JEWELER S REPAIR SERVICE	Pacific Telephone

### 472 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	GRAND AV MEAT MKT	R. L. Polk & Co. of California
1920	GRAND-AV MEAT MKT	R. L. Polk & Co. of California

### 475 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	DAVIS GROCERY	Pacific Telephone
1925	DIMENCO G	R. L. Polk & Co. of California

### 476 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	AUX MERINOS UPHOLSTERY STUDIO	Pacific Telephone

### 478 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	ACADEMY OF MODERN DESIGN	Pacific Telephone
	BAKER DANCE STUDIOS	Pacific Telephone

### 480 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	BROCK S BIRD STORE & BIRD HOSPITAL	The Pacific Telephone & Telegraph Co.
1938	BROCK S BIRD STORE & BIRD HOSPITAL	Pacific Telephone

### 484 SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	PARADISE CONFECTIONERY THE	Pacific Telephone

### 365A SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	YORK MYRTLE L R	The Pacific Telephone & Telegraph Co.
1938	YORK MYRTLE L R	Pacific Telephone

## FINDINGS

### 365B SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	HAWLEY E A R	Pacific Telephone
1933	LARISON LLOYD H (ELEANOR) H	R. L. Polk & Co.

### 405A SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1920	NORCIA GEO R	R. L. Polk & Co. of California

### 414B SANTA CLARA WAY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	GRABELL EDGAR J R	Pacific Telephone

### SANTA MARGARITA AVE

#### 345 SANTA MARGARITA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	KIOUS JOHN B	Pacific Telephone

### SANTA MARIA AVE

#### 432 SANTA MARIA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	OCdnnell Wm	PACIFIC BELL WHITE PAGES
	OCornesl Daw dy Martha	PACIFIC BELL WHITE PAGES
	OConnell Auto Parts	PACIFIC BELL WHITE PAGES

### SANTA MONICA AVE

#### 460 SANTA MONICA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	FINTA C J	Pacific Telephone

### SANTA RAY AVE

#### 344 SANTA RAY AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	HEATHORN W W R	R. L. Polk & Co. of California

## FINDINGS

### SANTA TRINITA AVE

#### 376 SANTA TRINITA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	MINIS KEITH	Pacific Telephone

#### 384 SANTA TRINITA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	MEMOREX CORP	Pacific Telephone Directory
	STORAGE PRODUCTS CORP SUNNYVALE	Pacific Telephone Directory

### SONTA CLARA AVE

#### 401 SONTA CLARA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	HENDRICKSON F	Pacific Telephone

### VALLE VIS

#### 460 VALLE VIS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	EMERALD HOLDINGS LLC	EDR Digital Archive

#### 519 VALLE VIS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	LCA CONSULTING GROUP	EDR Digital Archive

### VALLE VISTA AVE

#### 433 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	CANINEY LORRAINE	R. L. Polk Co.

#### 435 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	MARIA HIRNI	EDR Digital Archive
2017	GORDON POOLE	Cole Information
2014	ANTHONY GRAY	Cole Information
2010	NIDHI JAIN	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2005	WILKIN LEE	Cole Information
1996	HARTLEY KATE	PACIFIC BELL DIRECTORY
1995	HARTLEY, KATE	Cole Information
1992	HARTLEY KATE	PACIFIC BELL DIRECTORY
1980	Bow er Jas	Pacific Telephone
1975	CANE L	Pacific Telephone
1967	LEE WILKIN	R. L. Polk Co.
1962	Schafer Clark O	Pacific Telephone
1955	MACDONALD BENJ L	The Pacific Telephone & Telegraph Co.
1945	WEST IRENE R	The Pacific Telephone & Telegraph Co.
1938	FERREE HAROLD C R	Pacific Telephone
1933	FERREE HAROLD C (SARAH E) ARCHT	R. L. Polk & Co.
1928	B Edw A Winifred E H	R.L. Polk and Co of California

### 441 VALLEVISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ROSS DICKINSON	EDR Digital Archive
2014	DONALD BRUGGERS	Cole Information
2010	DOROTHY GOLDBERG	Cole Information
2005	DOROTHY GOLDBERG	Cole Information
2000	GOLDBERG D	Pacific Bell
	DOROTHY GOLDBERG	Cole Information
1996	GOLDBERG D	PACIFIC BELL DIRECTORY
1992	GOLDBERG D	PACIFIC BELL DIRECTORY
	GOLDBERG, DOROTHY	Cole Information
1991	Goldberg D	PACIFIC BELL WHITE PAGES
	Goldberg David	PACIFIC BELL WHITE PAGES
	Goldberg David	PACIFIC BELL WHITE PAGES
1986	Goldberg D	PACIFIC BELL WHITE PAGES
	Goldberg Dean MD Medical Corp	PACIFIC BELL WHITE PAGES
1980	Goldberg D	Pacific Telephone
1975	BRILL H A	Pacific Telephone
1970	BRILL H A	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	BRILL HYMAN A TE	R. L. Polk Co.
1965	PEREZ VALDEZ	R. L. Polk & Co.
1962	Brill H A	Pacific Telephone
1959	Garcia Richd C	R. L. Polk & Co.
1955	HALEVY N H REV R	The Pacific Telephone & Telegraph Co.
1950	HALEVY N H REV R	The Pacific Telephone & Telegraph Co.
1945	HALEVY N H REV R	The Pacific Telephone & Telegraph Co.
1938	SINGERMAN JOSEPH R	Pacific Telephone
	UNTERBERGER MORIS R	Pacific Telephone
1933	STEBBINS CHESTER L (ETTA) H	R. L. Polk & Co.
1928	HOLLESTED Magnus Christine Cal Mill &c Lmbr Co C H	R.L. Polk and Co of California

### 442 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	JOHN PARATORE	EDR Digital Archive
2017	JOHN PARATORE	Cole Information
2014	JOHN PARATORE	Cole Information
2010	JOHN PARATORE	Cole Information
2006	PARATORE John	Haines Company, Inc.
2005	JOHN PARATORE	Cole Information
2000	PARATORE JOHN & MICHEALA	Pacific Bell
	PARATORE JOHN & MICHEALA	Pacific Bell
	JOHN PARATORE	Cole Information
1996	PARATORE JOHN & MICHEALA	PACIFIC BELL DIRECTORY
	PARATORE JOHN & MICHEALA	PACIFIC BELL DIRECTORY
1995	PARATORE, JOHN	Cole Information
1992	PARATORE JOHN & MICHEALA	PACIFIC BELL DIRECTORY
	PARATORE, JOHN	Cole Information
1991	Paratore John & Micheala	PACIFIC BELL WHITE PAGES
1986	de Sam Lazaro Alda	PACIFIC BELL WHITE PAGES
1980	de Sam Lazaro Elda	Pacific Telephone
1975	PETERSON KENNETH E CS PR LATHAM SQ BLDG	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	PETERSON KENNETH E	Pacific Telephone Directory
	PETERSON KENNETH E CSPR	Pacific Telephone Directory
	PETERSON RUTH D	Pacific Telephone Directory
1967	PETERSON KENNETH E	R. L. Polk Co.
1962	Percy E N Mrs	Pacific Telephone
1955	PERCY E N MRS R	The Pacific Telephone & Telegraph Co.
1950	PERCY E N MRS R	The Pacific Telephone & Telegraph Co.
1945	PERCY E N MRS R	The Pacific Telephone & Telegraph Co.
1943	DAVIDSON Mary wid C D r	R. L. Polk & Co.
	Percival Ida M wid E L sten h	R. L. Polk & Co.
1938	PERCY E N R	Pacific Telephone
1933	PERCY EARL N (IDA M) C S PRACT	R. L. Polk & Co.
1928	Percy Earl N Ida M eng H	R.L. Polk and Co of California
1920	JONES MARCIA L R	R. L. Polk & Co. of California

### 443 VALLEVISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	CLAIRE TOMPKINS	Cole Information
2014	CLAIRE TOMPKINS	Cole Information
2006	No Current Listing	Haines Company, Inc.
2000	OCCUPANT UNKNOWN	Cole Information
1996	FELSEN LANK	PACIFIC BELL DIRECTORY
1995	FELSEN, LANK	Cole Information
1980	Dharmakirti	Pacific Telephone
	Reed Eric	Pacific Telephone
1975	HUGHES A FRANCES	Pacific Telephone
1970	HUGHES A FRANCES	Pacific Telephone Directory
1967	HUGHS F R GL	R. L. Polk Co.
1962	Hughes A Frances	Pacific Telephone
1955	HUGHES W CURTIS MRS	The Pacific Telephone & Telegraph Co.
1950	ROSENSTEIN BENJ R	The Pacific Telephone & Telegraph Co.
1943	Wells Carmen Mrs librn Okld Pub Libry r	R. L. Polk & Co.

## FINDINGS

### 447 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1965	LANGSETH JAMES	R. L. Polk & Co.
1959	Baker Edw J	R. L. Polk & Co.

### 448 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ARLENE ROSEN	EDR Digital Archive
	MATTHEW COHEN	EDR Digital Archive
	DAVID COHEN	EDR Digital Archive
2017	DAVID COHEN	Cole Information
2014	DAVID COHEN	Cole Information
2010	DAVID COHEN	Cole Information
2006	ROSENA Mew e	Haines Company, Inc.
2005	DAVID COHEN	Cole Information
2000	OCCUPANT UNKNOWN	Cole Information
1995	STEVENS, DEREK T	Cole Information
1992	ROSEN, ARLENE	Cole Information
1986	Brown Margaret A Mrs	PACIFIC BELL WHITE PAGES
1980	Brown Margaret A Mrs	Pacific Telephone
1975	BROWN MARGARET A MRS	Pacific Telephone
1970	BROWN CONNIE	Pacific Telephone Directory
	BROWN MARGARET A MRS	Pacific Telephone Directory
	BROWN THOS J	Pacific Telephone Directory
1967	BROWN THOS J	R. L. Polk Co.
1962	Brown Margaret A Mrs	Pacific Telephone
	Brown Thos J	Pacific Telephone
1950	FORD MOLLIE MISS R	The Pacific Telephone & Telegraph Co.
	TIMOMAS MARGARET F	The Pacific Telephone & Telegraph Co.
1943	Ford Mary A slsw n Kahns r	R. L. Polk & Co.
	Thomas Margt B wid G H h	R. L. Polk & Co.
1938	FORD MOLLIE MISS R	Pacific Telephone
	THOMAS MARGARET F R	Pacific Telephone
1933	FORD MOLLIE MRS SLSWN R	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	THOMAS MARGT F (WID G H) H	R. L. Polk & Co.
1928	Club Mollie A slsw mn R	R.L. Polk and Co of California
	legass Guilbert P Margt B pres Elec Blue Print & Photo Co H	R.L. Polk and Co of California

### 449 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	MARTIN MUENDEL	EDR Digital Archive
	HANNAH MITCHELL	EDR Digital Archive
2010	MARTIN MUENDEL	Cole Information
2006	CARDOSO Augusto	Haines Company, Inc.
2000	FUNG WM Y DR	Pacific Bell
	DAISY FUNG	Cole Information
1996	FUNG WM Y DR	PACIFIC BELL DIRECTORY
1995	FUNG, WILLIAM Y	Cole Information
1992	FUNG WM Y DR	PACIFIC BELL DIRECTORY
	FUNG, WILLIAM Y	Cole Information
1991	Fung Wm Y Dr	PACIFIC BELL WHITE PAGES
1980	Fung Wm Y Dr	Pacific Telephone
1975	FUNG WM Y DR	Pacific Telephone
1970	GEMIGNANI E PAUL	Pacific Telephone Directory
1967	GEMIGNANI E PAUL	R. L. Polk Co.
1962	Gemignani E Paul	Pacific Telephone
1955	GEMIGNANI E PAUL R	The Pacific Telephone & Telegraph Co.
1950	MARTIN JOHN JR R	The Pacific Telephone & Telegraph Co.
	WILKINS LEONARD V R	The Pacific Telephone & Telegraph Co.
1945	MARTIN JOHN JR R	The Pacific Telephone & Telegraph Co.
	WILKINS LEONARD V R	The Pacific Telephone & Telegraph Co.
1928	Pied Warren F Anne Western Wirebound Box Co H	R.L. Polk and Co of California
1920	ANDERSON MELVIN A R	R. L. Polk & Co. of California

### 451 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1965	MARQUES FRANK J	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1959	Marques Frank R 4 L	R. L. Polk & Co.

### 452 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	MARGARET KIANG	EDR Digital Archive
2017	TOMMY KIANG	Cole Information
2010	TOMMY CHI-KIANG	Cole Information
2006	CHI KIANG Stella	Haines Company, Inc.
	KIANG Margaret 00 a	Haines Company, Inc.
2005	TOMMY CHI-KIANG	Cole Information
2000	M KIANG	Cole Information
1992	CHANG ARMANDO Q	PACIFIC BELL DIRECTORY
	CHANG, ARMANDO Q	Cole Information
1967	DIMON EDWIN	R. L. Polk Co.
1962	Busset Mabel M	Pacific Telephone
	Dimon Edw in	Pacific Telephone
1955	CALOSSO PETER	The Pacific Telephone & Telegraph Co.
1950	CALOSSO JOHN R	The Pacific Telephone & Telegraph Co.
1945	CALOSSO JOHN R	The Pacific Telephone & Telegraph Co.
1943	Calosso John h	R. L. Polk & Co.
1938	ROSENTHAL O S R	Pacific Telephone
1933	ENGVICK CLARENCE E (SADIE) OFFICE MGR CRANE CO H	R. L. Polk & Co.
1928	Engvick Clarence E Sadie slsmn Crane Co H	R.L. Polk and Co of California

### 454 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	OCCUPANT UNKNOWN	Cole Information
1995	OCCUPANT UNKNOWNN	Cole Information
1980	Kiang Margaret Chi	Pacific Telephone
1970	METCALF V A	Pacific Telephone Directory
1967	BEDFORD THOS	R. L. Polk Co.
1950	OWENS J A R	The Pacific Telephone & Telegraph Co.
1943	Ow ens John A Nellie h	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	CHANDLER K MRS R	Pacific Telephone
1933	PARK DAVID B (LAURA I) CLK H	R. L. Polk & Co.

### 455 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	TONYA COOK	EDR Digital Archive
	TABITHA CEFARATTI	EDR Digital Archive
	CHANG LIMU	EDR Digital Archive
	TONYA CAUDLE	EDR Digital Archive
	TYONIE WOODS	EDR Digital Archive
2017	TERRANCE MCCARTHY	Cole Information
2014	TERRANCE MCCARTHY	Cole Information
2010	TERRENCE MCCARTHY PHOTOGRAPHY	Cole Information
2006	MCCARTHY Terrance	Haines Company, Inc.
2005	TERRENCE MCCARTHY PHOTOGR	Cole Information
2000	T MCCARTHY	Cole Information
1995	PERRY, DENNIS M	Cole Information
1980	Keefe Chanda	Pacific Telephone
1967	COLLIER JACK H	R. L. Polk Co.
1962	Collier Jack H r	Pacific Telephone
1955	COLLIER JACK H R	The Pacific Telephone & Telegraph Co.
	MCSORLEY R J	The Pacific Telephone & Telegraph Co.
1950	COLLIER JA CL H R	The Pacific Telephone & Telegraph Co.
	COLLIER LULA A R	The Pacific Telephone & Telegraph Co.
1938	COLLIER J H R	Pacific Telephone
1933	COLLIER JOHN H (LULU A) MINING ENG H	R. L. Polk & Co.
1928	Collier Aileen M stdt R	R.L. Polk and Co of California
	Vista John H Jr R	R.L. Polk and Co of California
1920	COLLIER J H R	R. L. Polk & Co. of California

### 458 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	ENGVICK SAIOE MRS	R. L. Polk Co.

## FINDINGS

### 460 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	BRETT TODOROFF	EDR Digital Archive
2014	RAY GONZALES	Cole Information
	ANNE GORDON	Cole Information
	ANDREW GARLAND	Cole Information
	OCCUPANT UNKNOWN	Cole Information
2010	SUF CONSTRUCTION CO	Cole Information
	OCCUPANT UNKNOWN	Cole Information
2006	FIZBAKSHSH Chargiz	Haines Company, Inc.
2005	CHANGIZ FIZBAKSHSH	Cole Information
2000	FIZBAKSHSH CHANGIZ	Pacific Bell
1995	MOORE, D	Cole Information
	LIU, YUEN S	Cole Information
1992	LIU YUEN SHAN	PACIFIC BELL DIRECTORY
	LIU, YUEN S	Cole Information
	WALIS, ELIANE	Cole Information
1991	Liu Yuen Shan	PACIFIC BELL WHITE PAGES
	Liu Z	PACIFIC BELL WHITE PAGES
1986	Liu Yuen Shan	PACIFIC BELL WHITE PAGES
	Liu Yuh Yann	PACIFIC BELL WHITE PAGES
1980	Liu Sun Lung	Pacific Telephone
1970	SALVATORE DANL	Pacific Telephone Directory
	SALVATORE MARILENA	Pacific Telephone Directory
1967	SALVATORE	R. L. Polk Co.
1962	Black Byron H	Pacific Telephone
1950	LOGAN LESLEY L R	The Pacific Telephone & Telegraph Co.
1943	Sharon Claude S Edyth h	R. L. Polk & Co.
1938	LOGAN L MISS R	Pacific Telephone
	SHARON C S R	Pacific Telephone
1933	LOGAN LESLIE D ADV R	R. L. Polk & Co.
	SHARON CLAUDE S (EDITH) MINING H	R. L. Polk & Co.
1928	Pt Leslye D R	R.L. Polk and Co of California

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Sharon Claude S Edith H	R.L. Polk and Co of California

### 466 VALLEVISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	DONALD MILLER	EDR Digital Archive
2017	DONALD MILLER	Cole Information
2014	DONALD MILLER	Cole Information
2006	MILLER France	Haines Company, Inc.
1995	MILLER, FRANCES	Cole Information
1992	MILLER F	PACIFIC BELL DIRECTORY
	MILLER, F	Cole Information
1991	Miller Don	PACIFIC BELL WHITE PAGES
	Or	PACIFIC BELL WHITE PAGES
	Miller F	PACIFIC BELL WHITE PAGES
1986	Miller F	PACIFIC BELL WHITE PAGES
1980	Miller Don	Pacific Telephone
	Miller F	Pacific Telephone
1975	MILLER KARL	Pacific Telephone
1970	MILLER KARL	Pacific Telephone Directory
1967	MILLERS CARL 0 GLI 8207	R. L. Polk Co.
1962	Miller Karl	Pacific Telephone
1955	COVALT BLANCHE W	The Pacific Telephone & Telegraph Co.
1950	COVALT C A DR R	The Pacific Telephone & Telegraph Co.
1945	COVALT C A DR R	The Pacific Telephone & Telegraph Co.
1943	Covalt Clifford A Blanche W dentist Dr Jas A Campbell Dentists h	R. L. Polk & Co.
	Logan Leslye D r	R. L. Polk & Co.
1938	COVALT C A DR R	Pacific Telephone
1933	COVALT CLIFFORD A (BLANCHE W) DENTIST	R. L. Polk & Co.
1928	H	R.L. Polk and Co of California
	Covalt Clifford A Blanche dentist	R.L. Polk and Co of California

## FINDINGS

### 472 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	MARK MANCAO	EDR Digital Archive
	DONALD HARVILL	EDR Digital Archive
2017	MARK MANCAO	Cole Information
2014	MARK MANCAO	Cole Information
2010	TUAN NGO	Cole Information
2006	No Current Listing	Haines Company, Inc.
2005	NERO TOVAR	Cole Information
2000	CANADA WILLIAM	Pacific Bell
1995	VANCE, BILL	Cole Information
1991	Cardarelli Aldous	PACIFIC BELL WHITE PAGES
1980	De Borba Robt	Pacific Telephone
1975	LEDY G I	Pacific Telephone
1970	COONS CHESTER A	Pacific Telephone Directory
1967	COOMS CHESTER A GLI 0913	R. L. Polk Co.
1962	Coons Chester A	Pacific Telephone
1955	COONS CHESTER A R	The Pacific Telephone & Telegraph Co.
1950	COONS CHESTER A R	The Pacific Telephone & Telegraph Co.
1945	JOHNSON WARREN L R	The Pacific Telephone & Telegraph Co.
1943	JOHNSON Warren L Addie H restrw kr h	R. L. Polk & Co.
1933	DAVIS ROBT M (MAUDE E) SEC BARNEY S LOAN OFFICE H	R. L. Polk & Co.

### 483 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	SUZANNE HUIE	EDR Digital Archive
2014	OCCUPANT UNKNOWN	Cole Information

### 484 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	KIPHANIE RADFORD	Cole Information
2010	KIPHANIE RADFORD	Cole Information
2005	TRAC BUSINESS SYSTEMS INC	Cole Information

## FINDINGS

### 506 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	THOMAS REYNOLDS	EDR Digital Archive
	SAMARA REYNOLDS	EDR Digital Archive
2014	LAWRENCE PERRY	Cole Information
2010	LAWRENCE PERRY	Cole Information
2006	PERRY Laorence	Haines Company, Inc.
2005	LAWRENCE PERRY	Cole Information
2000	PERRY LAWRENCE	Pacific Bell
	L PERRY	Cole Information
1996	PERRY LAWRENCE	PACIFIC BELL DIRECTORY
1995	PERRY, L	Cole Information
1992	PERRY LAWRENCE	PACIFIC BELL DIRECTORY
	PERRY, L	Cole Information
1980	Kohlman Danl A	Pacific Telephone
1975	ALPERT ANNA	Pacific Telephone
1970	ALPERT ANNA	Pacific Telephone Directory
1967	ALPERT ANNA L MRS	R. L. Polk Co.
1962	Murphy Artie	Pacific Telephone
	Murphy Edw L	Pacific Telephone
1955	THOMAS W JEROME	The Pacific Telephone & Telegraph Co.
1950	ELIADES POTTA R	The Pacific Telephone & Telegraph Co.
	MC KENZIE ROBT D R	The Pacific Telephone & Telegraph Co.

### 508 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	SIEGEL JENNIFER	EDR Digital Archive
2017	VINCENT TREMBLAY	Cole Information
	BRYAN HASSEMER	Cole Information
2014	ALISON BALL	Cole Information
2010	ANDREAS UNGER	Cole Information
	ELIZABETH FABER	Cole Information
2006	No Current Listing	Haines Company, Inc.
2005	CHRISTOPHER BAKER	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	1 SPERRY JOSHUA	Pacific Bell
	ILINISA HENDRICKSON	Cole Information
	JOSHUA SPERRY	Cole Information
1995	TOMIDY, PAUL	Cole Information
	JOYCE, EILEEN	Cole Information
1992	1 TOMIDY PAUL	PACIFIC BELL DIRECTORY
1991	Tomidy Paul	PACIFIC BELL WHITE PAGES
	Tomikawa Lance	PACIFIC BELL WHITE PAGES
1986	Tomidy Paul	PACIFIC BELL WHITE PAGES
1980	Jewell O M	Pacific Telephone
1970	KAWELMACHER STEVEN	Pacific Telephone Directory
	SMITH FLORA MRS	Pacific Telephone Directory
1967	APARTMENTS	R. L. Polk Co.
	WILLIAMS JAY A	R. L. Polk Co.
	OCONNOR V	R. L. Polk Co.
	LUSARARYAN K	R. L. Polk Co.
	SMITH FLORA MRS	R. L. Polk Co.
1962	Picone Lorna Kay	Pacific Telephone
	Smith Flora Mrs	Pacific Telephone
	Wallan Laura	Pacific Telephone
	Zacharias Ethel L	Pacific Telephone
1955	HAZELTON ANN F	The Pacific Telephone & Telegraph Co.
1950	LYDIKSEN NADINE H R	The Pacific Telephone & Telegraph Co.
1943	France Sadie wid Geo r	R. L. Polk & Co.
	Reed Martha E wid F W hskpr	R. L. Polk & Co.
	Ross Jas r	R. L. Polk & Co.
1938	HANSON MARJORIE MISS R	Pacific Telephone
	OWENS J A R	Pacific Telephone
1933	VICKERSON JOHN I (JULIA) PHYS	R. L. Polk & Co.
1928	elec Wm D Elsa T H	R.L. Polk and Co of California

## FINDINGS

### 509 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	FAITH DARLING	EDR Digital Archive
	CORINNE COUTURE	EDR Digital Archive
2017	CORI COUTURE	Cole Information
2014	FAITH DARLING	Cole Information
2010	CORI COUTURE	Cole Information
2006	: COUTURE Co D	Haines Company, Inc.
	COUTURE Cod	Haines Company, Inc.
2005	CORI COUTURE	Cole Information
2000	COUTURE CORI	Pacific Bell
	COUTURE CORI	Pacific Bell
	CORI COUTURE	Cole Information
1996	COUTURE CORI	PACIFIC BELL DIRECTORY
	COUTURE CORI	PACIFIC BELL DIRECTORY
1995	COUTURE, CORI	Cole Information
1992	COUTURE CORI	PACIFIC BELL DIRECTORY
	COUTURE, CORI	Cole Information
1991	Couture Cori	PACIFIC BELL WHITE PAGES
	Couture Paul	PACIFIC BELL WHITE PAGES
	Couture Raymond	PACIFIC BELL WHITE PAGES
1986	Davila Julio Rob	PACIFIC BELL WHITE PAGES
	Davila N	PACIFIC BELL WHITE PAGES
	Davila R	PACIFIC BELL WHITE PAGES
	Davila Robt	PACIFIC BELL WHITE PAGES
1970	LUNDBERG LESTER R	Pacific Telephone Directory
1967	MURPHY EDW L	R. L. Polk Co.
1962	Sw anson Arthur Mrs	Pacific Telephone
1955	SWANSON ARTHUR MRS	The Pacific Telephone & Telegraph Co.
1950	HILL J A MRS R	The Pacific Telephone & Telegraph Co.
1945	HUNKIN S R	The Pacific Telephone & Telegraph Co.
1938	HILL J A MRS R	Pacific Telephone
1928	r Erle R H	R.L. Polk and Co of California

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1920	RAFFETTO MISS HAZEL R R	R. L. Polk & Co. of California

### 511 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	LAUREN GOMES	Cole Information
2014	OCCUPANT UNKNOWN	Cole Information
2010	OCCUPANT UNKNOWN	Cole Information
2006	No Current Listing	Haines Company, Inc.
2005	OCCUPANT UNKNOWN	Cole Information
2000	UZZELL DAVID	Pacific Bell
	WHEELS DARCY	Pacific Bell
	DAVID UZZELL	Cole Information
	DARCY WHEELS	Cole Information
1995	BILLINGS, C	Cole Information
1980	Chamberlain Robt G	Pacific Telephone
1970	CHUTE G M	Pacific Telephone Directory
1967	CHUTE GRACE M	R. L. Polk Co.
1962	Chute Grace	Pacific Telephone
1950	RUDD HENRY A R	The Pacific Telephone & Telegraph Co.

### 513 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2010	ERIK EISERLING	Cole Information
2005	ERIK EISERLING	Cole Information
1995	LEWIS, DEBORAH	Cole Information

### 514 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	CHRISTINE HAMANN	Cole Information
2014	OCCUPANT UNKNOWN	Cole Information
2010	OCCUPANT UNKNOWN	Cole Information
2006	COUSINS Grady	Haines Company, Inc.
2005	SHARON LEMMON	Cole Information
2000	OCCUPANT UNKNOWN	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1995	OCCUPANT UNKNOWNN	Cole Information
1980	Alba Leanna	Pacific Telephone
1975	LESTER LA	Pacific Telephone
1970	JONES L G	Pacific Telephone Directory
1967	CYt PATRICIA A	R. L. Polk Co.
1962	Conti Norma	Pacific Telephone
1955	LANGAN EDW	The Pacific Telephone & Telegraph Co.
1950	MC CREADY MARTHA MRS R	The Pacific Telephone & Telegraph Co.

### 515 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	CYNTHIA FRAZIER	Cole Information
2014	FRAZIER CYNTHIA	Cole Information
2010	WILLIAM LEBEN	Cole Information
2005	WILLIAM LEBEN	Cole Information
2000	LEBEN WILLIAM	Pacific Bell
	WILLIAM LEBEN	Cole Information
1995	OCCUPANT UNKNOWNN	Cole Information
1980	Farren Richard	Pacific Telephone
1967	BELL SAM	R. L. Polk Co.
1962	Bell Sam r	Pacific Telephone
1955	BELL SAM R	The Pacific Telephone & Telegraph Co.
1950	BELL SAM R	The Pacific Telephone & Telegraph Co.
1945	BELL SAM R	The Pacific Telephone & Telegraph Co.
1943	Bell Sam E Louise Pipeftr h	R. L. Polk & Co.
1938	PARKER M R	Pacific Telephone
1933	PARKER HARRY R	R. L. Polk & Co.
	PARKER MARCUS (REBECCA) H	R. L. Polk & Co.
1928	Edith tchr R	R.L. Polk and Co of California
	Marcus Rebecca H	R.L. Polk and Co of California
	Maurice R	R.L. Polk and Co of California
1920	PARKER M R	R. L. Polk & Co. of California

## FINDINGS

### 516 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	MARK GENTRY	EDR Digital Archive
2017	MARK GENTRY	Cole Information
	CLARE GARCIA	Cole Information
2014	OCCUPANT UNKNOWN	Cole Information
	CLARE GARCIA	Cole Information
2010	OCCUPANT UNKNOWN	Cole Information
	KARA BIDSTRUP	Cole Information
2006	BIDSTRUP Kara	Haines Company, Inc.
	STONE David	Haines Company, Inc.
2005	OLGA RINGO	Cole Information
2000	OCCUPANT UNKNOWN	Cole Information
1995	KOISTINEN, JUNE M	Cole Information
1970	FIELD DANL C	Pacific Telephone Directory
	KOISTINEN RAY	Pacific Telephone Directory
1967	KOISTINEN RAY V	R. L. Polk Co.
1962	Koistinen Ray r	Pacific Telephone
	Sw ett Stuart H	Pacific Telephone
1955	KOISTINEN RAY R	The Pacific Telephone & Telegraph Co.
1950	KOISTINEN RAY R	The Pacific Telephone & Telegraph Co.
1945	CARSWELL WM R R	The Pacific Telephone & Telegraph Co.
1943	Carsw ell Dorothy Er	R. L. Polk & Co.
	Carsw ell Jessie M sten r	R. L. Polk & Co.
	Carsw ell Wm R Jeanie D h	R. L. Polk & Co.
1938	CARSWELL WM R R	Pacific Telephone
1933	GEDE HENRY JR (VELITA) H	R. L. Polk & Co.
1928	Raw sthn Edw Anna Edw S Johnston Motor Co and Johnston Finance Co H	R.L. Polk and Co of California
	Edeemoor Henry B Frederica appraiser Johnston Finance Co H	R.L. Polk and Co of California

### 517 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	LINDSEY LUKAS	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	No Current Listing	Haines Company, Inc.
2005	OCCUPANT UNKNOWN	Cole Information
2000	PAUL FLOOD	Cole Information
1996	BILLINGS C	PACIFIC BELL DIRECTORY
1995	OCCUPANT UNKNOWNN	Cole Information
1992	HARRIS, LESLIE	Cole Information
1991	Harris Leslie	PACIFIC BELL WHITE PAGES
1975	MORRISON W SCOTT	Pacific Telephone
1970	MURAOKA WALTER	Pacific Telephone Directory
1967	SOUZA GILBERT A	R. L. Polk Co.
1950	PAULSON WM F ENS R	The Pacific Telephone & Telegraph Co.

### 519 VALLEVISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	SARAH COX	EDR Digital Archive
	PAUL COX	EDR Digital Archive
	KENT BUNN	EDR Digital Archive
	DAVID LEUNG	EDR Digital Archive
	MARIA LEUNG	EDR Digital Archive
2017	AMANDA COBLE	Cole Information
	S DAVID	Cole Information
	DAVID LEUNG	Cole Information
	ELIZABETH MONAHAN	Cole Information
2014	OCCUPANT UNKNOWN	Cole Information
	PAUL COX	Cole Information
	LEUNG ESTHER	Cole Information
2010	OCCUPANT UNKNOWN	Cole Information
	DAVID LEUNG	Cole Information
2006	No Current Listing	Haines Company, Inc.
2005	OCCUPANT UNKNOWN	Cole Information
2000	SHIN NAMIE	Pacific Bell
	WILLIAM MCDONNELL	Cole Information
	CHAD STONE	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2000	NAMIE SHIN	Cole Information
1995	SULLIVAN, GEORGE M	Cole Information
	MENDIOLA, MICHAEL M	Cole Information
	MENDOLA, MANUEL	Cole Information
1992	SULLIVAN, GEORGE M	Cole Information
1991	Sullivan Geo M & Mary K	PACIFIC BELL WHITE PAGES
1986	Sullivan Geo M & Mary K	PACIFIC BELL WHITE PAGES
	Sullivan M	PACIFIC BELL WHITE PAGES
	Wiley J P	PACIFIC BELL WHITE PAGES
1980	Sullivan Geo M & Mary K	Pacific Telephone
1970	MARTIN MICHAEL	Pacific Telephone Directory
	SILVER ALAN	Pacific Telephone Directory
	SILVER SAM	Pacific Telephone Directory
1967	SILVER SAM	R. L. Polk Co.
1962	Silver Adel	Pacific Telephone
	Silver Sam	Pacific Telephone
1955	LENT THOMAS R	The Pacific Telephone & Telegraph Co.
1950	LENT THOMAS R	The Pacific Telephone & Telegraph Co.
1945	LENT THOMAS R	The Pacific Telephone & Telegraph Co.
1943	Halcrow Thos J jr Martha h	R. L. Polk & Co.
1938	TERSTEGGE A F R	Pacific Telephone
1933	KNIGHT WALTER R (FLORENCE B) MFRS BROKER H	R. L. Polk & Co.
1928	Terstegge Arth F Rose M H	R.L. Polk and Co of California
	Terstegge Mrs musician H	R.L. Polk and Co of California

### 521 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	PAUL COX	Cole Information
2014	OCCUPANT UNKNOWN	Cole Information
2006	No Current Listing	Haines Company, Inc.
2005	JESUS RIVAS	Cole Information
2000	SUSAN ROSS	Cole Information
1995	CHAR, JANELLE L	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1991	Johnson V	PACIFIC BELL WHITE PAGES
	Johnson V B	PACIFIC BELL WHITE PAGES
1986	Perlstein Richard	PACIFIC BELL WHITE PAGES
1980	Eiselman D	Pacific Telephone
1975	PETERSON JAS	Pacific Telephone
1970	BENFORD J	Pacific Telephone Directory
	LITTLE K	Pacific Telephone Directory
	PAYNE J	Pacific Telephone Directory
1967	GONZALES TONY	R. L. Polk Co.
1962	Ainsworth Mildred S CS pr	Pacific Telephone
1955	RYAN MARK W	The Pacific Telephone & Telegraph Co.
1950	HOWARD KING T R	The Pacific Telephone & Telegraph Co.
1943	Pfundstein Lois cash West Coast Life Ins Co r	R. L. Polk & Co.
	Pfundstein Wm G Elsa h	R. L. Polk & Co.
1938	PFUNDSTEIN WM G R	Pacific Telephone
1933	PFUNDSTEIN WM G (ELSA L) SLSMN H	R. L. Polk & Co.
1928	Pfundstein Wm G Elsa L H	R.L. Polk and Co of California

### 525 VALLEVISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	STEPHEN GARRY	Cole Information
2014	STEPHEN GARRY	Cole Information
2010	STEPHEN GARRY	Cole Information
2006	GARRY Stepren	Haines Company, Inc.
2005	STEPHEN GARRY	Cole Information
2000	BRETT WERKHEISER	Cole Information
1995	FRANKENFIELD, JOSEPH	Cole Information
1986	Seideman Paul	PACIFIC BELL WHITE PAGES
	Seiden C E	PACIFIC BELL WHITE PAGES
	Seiden Greg	PACIFIC BELL WHITE PAGES
	Seiden Richard & Betty Voice &TDD	PACIFIC BELL WHITE PAGES
1970	KNOUF J L	Pacific Telephone Directory
1967	KONOUF JOSEPH	R. L. Polk Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1967	KNOUF JOSEPH	R. L. Polk Co.
1962	Knouf J L	Pacific Telephone
1955	KNOUF J L	The Pacific Telephone & Telegraph Co.
1950	K(NOUF J L R	The Pacific Telephone & Telegraph Co.
1945	FERNSTEN ERNEST A LT R	The Pacific Telephone & Telegraph Co.
1943	DOWNING Geo J r	R. L. Polk & Co.
	DOWNING Serena A r	R. L. Polk & Co.
	Robinson Alice D wid Dow ning h	R. L. Polk & Co.
1938	DOWNING GEO J R	Pacific Telephone
	ROBINSON ALICE DOWNING MRS R	Pacific Telephone
1933	DOWNING GEO J H	R. L. Polk & Co.
	DOWNING SERENA R	R. L. Polk & Co.
	ROBINSON ALICE D MRS R	R. L. Polk & Co.
1928	M Merrill E Alice D v pres mgr Loop Lmbr & Mill Co H	R.L. Polk and Co of California

### 526 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	MARY LEVER	EDR Digital Archive
2017	MARY LEVER	Cole Information
2014	MARY LEVER	Cole Information
2010	MARY LEVER	Cole Information
2006	LEVER Mary	Haines Company, Inc.
2005	MARY LEVER	Cole Information
2000	MARY LEVER	Cole Information
1995	LEVER, MARY E	Cole Information
1970	LEVER MARY	Pacific Telephone Directory
1967	LEVER JAMES	R. L. Polk Co.
1962	Manning Rita r	Pacific Telephone
1955	MANNING RITA R	The Pacific Telephone & Telegraph Co.
1950	MC:RING RITA R	The Pacific Telephone & Telegraph Co.
1945	FLEET L O R	The Pacific Telephone & Telegraph Co.
1943	Bloom Esther w id Nathan r	R. L. Polk & Co.
	Schoenfeld Jos Annie mens furngs h	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	SCHOENFELD JOSEPH R	Pacific Telephone
1933	SCHOENFELD JOS (ANNIE) MENS FURNGS	R. L. Polk & Co.
1928	H	R.L. Polk and Co of California
	Schoenfeld Jos Anne mens furngs	R.L. Polk and Co of California

### 530 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	HEATHER KATZ	Cole Information
2014	HEATHER KATZ	Cole Information
2010	HEATHER KATZ	Cole Information
2006	BRECKER Susan	Haines Company, Inc.
2000	CINDY CAHILL	Cole Information
1992	CAMPBELL J	PACIFIC BELL DIRECTORY
1980	Johnson Dw ight	Pacific Telephone
	Oakland Insurance Mart Inc	Pacific Telephone
	Thomas Stan	Pacific Telephone
1975	JOHNSON DWIGHT	Pacific Telephone
1970	BICKERTON HARRY H	Pacific Telephone Directory
1967	DORSCH LOUISE MRS	R. L. Polk Co.
1962	Dorsch Chas Mrs	Pacific Telephone
1955	DORSCH CHAS MRS	The Pacific Telephone & Telegraph Co.
1950	DOYCH CHAS C R	The Pacific Telephone & Telegraph Co.
1943	Dorsch Chas C Louise h	R. L. Polk & Co.
1938	DORSCH CHAS C R	Pacific Telephone
1933	DORSCH CHAS C (LOUISE) REAL EST	R. L. Polk & Co.
1928	Dorsch Chas C Louise real est	R.L. Polk and Co of California
	H	R.L. Polk and Co of California
1920	DORSCH CHAS C R	R. L. Polk & Co. of California

### 531 VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ELIZABETH MERZENICH	EDR Digital Archive
	STEPHEN WRIGHT	EDR Digital Archive
	LEILA MERZENICH	EDR Digital Archive

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	STEPHEN WRIGHT	Cole Information
2014	STEPHEN WRIGHT	Cole Information
2010	STEPHEN WRIGHT	Cole Information
2006	WRIGHT Stephen	Haines Company, Inc.
2005	STEPHEN WRIGHT	Cole Information
2000	RICHARD SPROTT	Cole Information
1995	MILLER, SUSAN D	Cole Information
1992	MILLER S	PACIFIC BELL DIRECTORY
	MILLER, SUSAN D	Cole Information
1991	Miller S	PACIFIC BELL WHITE PAGES
	Miller S A	PACIFIC BELL WHITE PAGES
1986	Miller S	PACIFIC BELL WHITE PAGES
	New hall J	PACIFIC BELL WHITE PAGES
	New hall Jonathan & Barbara Falconer	PACIFIC BELL WHITE PAGES
1980	Miller S	Pacific Telephone
1975	MILLER STEPHEN	Pacific Telephone
1970	DELL VIRGINIA	Pacific Telephone Directory
1962	Smith Wm K r	Pacific Telephone
1955	SMITH WM K R	The Pacific Telephone & Telegraph Co.
1950	SMEITH WIM K R	The Pacific Telephone & Telegraph Co.
1938	KENNEDY J A R	Pacific Telephone
1933	KENNEDY JOSEPH A (MARY R) ATTORNEY-AT-LAW	R. L. Polk & Co.
1920	KENNEDY J A R	R. L. Polk & Co. of California

### 516B VALLE VISTA AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	MONROE GENE R	The Pacific Telephone & Telegraph Co.

### VALLE VISTA CT

#### 448 VALLE VISTA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	THOMAS MARGARET F R	The Pacific Telephone & Telegraph Co.

## FINDINGS

### 454 VALLE VISTA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	SIMPKINS W N	The Pacific Telephone & Telegraph Co.

### 460 VALLE VISTA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	LOGAN LESLEY L R	The Pacific Telephone & Telegraph Co.

### 508 VALLE VISTA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	LYDIKSEN NADINE H	The Pacific Telephone & Telegraph Co.
1945	LYDLKSEN NADINE H R	The Pacific Telephone & Telegraph Co.

### 521 VALLE VISTA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	HOWARD KING T R	The Pacific Telephone & Telegraph Co.

### 525 VALLE VISTA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	ROBINSON ALICE DOWNING MRS R	The Pacific Telephone & Telegraph Co.

### 530 VALLE VISTA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	NATIONAL SURVEYS	The Pacific Telephone & Telegraph Co.

### 531 VALLE VISTA CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	KENNEDY J A JR R	The Pacific Telephone & Telegraph Co.

### VALLE VISTA DR

#### 401 VALLE VISTA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	ALAMEDA COUNTY ANTI-VIVISECTION SOCIETY INC CONCRD	The Pacific Telephone & Telegraph Co.
	PET WELFARE ASSN INC CONCRD	The Pacific Telephone & Telegraph Co.

## FINDINGS

### 435 VALLE VISTA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	HALLAHAN MRS GEO R	R. L. Polk & Co. of California

### 441 VALLE VISTA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	HOLLESTED M R	R. L. Polk & Co. of California

### 442 VALLE VISTA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	PERCY E N R	R. L. Polk & Co. of California

### 448 VALLE VISTA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	FORD MOLLIE MISS R	The Pacific Telephone & Telegraph Co.
1945	FORD MOLLIE MISS R	The Pacific Telephone & Telegraph Co.
	THOMAS MARGARET F R	The Pacific Telephone & Telegraph Co.
1925	THOMAS H GUILBERT R	R. L. Polk & Co. of California

### 449 VALLE VISTA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	MCDADE DR WM J R	R. L. Polk & Co. of California

### 452 VALLE VISTA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	ENGVICK CLARENCE E R	R. L. Polk & Co. of California

### 454 VALLE VISTA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	OWENS J A R	The Pacific Telephone & Telegraph Co.
1925	WALL A O R	R. L. Polk & Co. of California
	WOLL A O R	R. L. Polk & Co. of California

### 455 VALLE VISTA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	COLLIER J H R	The Pacific Telephone & Telegraph Co.
1925	COLLIER J H R	R. L. Polk & Co. of California

## FINDINGS

### 460 VALLE VISTA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	LOGAN L MISS R	The Pacific Telephone & Telegraph Co.
	SHARON C S R	The Pacific Telephone & Telegraph Co.
1925	LOGAN MISS LESLYE R	R. L. Polk & Co. of California
	SHARON C S R	R. L. Polk & Co. of California

### 472 VALLE VISTA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	POTTS W ELMER R	R. L. Polk & Co. of California

### 508 VALLE VISTA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	JOHNSON J AUG R	R. L. Polk & Co. of California
	JOHNSON WALTER G R	R. L. Polk & Co. of California

### 509 VALLE VISTA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	HILL ALBERT E R	R. L. Polk & Co. of California
	HILL MRS J A R	R. L. Polk & Co. of California

### 515 VALLE VISTA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	PARKER M R	R. L. Polk & Co. of California

### 516 VALLE VISTA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	JOHNSTON E S R	R. L. Polk & Co. of California

### 519 VALLE VISTA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	TERSTEGGE A F R	R. L. Polk & Co. of California

### 521 VALLE VISTA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	PFUNDSTEIN WM G R	R. L. Polk & Co. of California

## FINDINGS

### 526 VALLE VISTA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	SCHOENFELD JOSEPH R	R. L. Polk & Co. of California

### 530 VALLE VISTA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	DORSCH CHAS C R	The Pacific Telephone & Telegraph Co.
1925	DORSCH CHAS C R	R. L. Polk & Co. of California

### 531 VALLE VISTA DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	KENNEDY J A R	The Pacific Telephone & Telegraph Co.
1925	KENNEDY J A R	R. L. Polk & Co. of California

### VALLE VISTA RD

#### 485 VALLE VISTA RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1951	Mesa CarlosR	R. L. Polk & Co.

#### 489 VALLE VISTA RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1951	Kw ilecki Martin	R. L. Polk & Co.

### WALCEAR AVE

#### 723 WALCEAR AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	JOHNS WANDA R	The Pacific Telephone & Telegraph Co.

### WALKER AVE

#### 719 WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	RAVI NEMANA	Cole Information
2010	RAVI NEMANA	Cole Information

## FINDINGS

### 721 WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	BOTKINS RUTH G	Pacific Telephone Directory
	DAWSON C G	Pacific Telephone Directory
	MCMEAN FLORENCE M	Pacific Telephone Directory
	PARDEE NAN MRS	Pacific Telephone Directory
1967	A MC MEAN JOSEPH TE	R. L. Polk Co.
	B PARDEE NAN MRS	R. L. Polk Co.
1962	Carr Alfred H	Pacific Telephone
	Daw son Carmileta	Pacific Telephone
	Mc Mean Jos	Pacific Telephone
	Pardee Nan Mrs	Pacific Telephone
1955	PARDEE NAN MRS	The Pacific Telephone & Telegraph Co.
	REEVES W MARSHALL	The Pacific Telephone & Telegraph Co.
1950	MAYON EDWIN H R	The Pacific Telephone & Telegraph Co.
	MYATT HORACE R	The Pacific Telephone & Telegraph Co.
1945	BOHALL MARCELLINE R	The Pacific Telephone & Telegraph Co.
	FERNBACH F G R	The Pacific Telephone & Telegraph Co.
	MYATT HORACE R	The Pacific Telephone & Telegraph Co.
1943	Fernbach Emma Mrs slsw n HCCCo r	R. L. Polk & Co.
	Fernbach Fredk Lee h	R. L. Polk & Co.
	Leslie Aubrey V Ingrid M auto repr h	R. L. Polk & Co.
	Leslie Ingrid M Mrs ofc nurse P M Elw old r	R. L. Polk & Co.
	Myatt Horace A Alfreda photo engr h	R. L. Polk & Co.
	Thompson Chas Kath h	R. L. Polk & Co.
	Thompson Kathleen B Mrs tchr Pub Sch r	R. L. Polk & Co.
1938	FISHER ELIZABETH B MRS R	Pacific Telephone
	MYATT HORACE R	Pacific Telephone
	PORTER MARY JEAN R	Pacific Telephone
1933	SCHRADER ROBT (LILLIAN) H	R. L. Polk & Co.
1928	DEETKEN Fredk I radio opr H	R.L. Polk and Co of California
	N Lucille sten R	R.L. Polk and Co of California
	H	R.L. Polk and Co of California

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Birch Vernon ildre G mfrs ast	R.L. Polk and Co of California

### 723 WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1962	Carty Alfred E	Pacific Telephone
1955	PECKHAM ALICE M MRS	The Pacific Telephone & Telegraph Co.

### 725 WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1962	Myatt Horace r	Pacific Telephone
1955	MYATT HORACE R	The Pacific Telephone & Telegraph Co.
1950	EPSTEIN H B MRS R	The Pacific Telephone & Telegraph Co.
1945	EPSTEIN H B MRS R	The Pacific Telephone & Telegraph Co.
1943	Epstein Harry B Cecelia br mgr United Cigars Whelen Stores Inc h	R. L. Polk & Co.
1938	LACEY T R R	Pacific Telephone
1933	HERSOM MILTON W VULC R	R. L. Polk & Co.
	RANDELIN JOHN (HAZEL) DRIVER H	R. L. Polk & Co.
	SCHOFIELD MAE MRS R	R. L. Polk & Co.
1928	rr Pt Loleta F R	R.L. Polk and Co of California

### 726 WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Cuprak E E	Pacific Telephone
1975	DUPUY GEO J MRS	Pacific Telephone
1970	DUPUY GEO J MRS	Pacific Telephone Directory
1967	DUPVY VIVIAN MRS	R. L. Polk Co.
1962	Dupuy Geo J Mrs	Pacific Telephone
1955	GIVEN HOMER A	The Pacific Telephone & Telegraph Co.
1943	Stearns Elum E Elsie trainmaster Key System h	R. L. Polk & Co.
1933	CAMPBELL RALPH G SLSMN R	R. L. Polk & Co.
	CHINNOCK WM E (MAY B) CBTMKR H	R. L. Polk & Co.

## FINDINGS

### 727 WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1962	Davis Diane	Pacific Telephone
1955	DELAY DIANE	The Pacific Telephone & Telegraph Co.
1950	RUTHERFORD ORRIS E R	The Pacific Telephone & Telegraph Co.

### 728 WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	MICHEL Conrlne	Haines Company, Inc.
2000	BRAUNEISS STEVEN	Pacific Bell
1992	LA MACCHIA D	PACIFIC BELL DIRECTORY
1991	La Macchia D	PACIFIC BELL WHITE PAGES
	Lamade Dietrick Lt Col Naval Air Station Almda	PACIFIC BELL WHITE PAGES
1986	Strause Jeffrey H	PACIFIC BELL WHITE PAGES
	Strauss Alexis	PACIFIC BELL WHITE PAGES
	Strauss B	PACIFIC BELL WHITE PAGES
	Strauss D	PACIFIC BELL WHITE PAGES
1980	Strause Jeffrey H	Pacific Telephone
1970	STRAUSE JEFFREY H	Pacific Telephone Directory
1967	STRAUSE JEFFREY H	R. L. Polk Co.
1962	Strause Jeffrey H	Pacific Telephone
1955	STRAUSE JEFFREY H	The Pacific Telephone & Telegraph Co.
1950	SMITH R J R	The Pacific Telephone & Telegraph Co.
1945	SANBORN GEO A R	The Pacific Telephone & Telegraph Co.
1943	Sanborn Geo A dept mgr FDGM Corp h	R. L. Polk & Co.
	Sanborn Therese wid Geo A r	R. L. Polk & Co.
1933	CAMPBELL ROBT T (ANNIE C) PHARM H	R. L. Polk & Co.
1928	h Robt T Annie 0 pharm L K Liggett Co H	R.L. Polk and Co of California

### 729 WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1962	Davey E T	Pacific Telephone
1955	DAVEY E T	The Pacific Telephone & Telegraph Co.
1950	DAVEY E T R	The Pacific Telephone & Telegraph Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	GRAHAM L D LT COMNDR R	The Pacific Telephone & Telegraph Co.
1943	Graham Eleanor r	R. L. Polk & Co.
	GRAHAM Lyman D Anna USN h	R. L. Polk & Co.
1933	FOSSING ALICE (WID J C) R	R. L. Polk & Co.
	SIGOURNEY THADDEUS W (HAZEL) H	R. L. Polk & Co.
1928	Sigourney Thadeus W Hazel H	R.L. Polk and Co of California

### 730 WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	No Current Listing	Haines Company, Inc.
1980	Miller G E	Pacific Telephone
1975	ANDERSON C	Pacific Telephone
1970	ADAMS MARION A	Pacific Telephone Directory
	GLOBENSKY GLADYS I	Pacific Telephone Directory
1967	DOHNERT VICTOR	R. L. Polk Co.
1962	Curry Marion M	Pacific Telephone
	Curry Wayman E	Pacific Telephone
1955	SCHOTTO L C	The Pacific Telephone & Telegraph Co.
1950	MEYER A C R	The Pacific Telephone & Telegraph Co.
1945	ANDERSON W A R	The Pacific Telephone & Telegraph Co.
1943	Fox Herbt variety store r	R. L. Polk & Co.
	Fuchs Herbt Helen h	R. L. Polk & Co.
1928	BRAY Watson A collr E B Water Co R	R.L. Polk and Co of California
	Lmbr Geo R H	R.L. Polk and Co of California
	Pauline C asst credit mgr Rhodes Jamieson Co R	R.L. Polk and Co of California

### 731 WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	ROWE JOHN JACK A R	The Pacific Telephone & Telegraph Co.

### 732 WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	No Current Listing	Haines Company, Inc.
1980	Shepherd Larry	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1975	BROWN CHAS C	Pacific Telephone
1970	BROWN CHAS C	Pacific Telephone Directory
1967	BROWN CHARLES C	R. L. Polk Co.
1962	Brown Chas C r	Pacific Telephone
1955	BROWN CHAS C R	The Pacific Telephone & Telegraph Co.
1950	BROWN CHAS C R	The Pacific Telephone & Telegraph Co.
1943	Feibelman Wm I h	R. L. Polk & Co.
1933	SCHNEIDER RAFAEL (FREDA) (SCHNEIDER & FELDMAN) H	R. L. Polk & Co.
1928	w ay Kath B Mrs H	R.L. Polk and Co of California

### 734 WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Schlitt& Stanhope	PACIFIC BELL WHITE PAGES
	Schlitt Steve	PACIFIC BELL WHITE PAGES
	Schlitt Steve geni contr	PACIFIC BELL WHITE PAGES
	Schlitt Gerson Arlette	PACIFIC BELL WHITE PAGES
	Stanhope Richard	PACIFIC BELL WHITE PAGES
	Stanhope Richard geni contr	PACIFIC BELL WHITE PAGES
1980	Arthur Douglas	Pacific Telephone
1975	ARMON C J	Pacific Telephone
1970	ARMON C J	Pacific Telephone Directory
1967	ARMON CONSTANTINE	R. L. Polk Co.
1962	Armon C J	Pacific Telephone
1955	BORNHOLDT JOHN R	The Pacific Telephone & Telegraph Co.
1950	BORRRHOLDT JOLIN R	The Pacific Telephone & Telegraph Co.
1945	AIRGOOD W H MRS R	The Pacific Telephone & Telegraph Co.
1943	Airgood W r	R. L. Polk & Co.
	Manna Jack A Frances driver r	R. L. Polk & Co.
1928	B Gantt Hortense br mgr Serval Sales H	R.L. Polk and Co of California

### 735 WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Arena Jos P Etha slsmn G P Corp h	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	SILVER ANN R	R. L. Polk & Co.
	SILVER CHAS CLK R	R. L. Polk & Co.
	SILVER LILLIE (WID ABR) H	R. L. Polk & Co.
	SILVER LLOYD CLK R	R. L. Polk & Co.
	SILVER MARY R	R. L. Polk & Co.
1928	Haesloop Aug G Anita furrier H	R.L. Polk and Co of California

### 736 WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Herrera P	PACIFIC BELL WHITE PAGES
1980	Shaul Julia	Pacific Telephone
	Stoughton Jeanne E	Pacific Telephone
1975	BRESSI CALIFORNIA A	Pacific Telephone
1970	BRESSI CALIFORNIA A	Pacific Telephone Directory
1967	KUHN SALLY	R. L. Polk Co.
1962	Kuhn Sally G	Pacific Telephone
1955	KUHN MAY L	The Pacific Telephone & Telegraph Co.
	KUHN SALLY G	The Pacific Telephone & Telegraph Co.
1950	LISKER SAML R	The Pacific Telephone & Telegraph Co.
1943	Jordan Louis L Ethel M dep Co Assessor h	R. L. Polk & Co.
1928	h Paul O Louise slsmn Black & Decker Mfg Co H	R.L. Polk and Co of California

### 737 WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	REID MILTONA	The Pacific Telephone & Telegraph Co.
1950	KENNEDY BLANCHE E R	The Pacific Telephone & Telegraph Co.
1945	GEHRKE ARTHUR F R	The Pacific Telephone & Telegraph Co.
1943	Neu irth F Edw in Margt USN h	R. L. Polk & Co.
1933	KING MABEL MRS SLSWN R	R. L. Polk & Co.

### 738 WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1980	Bain J	Pacific Telephone
1975	LANDRESS TERRY W	Pacific Telephone

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	PLUMMER HELEN E	Pacific Telephone Directory
	RYDER GRACE B	Pacific Telephone Directory
1967	PLUMMER HELEN E MRS	R. L. Polk Co.
1962	Kendrick Elizabeth A	Pacific Telephone
1955	KLARNET S L	The Pacific Telephone & Telegraph Co.
1945	JACOBS WALTER R	The Pacific Telephone & Telegraph Co.
1943	Jacobs Walter J h	R. L. Polk & Co.
1938	ERICKSON GRACE MRS R	Pacific Telephone
	ERICKSON J ALBERT R	Pacific Telephone

### 740 WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2006	o CHAPLAN Debra	Haines Company, Inc.
2000	CHAPLAN D	Pacific Bell
1986	Sukkestad Mary	PACIFIC BELL WHITE PAGES
1980	Rossett Carol	Pacific Telephone
	Shkurkin Sergei V	Pacific Telephone
1975	HUDSON B G	Pacific Telephone
1970	HUDSON B G	Pacific Telephone Directory
1967	HUDSON BEATRICE	R. L. Polk Co.
1955	GERBODE GERTRUDE M R	The Pacific Telephone & Telegraph Co.
1950	GERBO D L R	The Pacific Telephone & Telegraph Co.
1943	Engs Joan sten r	R. L. Polk & Co.
	Engs Josephine S Mrs Major Realty Co h	R. L. Polk & Co.
1933	JORDAN LOUIS L (ETHEL M) BKPR H	R. L. Polk & Co.
1928	Louis L H	R.L. Polk and Co of California

### 741 WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	CARL TELSON	EDR Digital Archive
	SZ JOU	EDR Digital Archive
	ALYSSA WONG-CONWAY	EDR Digital Archive
2017	CARL TELSON	Cole Information
2014	CARL TELSON	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2014	BILL STEWART	Cole Information
2010	CARL TELSON	Cole Information
	VANESSA THOMAS	Cole Information
	BILL STEWART	Cole Information
2006	No Current Listing	Haines Company, Inc.
2005	CARL TELSON	Cole Information
	VANESSA THOMAS	Cole Information
	SZ JOU	Cole Information
2000	3 TELSON CARL	Pacific Bell
	JOEL REDDING	Cole Information
1996	2 EGILDSON JAY	PACIFIC BELL DIRECTORY
1995	EGILDSON, JAY	Cole Information
1992	2 EGILDSON JAY	PACIFIC BELL DIRECTORY
	3 MOORE FRANCINE	PACIFIC BELL DIRECTORY
	MOORE, F	Cole Information
1991	Cobb Alfred Robt	PACIFIC BELL WHITE PAGES
	Egildson Jay	PACIFIC BELL WHITE PAGES
	Moore Francine	PACIFIC BELL WHITE PAGES
	Oudrihiri Khalid	PACIFIC BELL WHITE PAGES
	L Ouellet Dan	PACIFIC BELL WHITE PAGES
	Sappington MM	PACIFIC BELL WHITE PAGES
1986	Frank Robert	PACIFIC BELL WHITE PAGES
1980	Cobb Alfred Robt	Pacific Telephone
	Egildson Jay	Pacific Telephone
	Milford Judith A	Pacific Telephone
	Sappington M M	Pacific Telephone
	Silket Sidney	Pacific Telephone
1975	EOL LFT T	Pacific Telephone
	MILFOSRD JUDITH A	Pacific Telephone
	MOULAS KATHY	Pacific Telephone
1970	FLORY EDGER	Pacific Telephone Directory
	MILFORD JUDITH A	Pacific Telephone Directory

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1970	REYNOLDS KAREN	Pacific Telephone Directory
1967	GRISSEN CARL E	R. L. Polk Co.
1943	Grissen Carl E Captolia E music tchr h	R. L. Polk & Co.
1933	EMIGH AMY (WID MILTON) R	R. L. Polk & Co.
	EMIGH MABEL MRS R	R. L. Polk & Co.
	HOLMES ANNIE (WID M W) H	R. L. Polk & Co.
1928	Amy Mabel Mrs R	R.L. Polk and Co of California
	H Ann W w id Melvin R	R.L. Polk and Co of California
	Wesley Percy W H	R.L. Polk and Co of California

### 743 WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	ANDRES TAMAYO	EDR Digital Archive
	NICOLE TAMAYO	EDR Digital Archive
	CHRISTIAN HILL	EDR Digital Archive
2017	ELENA LAPIANA	Cole Information
	NGUYEN DION	Cole Information
	HELEN HARRIS	Cole Information
2014	RICHARD MESKILL	Cole Information
	OCCUPANT UNKNOWN	Cole Information
2010	ANDRES TAMAYO	Cole Information
	BRIAN SMART	Cole Information
1995	ABRAMS, L S	Cole Information
	WOLFFSOHN, GEORGE B	Cole Information
	MORSE, B A	Cole Information
1992	ABRAMS, L S	Cole Information
	WOLFFSOHN, GEORGE B	Cole Information

### 745 WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	TOM SIMONSON	EDR Digital Archive
	GEORGE YAMADA	EDR Digital Archive
	YAEKO YAMADA	EDR Digital Archive
2017	TOM SIMONSON	Cole Information

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2017	YAEKO YAMADA	Cole Information
2014	TOM SIMONSON	Cole Information
	YAEKO YAMADA	Cole Information
2010	TOM SIMONSON	Cole Information
	YAEKO YAMADA	Cole Information
2005	JAMES YAMADA	Cole Information
2000	GEORGE YAMADA	Cole Information
1995	SAPPINGTON, MAURICE M	Cole Information
1992	SAPPINGTON, M M	Cole Information

### 747 WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2020	YITZE YANG	EDR Digital Archive
	MINYING YANG	EDR Digital Archive
	QI YANG	EDR Digital Archive
	FEZI YANG	EDR Digital Archive
	NATALIE SHERMAN	EDR Digital Archive
	RUSSELL SHERMAN	EDR Digital Archive
2017	QIWEI YANG	Cole Information
	WAYNE YANG	Cole Information
	FEZI YANG	Cole Information
2014	WAYNE YANG	Cole Information
	QI YANG	Cole Information
	MICHELLE NIP	Cole Information
	NATALIE SHERMAN	Cole Information
2010	WAYNE YANG	Cole Information
	ELLEN LI	Cole Information
2005	OCCUPANT UNKNOWN	Cole Information
2000	OCCUPANT UNKNOWN	Cole Information
1995	OCCUPANT UNKNOWN	Cole Information
1992	CHOY, RONALD	Cole Information

## FINDINGS

### 721A WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	BUTLER LUETTA RL EST	The Pacific Telephone & Telegraph Co.

### 723A WALKER AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	DANIEL RICHARD F	The Pacific Telephone & Telegraph Co.

### WALKER CT

#### 721 WALKER CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	HAMILTON LUKE SR MRS R	The Pacific Telephone & Telegraph Co.

### WALKER DR

#### 732 WALKER DR

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	May Mrs R	R.L. Polk and Co of California

### WALKER ST

#### 719 WALKER ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	WICKS JENNIE MRS R	The Pacific Telephone & Telegraph Co.
1945	GIBSON HATTIE G MRS R	The Pacific Telephone & Telegraph Co.
	McFARLAN JULIA A R	The Pacific Telephone & Telegraph Co.
	WICKS JENNIE MRS R	The Pacific Telephone & Telegraph Co.
1938	LAND RANDI MRS R	Pacific Telephone
	PERRINE H C MRS R	Pacific Telephone
1925	BECHTEL S D R	R. L. Polk & Co. of California
	LATHAM GEORGE H R	R. L. Polk & Co. of California
	WASTE W E R	R. L. Polk & Co. of California
	WILSON P D R	R. L. Polk & Co. of California

#### 721 WALKER ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1943	Mann Emma Mrs slsw n HCCCo r	R. L. Polk & Co.

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1928	Grand Marion B Gertrude serv sta	R.L. Polk and Co of California
	H	R.L. Polk and Co of California
	Arnold R musician R	R.L. Polk and Co of California
	Walkotte Harry W agi Metropolitan Life Ins Co H	R.L. Polk and Co of California
1925	CARTER S I R	R. L. Polk & Co. of California
	HARGEAR W A JR R	R. L. Polk & Co. of California
	STOOPS ROBT C R	R. L. Polk & Co. of California

### 724 WALKER ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	CARLSON C R R	R. L. Polk & Co. of California

### 725 WALKER ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1933	POTTER MONTAGUE (H JUSTINE) CIV ENG H	R. L. Polk & Co.
1928	Raw son Clara F wid Frank tchr OPS H	R.L. Polk and Co of California
1925	RAWSON CLARA F R	R. L. Polk & Co. of California
1920	RAWSON CLARA F R	R. L. Polk & Co. of California

### 726 WALKER ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1950	STEARNS ELUM E R	The Pacific Telephone & Telegraph Co.
1945	STEARNS ELUM E R	The Pacific Telephone & Telegraph Co.
1938	DAVENPORT M L R	Pacific Telephone
1928	H	R.L. Polk and Co of California
	Bamberger Justin Estelle dry gds	R.L. Polk and Co of California

### 728 WALKER ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	CAMPBELL ROBERT R	Pacific Telephone
1925	CAMPBELL ROBERT R	R. L. Polk & Co. of California

## FINDINGS

### 729 WALKER ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	SIGOURNEY THAD R	Pacific Telephone
1925	SIGOURNEY THAD R	R. L. Polk & Co. of California

### 730 WALKER ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	LUEDERS H J R	Pacific Telephone
1925	STEVENSON J J R	R. L. Polk & Co. of California

### 732 WALKER ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	FEIBELMAN WM I R	The Pacific Telephone & Telegraph Co.
1938	BRYANT R M R	Pacific Telephone
1925	KELLER M J R	R. L. Polk & Co. of California

### 734 WALKER ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	SHNELL J E R	R. L. Polk & Co. of California

### 735 WALKER ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1962	Arena Joseph Paul r	Pacific Telephone
1955	ARENA JOSEPH PAUL R	The Pacific Telephone & Telegraph Co.
1950	ARENA JOSEIPH PAUL R	The Pacific Telephone & Telegraph Co.
1945	ARENA JOSEPH PAUL R	The Pacific Telephone & Telegraph Co.
1938	JONES C E R	Pacific Telephone
1933	SILVER BENJ CLK R	R. L. Polk & Co.
	SILVER SAML CLK R	R. L. Polk & Co.
1925	BEEBE CHARLES H R	R. L. Polk & Co. of California
1920	KLEINBERG WM R	R. L. Polk & Co. of California

### 736 WALKER ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	WALLACE W D R	R. L. Polk & Co. of California

## FINDINGS

### 738 WALKER ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	ELLIS SELENA E R	R. L. Polk & Co. of California

### 740 WALKER ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1945	ENGS JOAN MISS R	The Pacific Telephone & Telegraph Co.
1938	SAUNDERS GUY W R	Pacific Telephone
1925	COLLINS E K R	R. L. Polk & Co. of California

### 741 WALKER ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1962	Grissen Carl r	Pacific Telephone
1955	GRISSEN CARL R	The Pacific Telephone & Telegraph Co.
1950	GRISSEML CARL R	The Pacific Telephone & Telegraph Co.
1945	GRISSEN CARL R	The Pacific Telephone & Telegraph Co.
1938	GRISSEN CARL R	Pacific Telephone
1925	HOLMES MRS M W R	R. L. Polk & Co. of California
1920	HUNT E J R	R. L. Polk & Co. of California

### 742 WALKER ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	SAGEHORN H A R	Pacific Telephone
1925	SAGEHORN H A R	R. L. Polk & Co. of California

### 743 WALKER ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1938	COOK CARL E R	Pacific Telephone
	PARKER WILLIAM W R	Pacific Telephone
	WATKINS MOLLIE MRS R	Pacific Telephone
1928	R	R.L. Polk and Co of California
	Mc Anna Emiln R	R.L. Polk and Co of California
1925	VAN EVERY J M R	R. L. Polk & Co. of California
1920	VAN EVERY J M R	R. L. Polk & Co. of California

## FINDINGS

### ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

<b><u>Address Researched</u></b>	<b><u>Address Not Identified in Research Source</u></b>
3201 GRAND AVE	2017, 2014, 2010, 2006, 2005, 2002, 2000, 1996, 1995, 1993, 1992, 1991, 1986, 1984, 1982, 1980, 1979, 1976, 1975, 1973, 1970, 1967, 1965, 1962, 1960, 1959, 1956, 1955, 1954, 1951, 1950, 1946, 1945, 1943, 1940, 1938, 1933, 1932, 1928, 1926, 1925, 1920
3201 GRAND AVE	2020, 2017, 2010, 2006, 2005, 2002, 2000, 1996, 1995, 1993, 1992, 1991, 1986, 1984, 1982, 1980, 1979, 1976, 1975, 1973, 1970, 1967, 1965, 1962, 1960, 1959, 1956, 1955, 1954, 1951, 1950, 1946, 1945, 1943, 1940, 1938, 1933, 1932, 1928, 1926, 1925, 1920
3201 GRAND AVE	2020, 2017, 2014, 2006, 2005, 2002, 2000, 1996, 1995, 1993, 1992, 1991, 1986, 1984, 1982, 1980, 1979, 1976, 1975, 1973, 1970, 1967, 1965, 1962, 1960, 1959, 1956, 1955, 1954, 1951, 1950, 1946, 1945, 1943, 1940, 1938, 1933, 1932, 1928, 1926, 1925, 1920
3201 GRAND AVE	2020, 2017, 2014, 2010, 2005, 2002, 2000, 1996, 1995, 1993, 1992, 1991, 1986, 1984, 1982, 1980, 1979, 1976, 1975, 1973, 1970, 1967, 1965, 1962, 1960, 1959, 1956, 1955, 1954, 1951, 1950, 1946, 1945, 1943, 1940, 1938, 1933, 1932, 1928, 1926, 1925, 1920
3201 GRAND AVE	2020, 2017, 2014, 2010, 2006, 2005, 2002, 1996, 1995, 1993, 1992, 1991, 1986, 1984, 1982, 1980, 1979, 1976, 1975, 1973, 1970, 1967, 1965, 1962, 1960, 1959, 1956, 1955, 1954, 1951, 1950, 1946, 1945, 1943, 1940, 1938, 1933, 1932, 1928, 1926, 1925, 1920
3201 GRAND AVE	2020, 2017, 2014, 2010, 2006, 2005, 2002, 2000, 1995, 1993, 1992, 1991, 1986, 1984, 1982, 1980, 1979, 1976, 1975, 1973, 1970, 1967, 1965, 1962, 1960, 1959, 1956, 1955, 1954, 1951, 1950, 1946, 1945, 1943, 1940, 1938, 1933, 1932, 1928, 1926, 1925, 1920
3201 GRAND AVE	2020, 2017, 2014, 2010, 2006, 2005, 2002, 2000, 1996, 1993, 1992, 1991, 1986, 1984, 1982, 1980, 1979, 1976, 1975, 1973, 1970, 1967, 1965, 1962, 1960, 1959, 1956, 1955, 1954, 1951, 1950, 1946, 1945, 1943, 1940, 1938, 1933, 1932, 1928, 1926, 1925, 1920
3201 GRAND AVE	2020, 2017, 2014, 2010, 2006, 2005, 2002, 2000, 1996, 1995, 1993, 1992, 1986, 1984, 1982, 1980, 1979, 1976, 1975, 1973, 1970, 1967, 1965, 1962, 1960, 1959, 1956, 1955, 1954, 1951, 1950, 1946, 1945, 1943, 1940, 1938, 1933, 1932, 1928, 1926, 1925, 1920
3201 GRAND AVE	2020, 2017, 2014, 2010, 2006, 2005, 2002, 2000, 1996, 1995, 1993, 1992, 1991, 1986, 1984, 1982, 1980, 1979, 1976, 1975, 1973, 1970, 1967, 1965, 1962, 1960, 1959, 1956, 1955, 1954, 1951, 1950, 1946, 1945, 1943, 1940, 1938, 1933, 1932, 1928, 1926, 1925, 1920
3201 GRAND AVE	2020, 2017, 2014, 2010, 2006, 2005, 2002, 2000, 1996, 1995, 1993, 1992, 1991, 1986, 1984, 1982, 1980, 1979, 1976, 1975, 1973, 1970, 1967, 1965, 1962, 1960, 1959, 1956, 1955, 1954, 1951, 1950, 1946, 1945, 1943, 1940, 1938, 1933, 1932, 1928, 1926, 1925, 1920
3201 GRAND AVE	2020, 2017, 2014, 2010, 2006, 2005, 2002, 2000, 1996, 1995, 1993, 1992, 1991, 1986, 1984, 1982, 1980, 1979, 1976, 1975, 1973, 1970, 1967, 1965, 1962, 1960, 1959, 1956, 1955, 1954, 1951, 1950, 1946, 1945, 1943, 1940, 1938, 1933, 1932, 1928, 1926, 1925, 1920























































































































































































































































































































































































































































































































































































































































































































































































## FINDINGS

### **Address Researched**

483 CRESCENT TER

483 CRESCENT TER

483 CRESCENT TER

### **Address Not Identified in Research Source**

2020, 2017, 2014, 2010, 2006, 2005, 2002, 2000, 1996, 1995, 1993, 1992, 1991, 1986, 1984, 1982, 1980, 1979, 1976, 1975, 1973, 1970, 1967, 1965, 1962, 1960, 1959, 1956, 1955, 1954, 1951, 1950, 1946, 1945, 1943, 1940, 1933, 1932, 1928, 1926, 1925, 1920

2020, 2017, 2014, 2010, 2006, 2005, 2002, 2000, 1996, 1995, 1993, 1992, 1991, 1986, 1984, 1982, 1980, 1979, 1976, 1975, 1973, 1970, 1967, 1965, 1962, 1960, 1959, 1956, 1955, 1954, 1951, 1950, 1946, 1943, 1940, 1938, 1933, 1932, 1928, 1926, 1925, 1920

2020, 2017, 2014, 2010, 2006, 2005, 2002, 2000, 1996, 1995, 1993, 1992, 1991, 1986, 1984, 1982, 1980, 1979, 1976, 1975, 1973, 1970, 1967, 1965, 1962, 1960, 1959, 1956, 1955, 1954, 1951, 1950, 1946, 1945, 1943, 1940, 1938, 1932, 1928, 1926, 1925, 1920

**TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE**

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

**Address Researched**

401 Santa Clara Avenue

**Address Not Identified in Research Source**

2002, 1993, 1984, 1982, 1979, 1976, 1973, 1965, 1960, 1959, 1956, 1954, 1951,  
1946, 1940, 1932, 1926, 1920

**Appendix E -  
Site Documentation and Regulatory  
Records**

**From:** [dehloptoxic, Env. Health](#)  
**To:** [Luke Swickard](#)  
**Subject:** Re: PRA Request  
**Date:** Friday, May 24, 2024 9:55:52 AM

---

Alameda County Department of Environmental Health's (ACDEH) Local Oversight Program (LOP), which includes Onsite Wastewater Treatment Systems (OWTS), is in receipt of your records request dated May 22nd, 2024. ACDEH does not have any records of open/closed environmental cleanup cases relating to soil and groundwater contamination or septic systems at 401 Santa Clara Ave in Oakland (APN: 10-823-15-5).

LOP recommends contacting Alameda County Public Works Agency for information regarding water wells at the site.

Thank you,  
Alameda County Land Use and Local Oversight Program (LOP)  
Alameda County Environmental Health  
1131 Harbor Bay Pkwy  
Alameda, CA 94502  
510-567-6700  
<https://deh.acgov.org/>

---

**From:** dehwebmain, Env. Health Mailbox <dehwebmain@acgov.org>  
**Sent:** Wednesday, May 22, 2024 11:10 AM  
**To:** dehcupafilereview, Env. Health <dehcupafilereview@acgov.org>; dehloptoxic, Env. Health <deh.loptoxic@acgov.org>  
**Subject:** Fw:

Good morning,

Record request.

Thank you,  
Gabrielle

---

**From:** acgovnoreply <acgovnoreply@acgov.org>  
**Sent:** Wednesday, May 22, 2024 11:05 AM  
**To:** dehwebmain, Env. Health Mailbox <dehwebmain@acgov.org>  
**Subject:**

**E-mail submitted from: Alameda County Environmental Health**

---

Assessor Parcel Number:	10-823-15-5
Property Address Number:	401
Property Address Street:	Santa Clara Avenue
Property Address City:	Oakland
Contact Full Name:	Luke Swickard
Contact Email:	lswickard@ninyoandmoore.com
Reason for Request:	I am requesting any and all environmental, hazardous materials, AST, UST, etc records for 401 Santa Clara Avenue. Thanks

**Appendix F -  
Site Photographs**



1: View of the exterior of the easting wing.



2: View of the exterior of the west wing.



3: View of the lobby.



4: View of the reading room in the lobby.



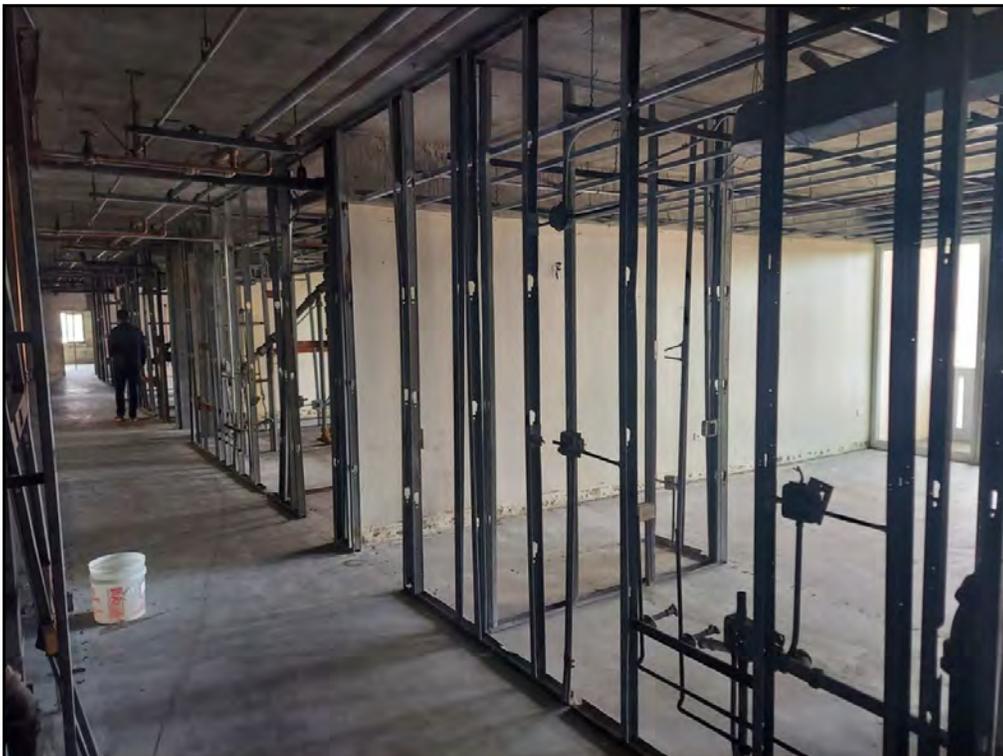
5: View of the first level (sub) of the parking garage.



6: View of the second level of the parking garage.



7: View of a typical residential unit.



8: View of the 5th floor.



9: View of the point of origin of the fire on the 5th floor.



10: View of the former dining hall on the 6th floor.



11: View of the kitchen.



12: View of the 6th floor balcony.



13: View of the elevators.



14: View of the boiler room.



15: View of the electric-powered elevator motors.



16: View of a typical drain.



17: View of a typical electrical room.



18: View of the 50-gallon used cooking oil tank.



19: View of the paint storage area.



20: View of several containers of paint, lubricant, glues, cleaners, and primers.



21: View of the maintenance room.



22: View of the sump pump in the maintenance area.



23: View of the cleaning supply area.



24: View of the transformer room (inaccessible).



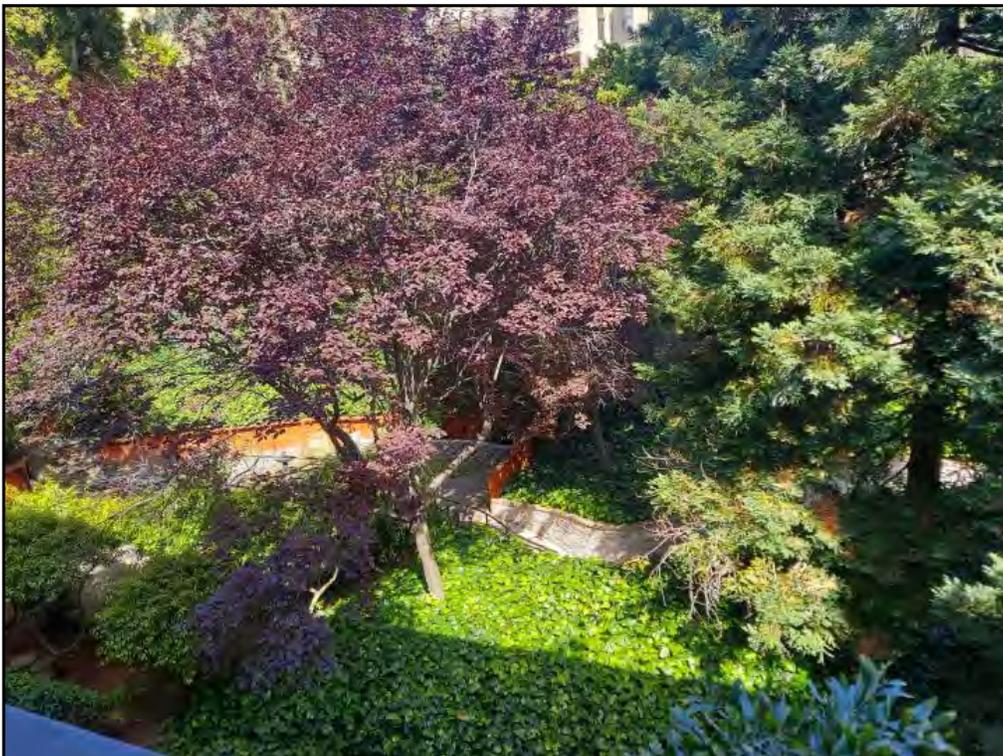
25: View of a typical bathroom.



26: View of a typical stairwell.



27: View of the natural gas-powered emergency generator.



28: View of the garden area.



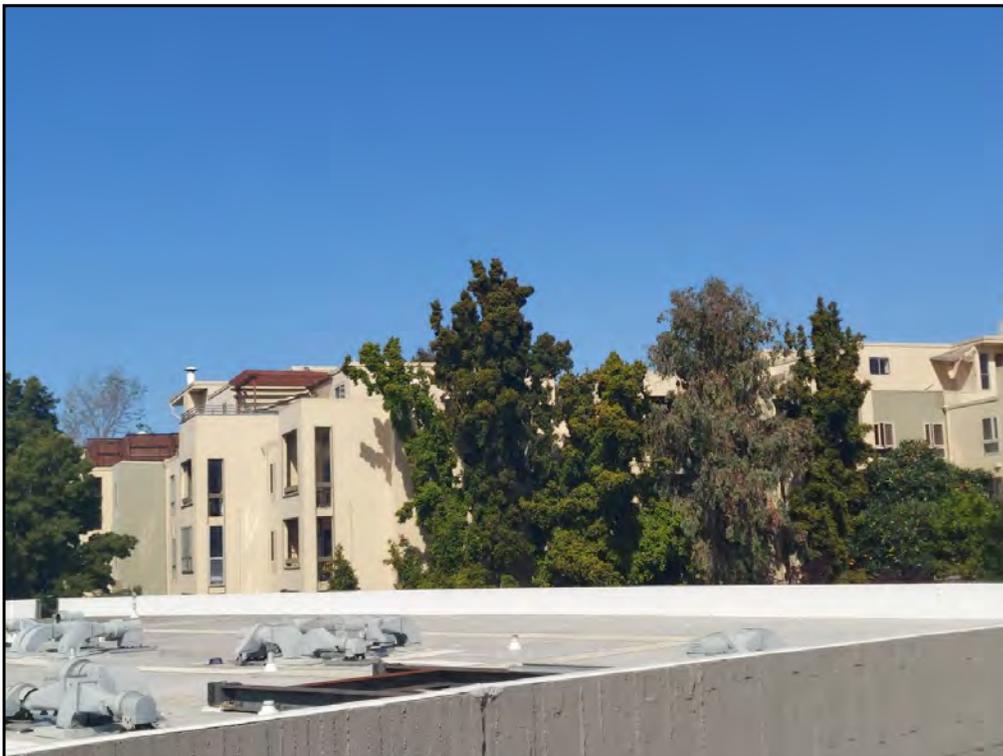
29: View of the gathering area.



30: View of Grand Lake Towers (377 Santa Clara Ave) to the north of the Site.



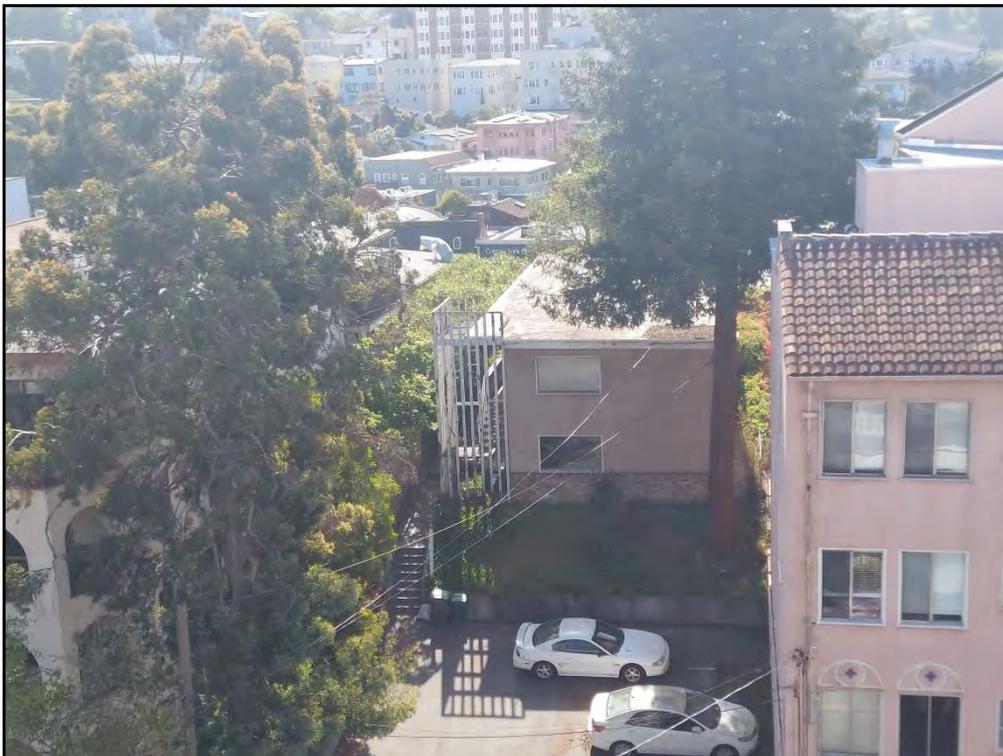
31: View of an apartment building (411 Santa Clara Ave) to the south of the Site.



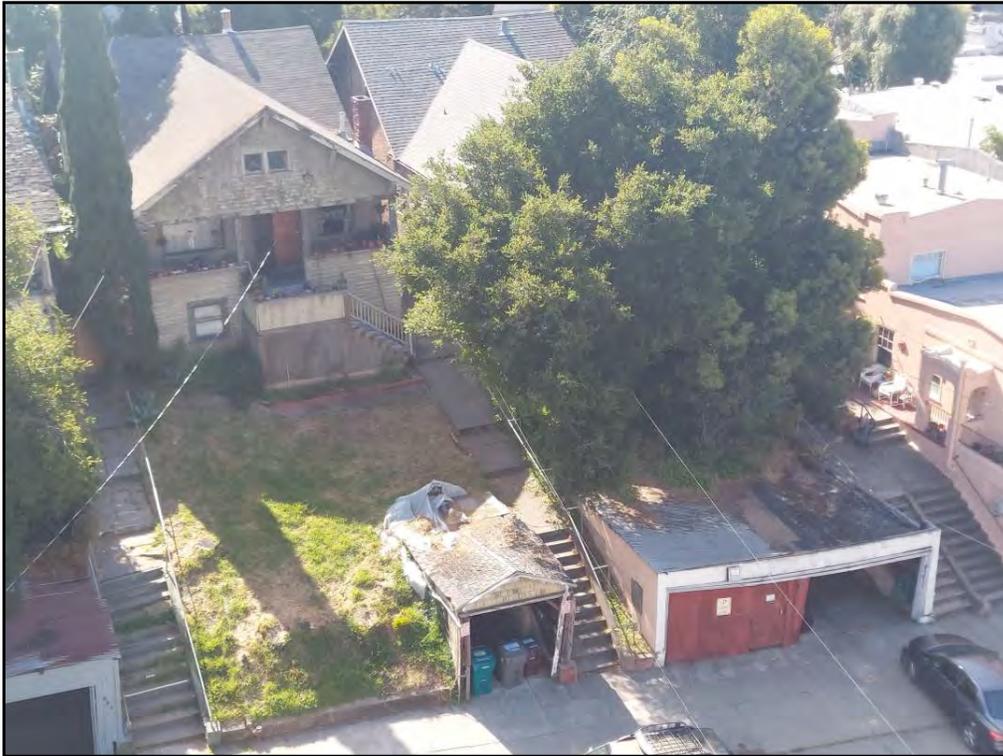
32: View of an apartment complex (460 Crescent St) to the northwest of the Site.



33: View of St Maarten Apartments (400 Santa Clara Ave) to the east of the Site.



34: View of 396 Santa Clara Avenue to the east of the Site.



35: View of 404-412 Santa Clara Avenue to the east of the Site.



36: View down Santa Clara Avenue, facing north.



37: View down Santa Clara Avenue, facing south.

**Appendix G -  
Vapor Encroachment Screening Matrix**

## Vapor Encroachment Screening Matrix

Phase I ESA Vapor Encroachment Conditions (VEC) matrix includes a (1) Search Radius Test, (2) Chemicals of Concern Test (COC), and (3) a Critical Distance Test [1].

**(1) Search Radius Test:** Are there any known or suspect contaminated properties in the primary area of concern within the corresponding search radii (including the site)?

- Yes  No      If **No**, then screening for a VEC is complete and no VEC *currently* exists, go to #4. If **Yes**, then:

**(2) Chemicals of Concern Test:** Are COC likely to be present within the area of concern for those known or suspect contaminated sites identified based on the Search Distance Test?

- Yes  No      If **No**, then screening for a VEC is complete and no VEC *currently* exists, go to #4. If **Yes**, then:

**(3) Critical Distance Test\*:** A plume test to determine whether or not COC in the contaminated plume(s) may be within the critical distance.

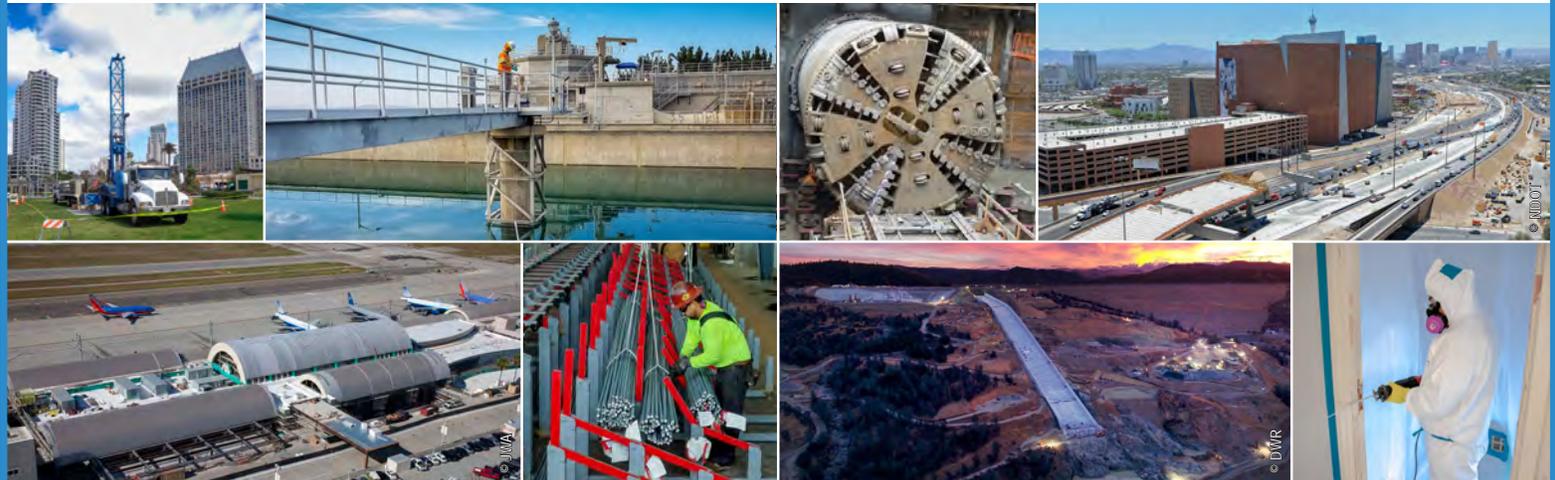
- Yes  No      (3a) Is information related to the contaminated(s) plume available (i.e. iso-concentration maps, site drawings, etc.)?  
(3b) If **No**, then a VEC cannot be ruled out; check **Yes** in #4 below indicating it is likely a VEC exists. If **Yes**, then:  
(3c) Is the site less than 100 feet to the nearest edge of a contaminated [non-petroleum hydrocarbon] plume(s)? If **Yes**, then check **Yes** in #4 below indicating it is likely a VEC exists.  
(3d) Is the site less than 30 feet to the nearest edge of a dissolved petroleum hydrocarbon plume(s)? If **Yes**, then check **Yes** in #4 below indicating it is likely a VEC exists.

\*If the distance from the nearest edge of a contaminated plume to the nearest existing or planned structure on the site is less than 100 feet for non-petroleum hydrocarbon COC, or less than 30 feet for dissolved petroleum hydrocarbons, then it is presumed that a VEC *currently* exists beneath the site. If the distance from the nearest edge of the contaminated plume is greater than or equal to 100 feet for non-petroleum hydrocarbons, or 30 feet for dissolved petroleum hydrocarbon chemicals of concern, then it is presumed unlikely that a VEC *currently* exists beneath the site.

**(4) Is it likely that a VEC *currently* exists beneath the site?**

- Yes  No      If **No**, then the VEC screening is complete and no further investigation is recommended at this time. If **Yes**, Ninyo & Moore recommends performing additional assessment, such as a Tier 2 VEC assessment according to ASTM E 2600-10.

[1] Based on guidance presented in the ASTM E 2600-10 Standard.



Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness  
Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS

***Ninyo & Moore***

Geotechnical & Environmental Sciences Consultants

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APPENDIX D  
ASBESTOS AIR SAMPLING REPORT

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5655 LINDERO CYN RD., STE 701 • WESTLAKE VILLAGE • CA 91362

August 23, 2023

**AEG Project No: 112387**

Reliance Building Services  
Attn: Andrew Harshman  
12714 Hoover Street  
Garden Grove, CA 92841

## **POST ASBESTOS ABATEMENT AIR CLEARANCE SAMPLING REPORT**

### **SUBJECT PROPERTY**

**Grand Lake Gardens  
401 Santa Clara Avenue  
Oakland, CA 94610**

### **Introduction**

American Environmental Group, Inc. (AEG) performed Post-Asbestos-Abatement Air Clearance Sampling at the Subject Property referenced above. The sampling was conducted on August 21, 2023, by Anthony Smith, under the supervision of Chris Heffernan (CSST - 16-5656) a California Division of Occupational Safety and Health (DOSH) Certified Technician and representative of AEG. *Technician certifications attached for reference.*

### **Methodologies**

A total of twenty-one (21) clearance air samples were collected from inside the 5<sup>th</sup> Floor: East Wing – South End, East Wing – South Hallway, East Wing – Elevator Lobby, East Wing – North Side, 4<sup>th</sup> Floor: East Wing – South Hallway, Elevator Lobby, West Wing – South Hallway, West Wing – Main Hallway, 3<sup>rd</sup> Floor: East Wing – South Hallway, Elevator Lobby, West Wing – South Hallway, West Wing – Main Hallway, 2<sup>nd</sup> floor: East Wing – South Hallway, Elevator Lobby, West Wing – South Hallway, West Wing – Main Hallway, 1<sup>st</sup> Floor: East Wing – South Hallway, Elevator Lobby, West Wing – Main Hallway containment(s). Two (2) additional blank (field and laboratory) samples were added in compliance with National Institute for Occupational Safety and Health (NIOSH) Method 7400 for the determination of “Asbestos and Other Fibers by Phase Contrast Microscopy (PCM)”, Issue 2 (15, August 1994) guidelines.

#### Proprietary Note:

This report contains CONFIDENTIAL INFORMATION and cannot be duplicated or copied under any circumstances without the express permission of American Environmental Group, Inc. The purpose of the report is to allow the CLIENT(s) listed above to evaluate the potential environmental liabilities at the Subject Property. Any unauthorized reuse of American Environmental Group reports or data will be at the unauthorized user’s sole risk and liability.

*“Providing Solutions... Put Us to the Test”*

**Results:**

**Asbestos Clearance Results are Acceptable**

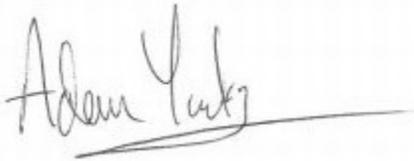
All air sample results were consistent at a level of less than or equal to ( $\leq$ ) 0.01 fibers per cubic centimeter of air (f/cc), the level recommended by the Environmental Protection Agency (EPA) for the re-occupancy of non-protected personnel following an asbestos response action. **Because these samples were below the recommended regulatory concentrations of fibers in the air, the containment may be removed and non-protected personnel may reoccupy the area.** A copy of the PCM analytical results is included in Attachment A.

If you have any questions concerning the information within this report, please contact our Reports Department at 866-251-5157. Thank you very much for choosing American Environmental Group, Inc. We appreciate the opportunity to be of service.

Sincerely,

**AMERICAN ENVIRONMENTAL GROUP, INC.**

*Written By:*



Lab Reports Manager  
Adam Yonkers

*Reviewed By:*



Tim Ryan – B.Sc.  
Technical Director  
Certified Asbestos Consultant #06-3979  
CDPH Certified Lead Inspector/Risk Assessor  
Project Monitor #14697  
[timothy.ryan@american-env.com](mailto:timothy.ryan@american-env.com)  
(805)-409-6727

Attachments: Analytical Data/Chain of Custody

Proprietary Note:

This report contains CONFIDENTIAL INFORMATION and cannot be duplicated or copied under any circumstances without the express permission of American Environmental Group, Inc. The purpose of the report is to allow the CLIENT(s) listed above to evaluate the potential environmental liabilities at the Subject Property. Any unauthorized reuse of American Environmental Group reports or data will be at the unauthorized user's sole risk and liability.

*“Providing Solutions... Put Us to the Test”*

**ATTACHMENT A**

**ANALYTICAL DATA, CHAIN OF CUSTODY  
& TECHNICIAN CERTIFICATIONS**

Proprietary Note:

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*“Providing Solutions... Put Us to the Test”*

## ASBESTOS AIR MONITORING DATA FORM

<b>Client:</b> ReliAnne building services						<b>AEG Technician(s):</b> T. Smith						
<b>Project Name:</b> Grand lake gardens						<b>Date:</b> 8/21/23			<b>Job/Work Order #:</b> 11238			
<b>Site Address:</b> 401 Santa Clara Ave. Oakland ca. 94610						<b>Contained Work Area (Rms.):</b> Floors 1-5						
Sample #	Pump #	Sample Location	Sample Code	On	Off	Total Mins.	Flow In	Flow Out	Volume (Ltrs.)	Fibers/Fields	Fiber Conc. (f/cc)	Init.
1		Blank	9							1/100	<.01 F/cc	AS
2		Blank	9							1/100	<.01 F/cc	AS
3		5th floor East wing south end	6	830	950	80	15	15	1200	7/100	<.01 F/cc	AS
4		5th floor East wing south hallway	6	830	950	80	15	15	1200	9/100	<.01 F/cc	AS
5		5th floor east wing elevator lobby	6	830	950	80	15	15	1200	5/100	<.01 F/cc	AS
6		5th floor east wing north side	6	830	950	80	15	15	1200	7/100	<.01 F/cc	AS
7		4th floor east wing south hallway	6	1020	1140	80	15	15	1200	6/100	<.01 F/cc	AS
8		4th floor elevator lobby	6	1020	1140	80	15	15	1200	9/100	<.01 F/cc	AS
9		4th floor west wing south hallway	6	1020	1140	80	15	15	1200	11/100	<.01 F/cc	AS
10		4th floor west wing main hallway	6	1020	1140	80	15	15	1200	8/100	<.01 F/cc	AS
<b>Sample Codes:</b>			<b>Job Description:</b>				<b>Analysis Information:</b>					
<ol style="list-style-type: none"> <li>1. Baseline / Background</li> <li>2. Inside Work Area</li> <li>3. Outside Work Area</li> <li>4. Ambient Air</li> <li>5. Negative Air Exhaust</li> <li>6. Clearance – Inside</li> <li>7. Clearance – Outside</li> <li>8. Personal</li> <li>9. Blank</li> </ol>			Dw/jc <b>Materials Removed:</b> _____ _____ <b>Quantity Removed:</b> 10,000 + sq feet per floor _____				<b>Collected By:</b> T. Smith <b>Analyzed By:</b> T. Smith <b>Date Analyzed:</b> 8-21-23 Page ____ of ____					



5655 Lindero Canyon Road, Suite 120, Westlake Village, CA 91362

## ASBESTOS AIR MONITORING DATA FORM

<b>Client:</b> Reliance building services						<b>AEG Technician(s):</b> T. Smith						
<b>Project Name:</b> Grand lake Gardens						<b>Date:</b> 3/21/23			<b>Job/Work Order #:</b> 112387			
<b>Site Address:</b> 401 Santa Clara Ave. Oakland ca,						<b>Contained Work Area (Rms.):</b> Floors 1-5						
Sample #	Pump #	Sample Location	Sample Code	On	Off	Total Mins.	Flow In	Flow Out	Volume (Ltrs.)	Fibers/Fields	Fiber Conc. (f/cc)	Init.
11		3rd floor east wing south hallway	6	1150	1310	80	15	15	1200	9/100	<.01 F/cc	AS
12		3rd floor elevator lobby	6	1150	1310	80	15	15	1200	6/100	<.01 F/cc	AS
13		3rd floor west wing south hallway	6	1150	1310	80	15	15	1200	8/100	<.01 F/cc	AS
14		3rd floor west wing main hallway	6	1150	1310	80	15	15	1200	5/100	<.01 F/cc	AS
15		2nd floor east wing south hallway	6	1320	1440	80	15	15	1200	7/100	<.01 F/cc	AS
16		2nd floor elevator lobby	6	1320	1440	80	15	15	1200	9/100	<.01 F/cc	AS
17		2nd floor west wing south hallway	6	1320	1440	80	15	15	1200	6/100	<.01 F/cc	AS
18		2nd floor west wing main hallway	6	1320	1440	80	15	15	1200	8/100	<.01 F/cc	AS
19		1st floor east wing south hallway	6	1450	1610	80	15	15	1200	8/100	<.01 F/cc	AS
20		1st floor elevator lobby	6	1450	1610	80	15	15	1200	5/100	<.01 F/cc	AS
<b>Sample Codes:</b>			<b>Job Description:</b>				<b>Analysis Information:</b>					
<ol style="list-style-type: none"> <li>1. Baseline / Background</li> <li>2. Inside Work Area</li> <li>3. Outside Work Area</li> <li>4. Ambient Air</li> <li>5. Negative Air Exhaust</li> <li>6. Clearance – Inside</li> <li>7. Clearance – Outside</li> <li>8. Personal</li> <li>9. Blank</li> </ol>			<b>Materials Removed:</b> Dw/jc <hr/> <b>Quantity Removed:</b> 10,000+ sq feet per floor <hr/>				<b>Collected By:</b> T. Smith <hr/> <b>Analyzed By:</b> T. Smith <hr/> <b>Date Analyzed:</b> 8/21/23 <hr/> <b>Page</b> ____ <b>of</b> ____					



5655 Lindero Canyon Road, Suite 120, Westlake Village, CA 91362

## ASBESTOS AIR MONITORING DATA FORM

<b>Client:</b> Reliance building services						<b>AEG Technician(s):</b> T. Smith						
<b>Project Name:</b> Grand lake gardens						<b>Date:</b> 8/21/23			<b>Job/Work Order #:</b> 112387			
<b>Site Address:</b> 401 Santa Clara Ave. Oakland ca, 94810						<b>Contained Work Area (Rms.):</b> Floors 1-5						
Sample #	Pump #	Sample Location	Sample Code	On	Off	Total Mins.	Flow In	Flow Out	Volume (Liters)	Fibers/Fields	Fiber Conc. (f/cc)	Init.
21		1st floor west wing main hallway	6	1450	1610	80	15	15	1200	9/100	<.01 F/cc	AS
<b>Sample Codes:</b>			<b>Job Description:</b>				<b>Analysis Information:</b>					
<ol style="list-style-type: none"> <li>1. Baseline / Background</li> <li>2. Inside Work Area</li> <li>3. Outside Work Area</li> <li>4. Ambient Air</li> <li>5. Negative Air Exhaust</li> <li>6. Clearance – Inside</li> <li>7. Clearance – Outside</li> <li>8. Personal</li> <li>9. Blank</li> </ol>			<b>Materials Removed:</b> <u>Dw/jc</u>  <b>Quantity Removed:</b> <u>10,000+ sq feet per floor</u>				<b>Collected By:</b> <u>T. Smith</u> <b>Analyzed By:</b> <u>T. Smith</u> <b>Date Analyzed:</b> <u>8/21/23</u> <b>Page</b> ____ <b>of</b> ____					

**CHRIS HEFFERNAN CSST & Lead Certifications**



	STATE OF CALIFORNIA DEPARTMENT OF PUBLIC HEALTH		
<b>LEAD-RELATED CONSTRUCTION CERTIFICATE</b>			
<b>INDIVIDUAL:</b>	<b>CERTIFICATE TYPE:</b>	<b>NUMBER:</b>	<b>EXPIRATION DATE:</b>
 Christopher Heffernan	Lead Sampling Technician	LRC-00002299	7/30/2024
<p>Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at <a href="http://www.cdph.ca.gov/programs/clppb">www.cdph.ca.gov/programs/clppb</a> or calling (800) 597-LEAD</p>			

**Senior Project Manager**

**Timothy Ryan, CAC**



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**APPENDIX E**

**ASBESTOS BUILDING INSPECTION**

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## **Asbestos Building Inspection**

Inspection Date

**September 19, 2024**

Prepared for:

**Raney Planning & Management, Inc.**

**Joseph Baucum**

Property

**401 Santa Clara Avenue**

**Oakland, CA 94610**

Year Built

**1967**

Loss Type

**Reno/Demo**

705 E. Bidwell St., Ste. 2-244, Folsom, CA 95630

Ph: 916.235.3110 | Fx: 916.404.5170

[www.regasgroup.com](http://www.regasgroup.com)

September 19, 2024

Raney Planning & Management, Inc.  
Joseph Baucum  
1501 Sports Drive, Suite A  
Sacramento CA, 95834

**SERVICE**

Asbestos Inspection & Report

**DATE | TIME**

September 19, 2024 | 09:00 AM

**LOCATION**

401 Santa Clara Avenue, Oakland, CA 94610

**CONSULTANT**

Emily Winn

**PURPOSE & SCOPE OF SERVICES**

The purpose of this service was to conduct an Asbestos Survey, aiding the client/owner-operator in assessing the presence or absence of Asbestos Containing Materials (ACM) for planned renovations and/or demolitions of the designated areas. Samples were collected in a manner sufficient to determine asbestos throughout the designated areas to be disturbed and are listed herein

**ANALYTICAL RESULTS**

**The following results are based on the samples collected from the site; the Pipe Wrap determined to be disturbed are positive for asbestos.** The location of ACM/ACCM, type, percent, category, and amount can be found in the attached analytical report.

**SAMPLING & ANALYSIS**

This inspection was completed in compliance with the EPA's Asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP) Regulations (40 CFR Part 61, Subpart M), In-Schools Rule; 40 CFR 763.85 (Inspection and Re-Inspection), including regional and local air quality district rules and regulations. EPA currently regulates Asbestos Containing (ACM) as materials containing greater than one percent (>1%) asbestos. Cal-OSHA currently regulates Asbestos Containing Construction Materials (ACCM) to 1/10th of 1% (0.1%) by weight. Cal-OSHA currently requires DOSH certified asbestos workers to conduct all asbestos related work. Samples were submitted to MicroTest Laboratories Inc., Concord, CA. (NVLAP 600389-0)

Destructive sampling was not conducted during the site visit. If in the course of work, additional suspect building materials are discovered (i.e.: inaccessible areas), the renovation and/or demolition activities must cease until further sampling is conducted.

Included at the end of this letter, you will find a table containing the analytical results for the various area(s) sampled today.

## RESULTS TABLE

The location and results from this sampling are as follows:

Sample ID:	Material	Location	Estimated Quantity	Condition Assessment	Lab Results	Category Pt. Ct.
<b>MECHANICAL</b>						
401-1.1 A	Insulation	Parking Garage, SW Area Parking Garage, S. Area Parking Garage, SE Area Parking Garage, NE Area Parking Garage, E. Area	~1,200 LF		6% Chrysotile 2% Amosite	Friable/RACM
401-1.1 B	Insulation				None Detected	Homogeneous
401-1.1 C	Pipe Wrap				None Detected	Homogeneous
401-1.2	Pipe Wrap				SFP	Homogeneous
401-1.3	Pipe Wrap				SFP	Homogeneous
401-1.4	Pipe Wrap				SFP	Homogeneous
401-1.5	Pipe Wrap				SFP	Homogeneous
<b>LEGEND   KEY</b>						
PACM-Presumed Asbestos Containing Material   ND-Non-Detected   SFP-Stop First Positive   PT.CT. – Point Count RACM-Regulated Asbestos Containing Material   NH-Non-Hazardous   HM-Homogeneous Material Cat 1-Category 1   Cat 2-Category 2   SF-Square Feet   LF-Linear Feet   CF-Cubic Feet G-Good (5-7)   D-Damaged (2-4)   SD-Significantly Damaged (1)						

## **REGULATIONS**

Federal and state regulations require that asbestos abatement must be performed by a licensed asbestos abatement contractor with current certifications, respiratory protection, and proper Personal Protective Equipment (PPE), adhering to all EPA and OSHA requirements. Containment and disposal of ACM/ACCM must be in accordance with EPA requirements. An Asbestos Abatement Work plan can be provided upon request. In some counties, Procedure 5 may be required.

## **RECOMMENDATIONS**

RegasGroup recommends on-site monitoring be conducted during the removal of asbestos containing materials (ACM), to verify proper protocols and worker safety in accordance with federal, state, and local rules and regulations. Upon completion of asbestos work, RegasGroup recommends a visual inspection and air sampling in compliance with federal, state, and local rules and regulations. The visual and air sampling will confirm that the abatement contractor has completed the removal of ACM, and the area is safe for employees and/or sub-contractors to enter the area for repairs and build back of the specific areas tested, without any health or safety concerns regarding the exposure of airborne asbestos fibers.

## ASSUMPTIONS & LIMITATIONS

The results, findings, conclusions, and recommendations expressed in this report are based only on conditions that were noted during RegasGroup's inspection of the specific areas noted herein.

The selection of sample locations and frequency of sampling was based on observations and the assumption that like materials in the same area are homogeneous in content. This report is not to be utilized as a bidding document or as a project specification document since it does not have all the components required to serve as an Asbestos Abatement Project Design document or an Asbestos Abatement Work plan.

Our professional services have been performed, our findings obtained, and our conclusions and recommendations prepared in accordance with customary principles and practices in the fields of environmental testing and consulting. This report does not warrant against undiscovered hazards and locations not investigated.

If you have any questions regarding this report or if I can be of further assistance, please feel free to contact me.

Reviewed and Submitted by:



**Emily Winn**  
Environmental Consultant

**RegasGroup**

Environmental Consultants

CAC #22-7138 exp. 06/24/25

LRC #00001466 exp. 08/29/25

NV #IM-2152

Mycometer

MMA-0605-US | MMS-1823-US | BQS-0281-US



**Dominick Sager**  
Senior Consultant

**RegasGroup**

Environmental Consultants

CAC #13-5082 exp. 08/14/25

LRC #00004929 exp. 05/09/25

NV #LIPM-1878

Mycometer

MMA-0226-US | MMS-1258-US | BQS-0118-US



**MicroTest Laboratories Inc.**  
 3955 Industrial Way, Concord, CA 94520  
 PH 925-331-1199 | FX 916.404.0302  
 www.microtestlabsinc.com | service@microtestlabsinc.com

**Project ID**  
**MT022450407**

**CLIENT INFORMATION**

**Company** RegasGroup  
**Name** Dominick Sager  
**Address** 705 E. Bidwell Street 2-244  
 Folsom, CA 95630  
**Phone** (916) 235 - 3110  
**Email** service@regasgroup.com

**SAMPLE**

**Date** Thursday, September 19, 2024  
**Time** 9:00 AM

**MicroTest**  
**Laboratories**

Analytical Data

**JOB SITE INFORMATION**

**Sampler** Emily Winn  
**Project** Property  
**Address** 401 Santa Clara Avenue  
 Oakland, CA 94610

**POLARIZED LIGHT MICROSCOPY (PLM) - 400 Point Count**  
**EPA METHOD 600 / R-93 / 116 & EPA – 40 CFR Appendix E to Subpart E of Part 763**

Sample ID	Accession Number	Client Description	Laboratory Description	Non Fibrous / Fibrous Materials	Asbestiform Minerals %
401-1.1A	50407-1A	Pipe Wrap	Off-White Insulation Fibrous Homogenous	5% Fiberglass 87% Binder	6% Chrysotile 2% Amosite
401-1.1B	50407-1B	Pipe Wrap	Yellow Insulation Fibrous Homogenous	100% Fiberglass	None Detected
401-1.1C	50407-1C	Pipe Wrap	Beige Pipe Wrap Fibrous Homogenous	90% Cellulose 10% Binder	None Detected
401-1.2	50407-2	Pipe Wrap	Pipe Wrap		SFP
401-1.3	50407-3	Pipe Wrap	Pipe Wrap		SFP
401-1.4	50407-4	Pipe Wrap	Pipe Wrap		SFP
401-1.5	50407-5	Pipe Wrap	Pipe Wrap		SFP

**Date Received:** Thursday, September 19, 2024  
**Date Analyzed:** Thursday, September 19, 2024  
**Date Reported:** Thursday, September 19, 2024

**Analyst:** Karina Martinez

**Authorized Signatory:**

Kelly Favero - Lab Manager

This analytical data sheet constitutes a final report. Due to the limitation of Polarized Light Microscopy (PLM), some samples classified as containing no asbestos in materials, NoneDetected (ND), such as floor tiles or like materials, warrant a recommendation for further analysis by Transmission Electron Microscopy (TEM). Results apply only to the sample as received. This report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government. All Samples will be held for not less than 30 days, upon which they will then be disposed of. This report shall not be reproduced except in full without written authorization from MicroTest Laboratories, Inc. Soil and rock matrices are considered problematic matrices and MicroTest recommends sample homogenization prior to PLM analysis. Thermal decomposition of asbestos fibers can yield non-asbestiform mineral properties. The reporting limit for calibrated visual area estimation quantitation procedures is 1%. The reporting limit for 400/1000 point count quantitation procedures is 0.25% or 0.1% respectively. The sample is considered acceptable unless otherwise noted. Layers are analyzed separately except when manufactured with multiple layers (i.e. Linoleum, Drywall, etc.) or requested contrarily by the client.



**RegasGroup Environmental Consultants**  
 705 E. Bidwell St., Suite 2-244, Folsom CA 95630  
 PH 916.235.3110 | FX 916.404.5170  
 www.RegasGroup.com | Service@RegasGroup.com

Project ID  
 MT0250407

**CLIENT INFORMATION**

**Company** Raney Planning & Management, Inc.  
**Name** Joseph Baucum  
**Address** 1501 Sports Drive, Suite A  
 Sacramento CA, 95834  
**Phone** (916) 372 - 6100  
**Email** raneymanagement.com

**Sample**

**Date** Thursday, September 19, 2024  
**Time** 9:00 AM



**JOB SITE INFORMATION**

**Site** Property  
**Address** 401 Santa Clara Avenue  
 Oakland, CA 94610  
**Claim#**  
**Job #** 83516  
**Chain #** 2

**Analysis:** PLM | TTFP - 400 PT.CT.  
**Turn Around Time:** Priority Rush

Sample ID	Location	Material
<b>MECHANICAL</b>		
401-1.1	Parking Garage, SW Area Parking Garage, S. Area Parking Garage, SE Area Parking Garage, NE Area Parking Garage, E. Area	Pipe Wrap
401-1.2		Pipe Wrap
401-1.3		Pipe Wrap
401-1.4		Pipe Wrap
401-1.5		Pipe Wrap

<b>Relinquished by (Client)</b>	<b>Date/Time</b>
<b>Received by (Tech)</b>	<b>Date/Time</b>

<b>Relinquished by (Tech)</b>	<b>Date/Time</b>
<i>[Signature]</i>	09/19/2024 9:00 AM
<b>Received by (Lab)</b>	<b>Date/Time</b>
<i>[Signature]</i>	9.19.24 11:20AM

Sampler: Emily Winn

Total Number of Samples 5

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APPENDIX F  
LEAD PAINT SURVEY

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# PAINT SURVEY

Grand Lake Gardens  
401 Santa Clara Avenue  
Oakland, California

Oakland Housing Authority  
1619 Harrison Street  
Oakland, California 94612

June 27, 2024 | Project No. 404724002



Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS

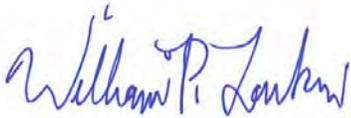
**Ninyo & Moore**

Geotechnical & Environmental Sciences Consultants

## PAINT SURVEY

Grand Lake Gardens  
401 Santa Clara Avenue  
Oakland, California

Ms. Paige Peltzer  
Oakland Housing Authority  
1619 Harrison Street | Oakland, California 94612  
June 27, 2024 | Project No. 404724002



**William P. Larkin**  
Principal Environmental Scientist  
DOSH Certified Asbestos Consultant  
(No. 99-2688)  
CDPH Certified Lead Inspector/Assessor and Project  
Monitor (Nos. 1284/1285)

WPL

Distribution: (1) Addressee (via e-mail)

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B – Lead-Containing Material Laboratory Analytical Report and Chain-of-Custody Records

C – CDPH Form 8552 - Lead Hazard Evaluation Report

# 1 INTRODUCTION

Ninyo & Moore was retained by the Oakland Housing Authority (OHA/Client) to conduct a limited paint survey within the Grand Lake Gardens (GLG) facility located at 401 Santa Clara Avenue in Oakland, California (Figures 1 and 2). Our services included the performance of a suspect lead-containing materials (LCMs) survey. For the purposes of this assessment, LCM refers to both lead-based paint (LBP), as defined by the California Department of Public Health (CDPH) and U.S. Department of Housing and Urban Development (HUD) and other potential LCMs (including ceramic tile).

The sampling activities were performed in accordance with established guidelines for the assessment of LCMs, and are based upon conditions at the GLG facility at the time of the sampling activities. This sampling event is not intended as a risk assessment. It is a summary of identified LCMs at the GLG facility. No dust wipe sampling or soil sampling were conducted as part of this scope of work. Our objective and scope of work for the sampling activities are presented below.

## 1.1 Involved Parties

The sampling activities were performed on June 10 and 11, 2024 by Mr. Nathan Eubanks of Ninyo & Moore. Mr. Eubanks is a State of California Department of Public Health (CDPH) Lead-related Construction Lead Sampling Technician (No. LRC-00010612). Mr. William Larkin provided principal-level oversight and quality review and is a State of California Division of Occupational Safety and Health (DOSH)-Certified Asbestos Consultant (No. 99-2688) and a CDPH Lead-related Construction Lead Inspector/Assessor and Project Monitor (Nos. 1284/1285). Professional certifications are presented in Appendix A.

## 1.2 User Reliance

This report may be relied upon (and is intended exclusively for use) by the OHA. Any use or re-use of the findings, conclusions, and/or recommendations of this report by parties other than the OHA is undertaken at said parties' sole risk.

# 2 OBJECTIVE AND SCOPE OF SERVICES

The purpose of this study is to provide information regarding current conditions within the GLG buildings to assist the OHA related to the proposed renovation of the buildings. Ninyo & Moore personnel performed the following services:

- Visual reconnaissance of the GLG buildings to document and locate suspect LCMs.

- Collection of 108 suspect LCM samples and submittal of these samples to a certified, independent laboratory for analysis of lead content (EPA Method SW-846 3050B/7000B and Total Threshold Limit Concentration analysis).
- Preparation of this sampling report, which presents our data and summarizes the assessed suspect LCMs. The report includes a site description, laboratory testing information, findings, conclusions, and recommendations, sample/site location maps, tables summarizing the LCMs assessed, and estimated quantities.

### **3 SITE DESCRIPTION**

The GLG facility encompasses approximately 77,000 square feet (SF), and is of reinforced concrete construction with exterior concrete/stucco walls and wood roofing. A parking garage, basement, lobby, kitchen, dining room, restrooms, and apartments are all located within the building. Finishes for the parking garage and basement include stucco/concrete wall assemblies (with some wood walls located within the basement office), concrete flooring, and stucco ceilings. Finishes within the lobby area include wood/stucco wall assemblies, wood floors, and wood ceilings. Finishes for the kitchen and dining room areas include wood/stucco wall assemblies, wood/vinyl flooring, and wood ceilings. Finishes for the apartments included wood/stucco wall assemblies, wood/ceramic flooring, and wood ceilings. Finishes for the bathrooms included wood/stucco wall assemblies, ceramic tile flooring, and wood ceilings.

### **4 PHYSICAL LIMITATIONS**

No physical limitations were encountered within the GLG facility during our sampling activities.

### **5 SAMPLE COLLECTION AND ANALYSES**

On June 10 and 11, 2024, the GLG facility was assessed for the presence of LCMs. The LCM survey followed United States Environmental Protection Agency (EPA) guidelines, or industry standards, within the limitations of the scope of this assessment. Survey activities are discussed below.

#### **5.1 Lead-Containing Materials Survey**

After collection, the suspect LCM samples were transferred to EMSL for analysis of total lead content by Flame Atomic Absorption Spectroscopy (Flame AAS/SW 846 3050B/7000B). The ceramic tile and fixtures (toilets, etc.) were analyzed by Total Threshold Limit Concentration analysis (7000B). EMSL is an American Industrial Hygiene Association-accredited Environmental Lead Laboratory (AIHA ELLA). Currently, the EPA stipulates what concentrations of lead in non-volatile components of surface coatings or materials indicate whether a material is considered to be lead-containing. The EPA stipulates that paint containing an amount equal to, or in excess of,

1 milligram per square centimeter (1.0 mg/cm<sup>2</sup>), or more than half of one percent (0.5%) by weight (or 5,000 milligrams per kilogram [mg/kg]), constitute a lead-based paint (LBP). Per the Occupational Safety and Health Administration (OSHA), coatings with any detectable amount of reported lead would be considered lead-containing paint (LCP).

Paint that is chipping or peeling, or that may be readily removed from surfaces, and has a lead content equal to, or more than, 1,000 mg/kg, would require handling as a California Title 22 hazardous waste. The analytical results associated with the suspect LCM samples collected from the GLG buildings are summarized in Table 1 and copies of the laboratory analytical report and chain-of-custody record are presented in Appendix B.

## 6 FINDINGS

A limited HBMS was performed within the GLG facility to evaluate if potential hazards associated with the paint or other suspect LCMs may exist.

### 6.1 Lead-Containing Materials

Ninety-nine paint chip samples and nine ceramic tiles/fixtures were collected for analysis of lead content. Five of the paint chip samples were reported with a lead concentration at greater than 0.5% by weight (or 5,000 mg/kg). Sample LBP-14 (green paint located on railing in the lobby garage) was reported with a lead concentration of 0.6% by weight (or 6,000 mg/kg). Sample LBP-15 (green paint on the lobby garage entrance door) was reported with a lead concentration of 0.97% by weight (or 9,700 mg/kg). Samples LBP-66 and LBP-68 (both black paint on sixth floor exterior metal pillars) were reported with lead concentrations of 1.9% by weight (or 19,000 mg/kg) and 4.8% by weight (or 48,000 mg/kg), respectively. Sample LBP-85 (black paint on a basement level stairwell metal ceiling) was reported with a lead concentration of 0.63% by weight (or 6,300 mg/kg). These samples are considered LBP.

Fifty-six of the 99 paint samples were reported at less than their associated lead detection limits. The nine ceramic tiles/fixture samples were also reported at less than their associated lead detection limits. The other 38 paint samples were reported with lead concentrations ranging from 0.0081% by weight (or 81 mg/kg) to 0.48% by weight (or 4,800 mg/kg). These paint samples are considered LCP. Please see Figures 3 through 10 for the locations of the LBP and LCP samples.

Occupational Health and Safety Administration (OSHA) regulations apply whenever materials with any detectable amounts of lead are disturbed. A copy of the CDPH form 8552 "Lead Hazard Evaluation Report" for the GLG facility is included in Appendix C.

## 7 RECOMMENDATIONS

Since LCMs have been reported within the GLG facility, the following recommendations and precautions are provided:

- The identified LCMs reported within the GLG facility should not be disturbed. Any LCMs found in a damaged or non-intact condition should be abated and/or stabilized. Prior to renovation or demolition work that would disturb the identified LCMs, a licensed lead abatement removal contractor should stabilize and/or remove the identified LCMs in compliance with the most recent and applicable federal, state, and local laws, regulations, standards, and/or codes governing abatement, transport, and disposal of LCMs. All lead waste must be properly characterized prior to disposal to determine waste classification, packaging, transportation, and disposal requirements. ***While Ninyo & Moore provided an estimate of the quantity of LCMs present within the GLG facility (Table 1), it is the abatement contractor's responsibility to assess the actual LCM quantities present.***
- It is recommended that dust wipe sampling be performed at the GLG facility to ensure that no lead dust hazards (lead concentrations in dust greater than 10 micrograms per square foot [ $>10 \mu\text{g}/\text{ft}^2$ ]) are encountered on site. The dust wipe sampling should occur after the planned renovations have occurred at the GLG facility, but prior to re-occupancy by future residents (to ensure that the building is safe for re-occupancy).
- There is a possibility that additional suspect LCMs (as well as other suspect hazardous building materials) may be discovered during building renovation activities. Therefore, Ninyo & Moore recommends that, should additional suspect LCMs not sampled or assessed in this report be uncovered during renovation activities, (a) samples of the suspect LCMs should be collected for laboratory analysis and activities that may impact the materials should cease until laboratory analytical results are reviewed or (b) the suspect LCMs should be assumed to be LCMs and handled as such.

## 8 LIMITATIONS

Ninyo & Moore's opinions and recommendations regarding environmental conditions, as presented in this report, are based on limited sampling and chemical analysis. Further assessment of potential adverse environmental impacts may be accomplished by conducting a more comprehensive assessment. The samples collected and used for testing, and the observations made, are believed to be representative of the areas evaluated. However, if additional suspect hazardous building materials are encountered during renovation/demolition

activities, these materials should be sampled by qualified personnel, and analyzed for content prior to further disturbance. ***In addition, please note that quantities of identified hazardous building materials are approximate. It is the contractor's responsibility to assess the actual quantities of hazardous building materials present.***

The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard of care exercised by environmental consultants performing similar work in the project area. No warranty, expressed or implied, is made regarding the professional opinions presented in this report. Variations in site conditions may exist and conditions not observed or described in this report may be encountered during subsequent activities.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires any additional information, or has questions regarding content, interpretations presented, or completeness of this document.

The environmental interpretations and opinions contained in this report are based on the results of laboratory tests and analyses intended to detect the presence and concentration of specific chemical or physical constituents in samples collected from the subject site. The testing and analyses have been conducted by an independent laboratory that is certified by the State of California to conduct such tests. Ninyo & Moore has no involvement in, or control over, such testing and analysis. Ninyo & Moore, therefore, disclaims responsibility for any inaccuracy in such laboratory results.

Our findings, opinions, and recommendations are based on an analysis of the observed site conditions. It should be understood that the conditions of a site can change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

**Table 1 - Lead-Containing Material Sampling Results**

Sample I.D.	Building	Sample Location	Substrate/Surface	Sample Description (Color / # of Layers / Substrate)	Estimated Surface Area (Square Feet [SF] or Linear Feet [LF])	Condition	Total Lead	
							Weight Percent	Parts per Million (or mg/kg)
LBP-01	401 Santa Clara Ave	Basement/Northeast Wall	Wood	White/2/Wood	NA	Intact	<0.0080	<80
LBP-02	401 Santa Clara Ave	Basement/Central Pillar	Concrete	White/2/Concrete	NA	Intact	<0.0080	<80
LBP-03	401 Santa Clara Ave	Basement/North Pipe	Metal	Black/2/Metal	NA	Intact	<0.014	<140
LBP-04	401 Santa Clara Ave	Basement/North Pillar	Concrete	White/2/Concrete	NA	Intact	<0.0092	<92
LBP-05	401 Santa Clara Ave	Basement/East Door	Metal	Green/2/Metal	25 SF	Intact	0.21	2,100*
LBP-06	401 Santa Clara Ave	Basement/Fire Extinguisher Container	Metal	Red/2/Metal	NA	Intact	<0.016	<160
LBP-07	401 Santa Clara Ave	Basement/Elevator Hallway/East Wall	Wood	Gray/2/Wood	100 SF	Intact	0.072	720*
LBP-08	401 Santa Clara Ave	Basement/Central Door (Near Elevator)	Metal	Black/2/Metal	25 SF	Intact	<0.011	<110
LBP-09	401 Santa Clara Ave	Basement/South Wall	Concrete	White/2/Concrete	NA	Intact	<0.0080	<80
LBP-10	401 Santa Clara Ave	Lobby/North Wall	Wood	White/2/Wood	NA	Intact	<0.0080	<80
LBP-11	401 Santa Clara Ave	Lobby/Central Garage Pillar	Concrete	White/1/Concrete	10,150 SF	Intact	0.0092	92*
LBP-12	401 Santa Clara Ave	Lobby/East Exterior Wall	Concrete	White/1/Concrete	Same as LBP-11	Intact	0.0082	82*
LBP-13	401 Santa Clara Ave	Lobby Garage/Southeast Exterior Wall	Concrete	White/1/Concrete	Same as LBP-11	Intact	0.016	160*
<b>LBP-14</b>	<b>401 Santa Clara Ave</b>	<b>Lobby Garage/Railing</b>	<b>Metal</b>	<b>Green/2/Metal</b>	<b>21 SF</b>	<b>Intact</b>	<b>0.6</b>	<b>6,000</b>
<b>LBP-15</b>	<b>401 Santa Clara Ave</b>	<b>Lobby Garage/Entrance Door</b>	<b>Metal</b>	<b>Green/2/Metal</b>	<b>25 SF</b>	<b>Intact</b>	<b>0.97</b>	<b>9,700</b>
LBP-16	401 Santa Clara Ave	Lobby/Lower Wall Detail	Wood	White/2/Wood	NA	Intact	<0.0080	<80
LBP-17	401 Santa Clara Ave	Lobby Garage/Fire Extinguisher Container	Metal	Red/2/Metal	10 SF	Intact	0.013	130*
LBP-18	401 Santa Clara Ave	1st Floor/Electrical Closet Door	Wood	Tan/2/Wood	NA	Intact	<0.0080	<80
LBP-19	401 Santa Clara Ave	1st Floor/South Exterior Wall	Concrete	Gray/1/Concrete	25,400 SF	Intact	0.03	300*

**Table 1 - Lead-Containing Material Sampling Results**

Sample	Building	Sample Location	Substrate/Surface	Sample Description (Color / # of Layers /	Estimated Surface Area (Square Feet)	Condition	Total Lead	
							Concentration (ppm)	Area (ppm-SF)
LBP-20	401 Santa Clara Ave	1st Floor/Northeast Apartment Wall	Wood	White/2/Wood	18,300 SF	Intact	0.011	110*
LBP-21	401 Santa Clara Ave	1st Floor/Northeast Apartment Wall	Stucco	Gray/2/Stucco	NA	Intact	<0.0080	<80
LBP-22	401 Santa Clara Ave	1st Floor/South Apartment Door	Wood	Blue/2/Wood	NA	Intact	<0.0080	<80
LBP-23	401 Santa Clara Ave	1st Floor/South Apartment/Balcony Guard	Stucco	Gray/2/Stucco	Same as LBP-19	Intact	0.046	460*
LBP-24	401 Santa Clara Ave	1st Floor/East Exterior Wall	Stucco	White/1/Stucco	NA	Intact	<0.0080	<80
LBP-25	401 Santa Clara Ave	1st Floor/South Apartment Wall	Concrete	White/2/Concrete	NA	Intact	<0.0080	<80
LBP-26	401 Santa Clara Ave	1st Floor/North Balcony Guard	Stucco	Gray/2/Stucco	Same as LBP-19	Intact	0.012	120*
LBP-27	401 Santa Clara Ave	1st Floor/West Apartment Window Sill	Wood	Burgundy/2/Wood	NA	Intact	<0.0080	<80
LBP-28	401 Santa Clara Ave	1st Floor/Northeast Exterior Wall	Stucco	White/1/Stucco	NA	Intact	<0.0080	<80
LBP-29	401 Santa Clara Ave	2nd Floor/South Apartment Wall	Wood	White/2/Wood	Same as LBP-20	Intact	0.031	310*
LBP-30	401 Santa Clara Ave	2nd Floor/Electrical Closet Door	Wood	Tan/2/Wood	NA	Intact	<0.0080	<80
LBP-31	401 Santa Clara Ave	2nd Floor/South Apartment Door	Wood	Blue/2/Wood	NA	Intact	<0.0086	<86
LBP-32	401 Santa Clara Ave	2nd Floor/North Apartment Door Frame	Wood	White/2/Wood	15 SF	Intact	0.078	780*
LBP-33	401 Santa Clara Ave	2nd Floor/North Apartment Wall	Wood	White/2/Wood	NA	Intact	<0.0080	<80
LBP-34	401 Santa Clara Ave	2nd Floor/West Apartment Wall	Concrete	White/2/Concrete	NA	Intact	<0.0080	<80
LBP-35	401 Santa Clara Ave	2nd Floor/South Apartment/Exterior Wall	Concrete	Gray/2/Concrete	Same as LBP-19	Intact	0.026	260*
LBP-36	401 Santa Clara Ave	2nd Floor/North Apartment/Lower Wall Detail	Wood	White/2/Wood	NA	Intact	<0.0080	<80
LBP-37	401 Santa Clara Ave	2nd Floor/Outside Stairwell Wall	Concrete	Dark Gray/1/Concrete	210 SF	Intact	0.024	240*
LBP-38	401 Santa Clara Ave	2nd Floor/West Apartment Door Frame	Wood	White/2/Wood	NA	Intact	<0.0080	<80
LBP-39	401 Santa Clara Ave	3rd Floor/South Apartment Wall	Concrete	White/2/Concrete	NA	Intact	<0.0080	<80
LBP-40	401 Santa Clara Ave	3rd Floor/North Apartment Door Frame	Wood	White/2/Wood	NA	Intact	<0.0080	<80

**Table 1 - Lead-Containing Material Sampling Results**

Sample	Building	Sample Location	Substrate/Surface	Sample Description (Color / # of Layers /	Estimated Surface Area (Square Feet)	Condition	Total Lead	
							mg/ft <sup>2</sup>	mg
LBP-41	401 Santa Clara Ave	3rd Floor/South Apartment Balcony Guard	Concrete	Gray/2/Concrete	Same as LBP-19	Intact	0.015	150*
LBP-42	401 Santa Clara Ave	3rd Floor/West Apartment/Lower Wall Detail	Wood	White/2/Wood	NA	Intact	<0.0080	<80
LBP-43	401 Santa Clara Ave	3rd Floor/West Apartment Wall	Wood	White/2/Wood	NA	Intact	<0.0080	<80
LBP-44	401 Santa Clara Ave	3rd Floor/West Apartment Door Frame	Wood	White/2/Wood	NA	Intact	<0.0080	<80
LBP-45	401 Santa Clara Ave	3rd Floor/West Apartment Balcony Guard	Concrete	Gray/2/Concrete	Same as LBP-19	Intact	0.029	290*
LBP-46	401 Santa Clara Ave	3rd Floor/Electrical Closet Door	Wood	Tan/2/Wood	NA	Intact	<0.0080	<80
LBP-47	401 Santa Clara Ave	3rd Floor/South Exterior Wall	Concrete	Gray/2/Concrete	Same as LBP-19	Intact	0.019	190*
LBP-48	401 Santa Clara Ave	3rd Floor/North Apartment Door	Wood	Blue/2/Wood	NA	Intact	<0.0080	<80
LBP-49	401 Santa Clara Ave	3rd Floor/West Apartment Door	Wood	Blue/2/Wood	NA	Intact	<0.0080	<80
LBP-50	401 Santa Clara Ave	4th Floor/North Apartment/Lower Wall Detail	Wood	White/2/Wood	NA	Intact	<0.0080	<80
LBP-51	401 Santa Clara Ave	4th Floor/North Apartment Door Frame	Wood	White/2/Wood	NA	Intact	<0.0080	<80
LBP-52	401 Santa Clara Ave	4th Floor/North Apartment Wall	Wood	White/2/Wood	Same as LBP-20	Intact	0.082	820*
LBP-53	401 Santa Clara Ave	4th Floor/South Apartment Balcony Guard	Stucco	Gray/2/Stucco	Same as LBP-19	Intact	0.013	130*
LBP-54	401 Santa Clara Ave	4th Floor/West Apartment Balcony Guard	Stucco	Gray/2/Stucco	Same as LBP-19	Intact	0.011	110*
LBP-55	401 Santa Clara Ave	4th Floor/West Apartment Door	Wood	Blue/2/Wood	NA	Intact	<0.0080	<80
LBP-56	401 Santa Clara Ave	4th Floor/North Apartment Door	Wood	Blue/2/Wood	NA	Intact	<0.0080	<80
LBP-57	401 Santa Clara Ave	4th Floor/Electrical Closet Door	Wood	Tan/2/Wood	NA	Intact	<0.0080	<80
LBP-58	401 Santa Clara Ave	4th Floor/South Exterior Wall	Concrete	Gray/2/Concrete	Same as LBP-19	Intact	0.025	250*
LBP-59	401 Santa Clara Ave	4th Floor/West Apartment Door Frame	Wood	White/2/Wood	15 SF	Intact	0.0093	93*
LBP-60	401 Santa Clara Ave	5th Floor/Central Wall	Concrete	White/2/Concrete	NA	Intact	<0.0080	<80
LBP-61	401 Santa Clara Ave	5th Floor/South Balcony Guard	Concrete	Gray/2/Concrete	Same as LBP-19	Intact	0.011	110*

**Table 1 - Lead-Containing Material Sampling Results**

Sample	Building	Sample Location	Substrate/Surface	Sample Description (Color / # of Layers /	Estimated Surface Area (Square Feet)	Condition	Total Lead	
							mg/ft <sup>2</sup>	mg
LBP-62	401 Santa Clara Ave	5th Floor/West Room Wall	Concrete	White/2/Concrete	NA	Intact	<0.0080	<80
LBP-63	401 Santa Clara Ave	5th Floor/South Exterior Wall	Concrete	Gray/2/Concrete	Same as LBP-19	Intact	0.043	430*
LBP-64	401 Santa Clara Ave	5th Floor/North Balcony Guard	Concrete	Gray/2/Concrete	NA	Intact	0.0081	81*
LBP-65	401 Santa Clara Ave	6th Floor/Near Roof Exterior Balcony Guard	Concrete	Burgundy/1/Concrete	800 SF	Intact	0.2	2,000*
<b>LBP-66</b>	<b>401 Santa Clara Ave</b>	<b>6th Floor/North-Central Exterior Pillar</b>	<b>Metal</b>	<b>Black/2/Metal</b>	<b>250 SF</b>	<b>Intact</b>	<b>1.9</b>	<b>19,000</b>
LBP-67	401 Santa Clara Ave	6th Floor/North Exterior Window	Wood	Brown/2/Wood	NA	Intact	<0.0080	<80
<b>LBP-68</b>	<b>401 Santa Clara Ave</b>	<b>6th Floor/Northeast Exterior Pillar</b>	<b>Metal</b>	<b>Black/2/Metal</b>	<b>Same as LBP-66</b>	<b>Intact</b>	<b>4.8</b>	<b>48,000</b>
LBP-69	401 Santa Clara Ave	6th Floor/South Room Door Frame	Wood	White/2/Wood	NA	Intact	<0.0080	<80
LBP-70	401 Santa Clara Ave	6th Floor/South Room/Lower Wall Detail	Wood	White/2/Wood	NA	Intact	<0.0080	<80
LBP-71	401 Santa Clara Ave	6th Floor/South Room Door	Wood	White/2/Wood	NA	Intact	<0.0080	<80
LBP-72	401 Santa Clara Ave	6th Floor/West Room Door	Wood	White/2/Wood	NA	Intact	<0.0083	<83
LBP-73	401 Santa Clara Ave	6th Floor/West Room Door Frame	Wood	White/2/Wood	NA	Intact	<0.0080	<80
LBP-74	401 Santa Clara Ave	6th Floor/Kitchen Wall	Wood	White/2/Wood	NA	Intact	<0.0080	<80
LBP-75	401 Santa Clara Ave	6th Floor/Main Dining Room/West Wall	Wood	White/2/Wood	NA	Intact	<0.0080	<80
LBP-76	401 Santa Clara Ave	6th Floor/Main Dining Room/South Wall	Wood	White/2/Wood	NA	Intact	<0.0080	<80
LBP-77	401 Santa Clara Ave	6th Floor/East Exterior Wall	Concrete	Gray/2/Concrete	Same as LBP-19	Intact	0.046	460*
LBP-78	401 Santa Clara Ave	6th Floor/East Exterior Window	Wood	Brown/2/Wood	NA	Intact	<0.0080	<80
LBP-79	401 Santa Clara Ave	6th Floor/East Balcony Guard	Stucco	Gray/2/Stucco	Same as LBP-19	Intact	0.011	110*
LBP-80	401 Santa Clara Ave	6th Floor/Stucco/Southeast Balcony Guard	Stucco	Gray/2/Stucco	Same as LBP-19	Intact	0.01	100*
LBP-81	401 Santa Clara Ave	1st Floor/Stairwell North Wall	Concrete	Gray/2/Concrete	NA	Intact	<0.0080	<80
LBP-82	401 Santa Clara Ave	4th Floor/Stairwell Door	Metal	Black/2/Metal	25 SF	Intact	0.35	3,500*
LBP-83	401 Santa Clara Ave	2nd Floor/Stairwell Railing	Metal	Black/2/Metal	150 SF	Intact	0.42	4,200*

**Table 1 - Lead-Containing Material Sampling Results**

Sample	Building	Sample Location	Substrate/Surface	Sample Description (Color / # of Layers /	Estimated Surface Area (Square Feet)	Condition	Total Lead	
							Lead Concentration (ppb)	Lead Content (ppb-ft²)
LBP-84	401 Santa Clara Ave	1st Floor/Stairwell Door	Metal	Black/2/Metal	Same as LBP-83	Intact	0.4	4,000*
<b>LBP-85</b>	<b>401 Santa Clara Ave</b>	<b>Basement/Stairwell Railing</b>	<b>Metal</b>	<b>Black/2/Metal</b>	<b>Same as LBP-83</b>	<b>Intact</b>	<b>0.63</b>	<b>6,300</b>
LBP-86	401 Santa Clara Ave	Basement/Stairwell Floor	Concrete	Gray/1/Concrete	NA	Intact	<0.0080	<80
LBP-87	401 Santa Clara Ave	3rd Floor/Stairwell Railing	Metal	Black/2/Metal	Same as LBP-83	Intact	0.48	4,800*
LBP-88	401 Santa Clara Ave	3rd Floor Wall/Outside Stairwell	Concrete	Dark Gray/1/Concrete	Same as LBP-37	Intact	0.012	120*
LBP-89	401 Santa Clara Ave	4th Floor Wall/Outside Stairwell	Concrete	Dark Gray/1/Concrete	Same as LBP-37	Intact	0.026	260*
LBP-90	401 Santa Clara Ave	1st Floor/Hallway Wall	Wood	Tan/2/Wood	NA	Intact	<0.0080	<80
LBP-91	401 Santa Clara Ave	Stairwell/Basement Pipe	Metal	Red/1/Metal	10 SF	Intact	0.057	570*
LBP-92	401 Santa Clara Ave	5th Floor/Stairwell/North Wall	Concrete	Gray/2/Concrete	NA	Intact	<0.0080	<80
LBP-93	401 Santa Clara Ave	5th Floor/Stairwell/South Wall	Concrete	Gray/2/Concrete	NA	Intact	<0.0080	<80
LBP-94	401 Santa Clara Ave	North Roof Flashing	Metal	Black/2/Metal	1,000 SF	Intact	<0.019	<190*
LBP-95	401 Santa Clara Ave	Roof Door Frame	Metal	Black/2/Metal	15 SF	Intact	0.1	1,000*
LBP-96	401 Santa Clara Ave	Northeast Roof Flashing	Metal	Black/2/Metal	Same as LBP-94	Intact	<0.017	<170
LBP-97	401 Santa Clara Ave	Roof Machinery Room/Pipe	Metal	Green/1/Metal	7 SF	Intact	0.49	4,900*
LBP-98	401 Santa Clara Ave	3rd Floor/Hallway Wall	Wood	Tan/2/Wood	7,500 SF	Intact	<0.0080	<80
LBP-99	401 Santa Clara Ave	2nd Floor/Hallway Wall	Wood	Tan/2/Wood	Same as LBP-98	Intact	<0.0080	<80
C-01	401 Santa Clara Ave	1st Floor/South Apartment Floor	Ceramic	12" x 12" Brown Ceramic Floor Tile	NA	Intact	<0.0040	<40
C-02	401 Santa Clara Ave	2nd Floor/North Apartment Floor	Ceramic	12" x 12" Brown Ceramic Floor Tile	NA	Intact	<0.0040	<40
C-03	401 Santa Clara Ave	3rd Floor/West Apartment Floor	Ceramic	12" x 12" Brown Ceramic Floor Tile	NA	Intact	<0.0040	<40
C-04	401 Santa Clara Ave	1st Floor/South Apartment/Kitchen Wall	Ceramic	4" x 4" Gray Ceramic Wall Tile	NA	Intact	<0.0040	<40
C-05	401 Santa Clara Ave	2nd Floor/North Apartment/Kitchen Wall	Ceramic	4" x 4" Gray Ceramic Wall Tile	NA	Intact	<0.0040	<40

**Table 1 - Lead-Containing Material Sampling Results**

Sample	Building	Sample Location	Substrate/Surface	Sample Description (Color / # of Layers /	Estimated Surface Area (Square Feet	Condition	Total Lead	
C-06	401 Santa Clara Ave	3rd Floor/Northwest Apartment Kitchen	Ceramic	4" x 4" Gray Ceramic Wall Tile	NA	Intact	<0.0040	<40
C-07	401 Santa Clara Ave	1st Floor/South Apartment Toilet	Ceramic	Toilet Ceramic	NA	Intact	<0.0040	<40
C-08	401 Santa Clara Ave	2nd Floor/North Apartment Toilet	Ceramic	Toilet Ceramic	NA	Intact	<0.0040	<40
C-09	401 Santa Clara Ave	3rd Floor/Northwest Apartment Toilet	Ceramic	Toilet Ceramic	NA	Intact	<0.0040	<40

**NOTES:**

Total lead in paint analyzed via Flame Atomic Absorption Spectroscopy/Flame AAS (EPA Test Method EPA SW-846 3050B/7000B).

Total lead in ceramic samples analyzed via Total Threshold Limit Concentration (TTLC/7000B).

mg/kg = Milligrams per kilogram

**Bold** concentrations indicate paint that is greater than or equal to 5,000 mg/kg ( $\geq 0.5\%$  by weight, lead-based paint)

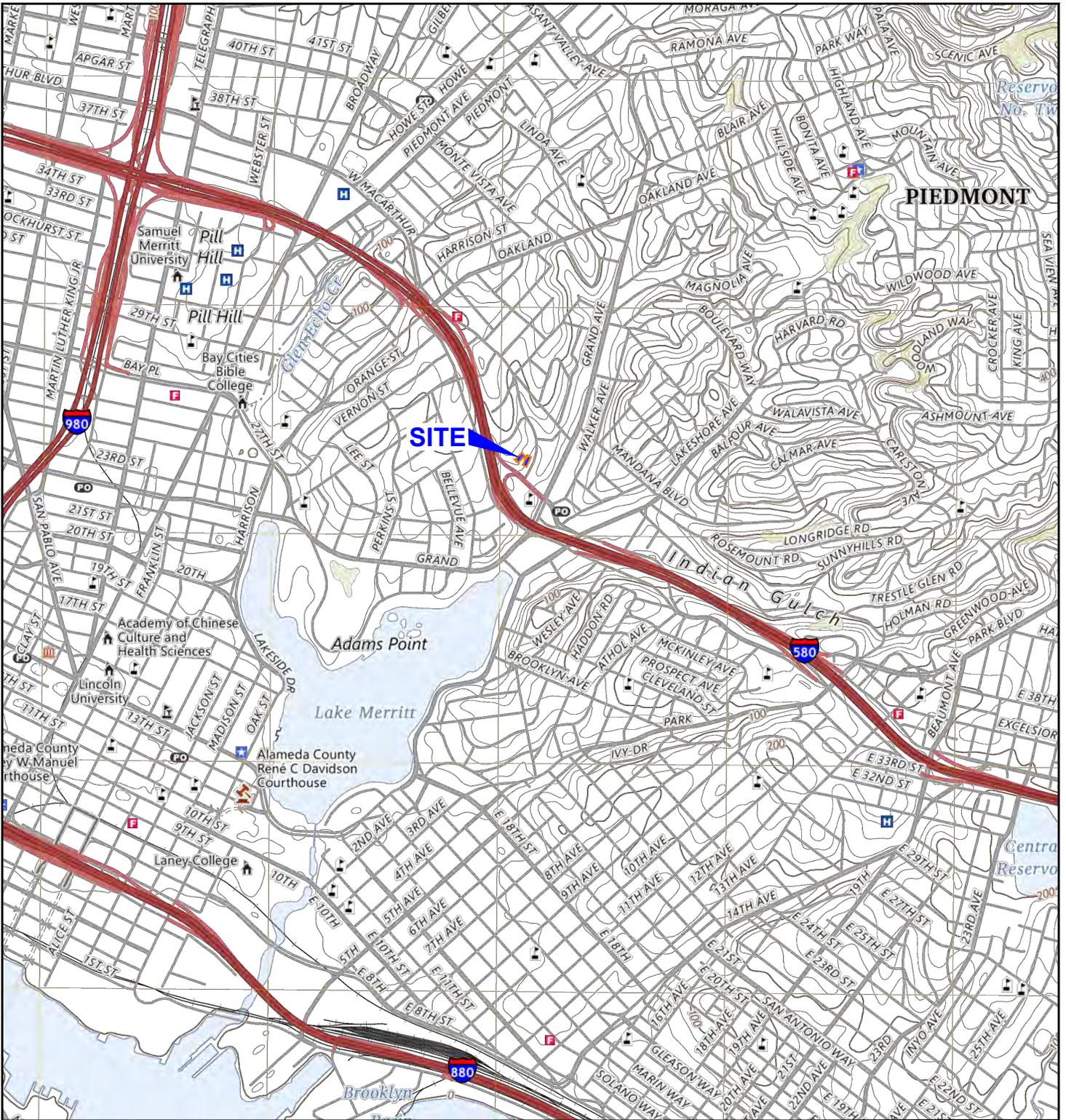
SF = Square feet

\* indicates lead-containing paint that is less than 5,000 mg/kg ( $<0.5\%$  by weight, lead-containing paint)

Estimated quantities are not intended for use in bidding calculations.

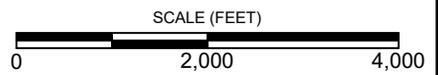


# FIGURES



404724002.dwg 06/27/2024 AEK

NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE | REFERENCE: USGS, 2023



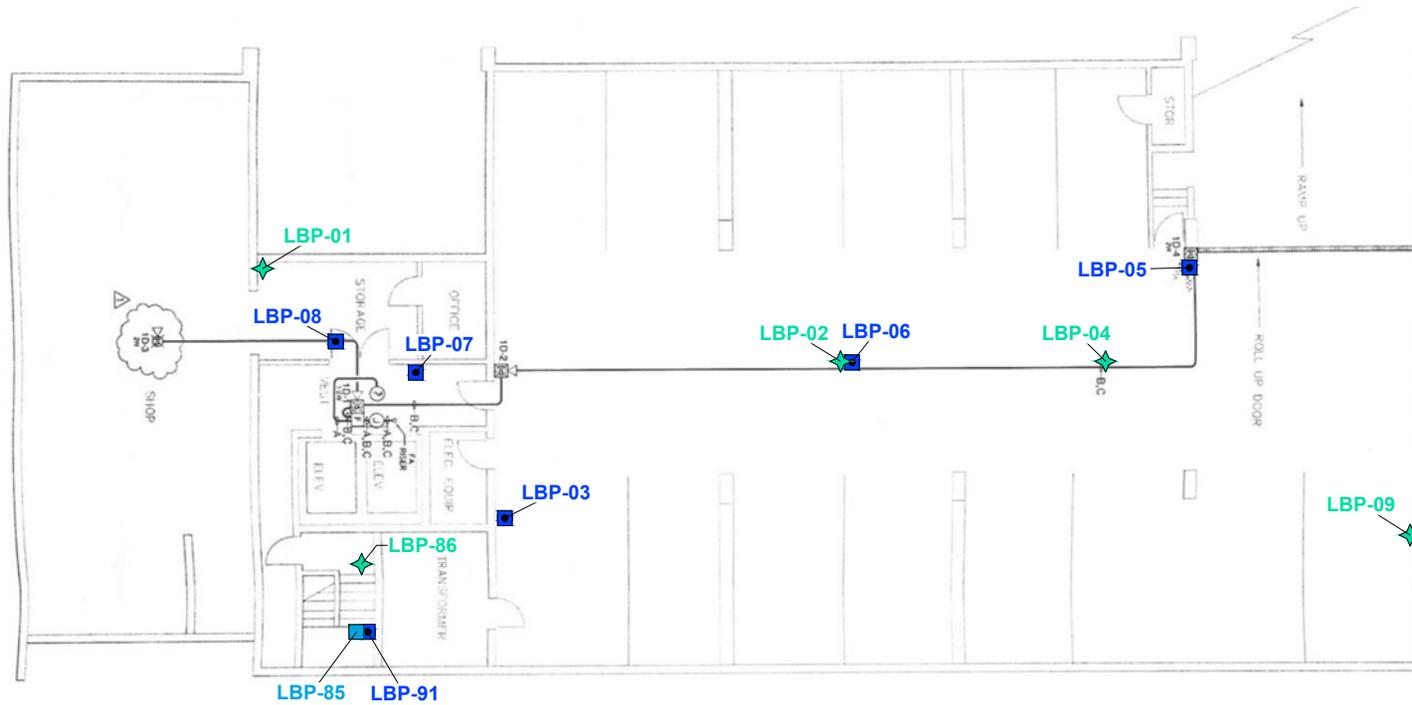
**FIGURE 1**



NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE | REFERENCE: GOOGLE EARTH, 2024

404724002.dwg 06/27/2024 AEK

FIGURE 2



**LEGEND**

- LBP-03** ■ LEAD-CONTAINING PAINT SAMPLE
- LBP-85** ■ LEAD-BASED PAINT SAMPLE
- LBP-01** ◆ SUSPECT LEAD-BASED PAINT SAMPLE, RESULTS BELOW DETECTION LIMIT

NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE

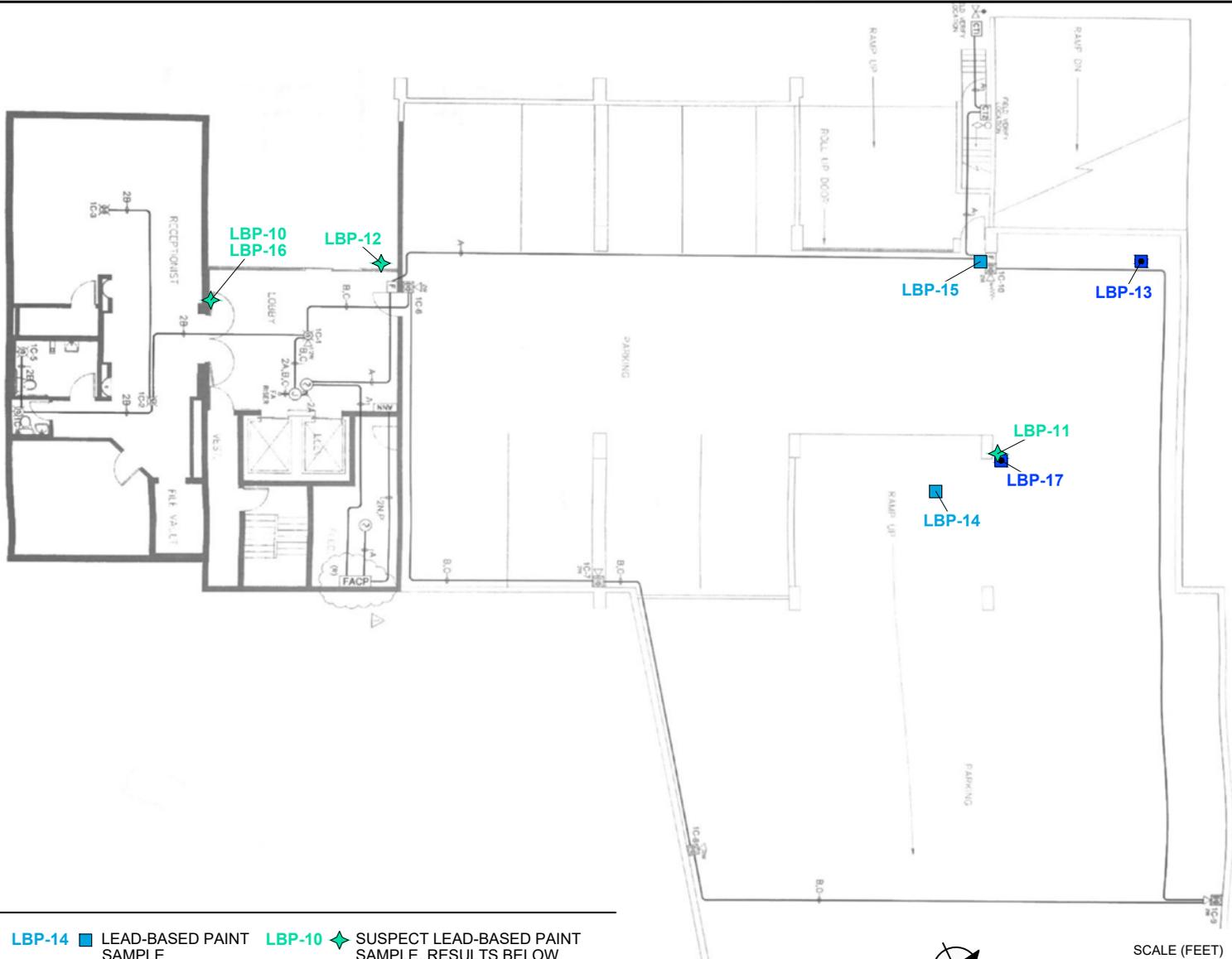


**FIGURE 3**

**SAMPLE LOCATIONS: BASEMENT AND LOWER PARKING LOT**

PAINT SURVEY  
 401 SANTA CLARA AVENUE  
 OAKLAND, CALIFORNIA  
 404724002 | 06/24

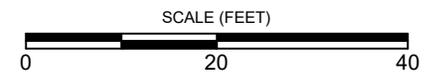
404724002.dwg\_06/27/2024\_AEK



**LEGEND**

- LBP-13** ■ LEAD-CONTAINING PAINT SAMPLE
- LBP-14** ■ LEAD-BASED PAINT SAMPLE
- LBP-10** ◆ SUSPECT LEAD-BASED PAINT SAMPLE, RESULTS BELOW DETECTION LIMIT

NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE



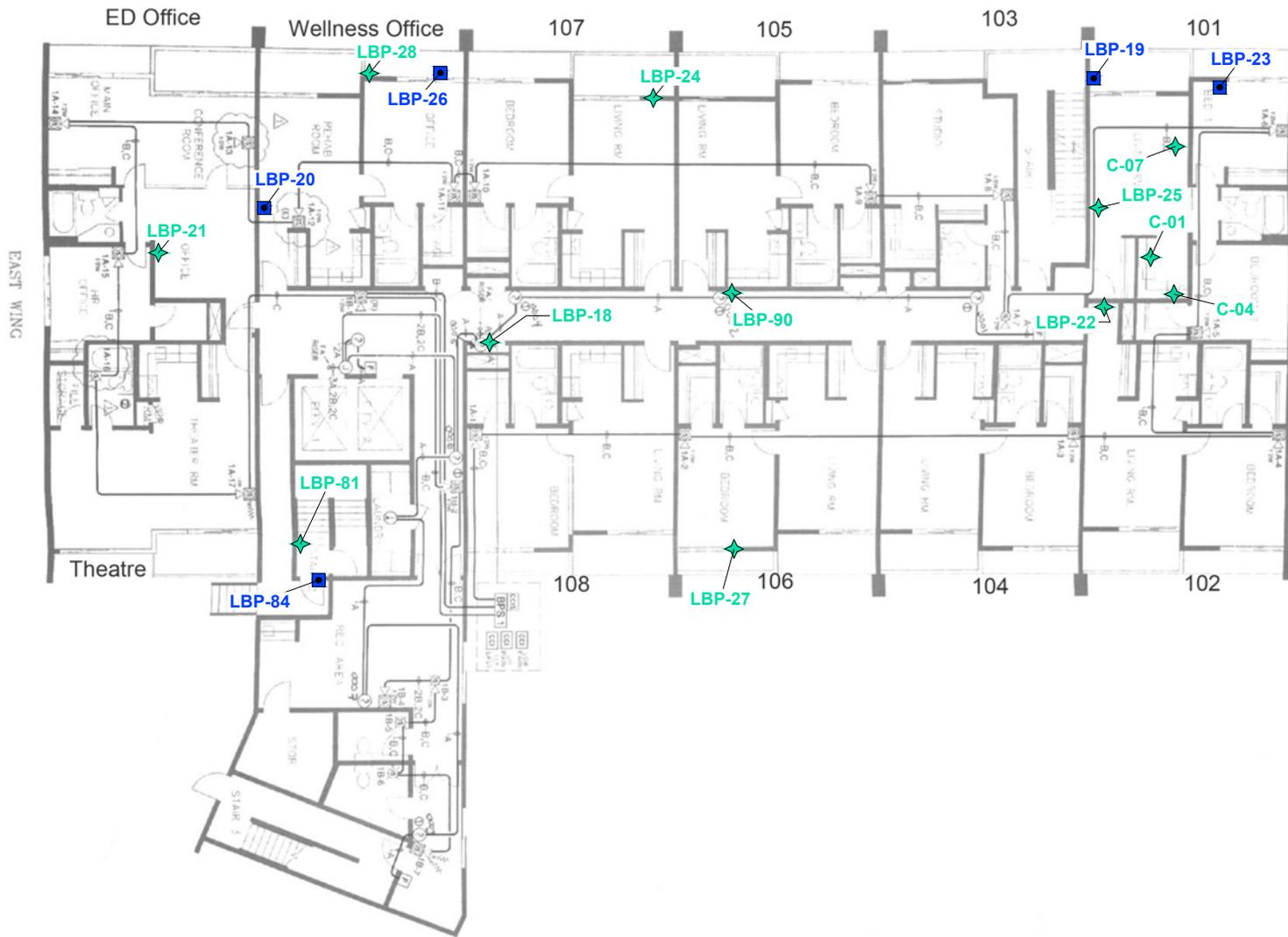
**FIGURE 4**

**SAMPLE LOCATIONS: LOBBY AND UPPER PARKING LOT**

PAINT SURVEY  
 401 SANTA CLARA AVENUE  
 OAKLAND, CALIFORNIA  
 404724002 | 06/24



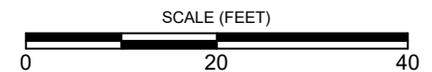
Geotechnical & Environmental Sciences Consultants



**LEGEND**

- **LBP-19** LEAD-CONTAINING PAINT SAMPLE
- ◆ **LBP-18** SUSPECT LEAD-BASED PAINT SAMPLE, RESULTS BELOW DETECTION LIMIT

NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE



**FIGURE 5**

**SAMPLE LOCATIONS: FIRST FLOOR**

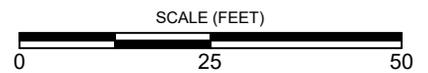
PAINT SURVEY  
 401 SANTA CLARA AVENUE  
 OAKLAND, CALIFORNIA  
 404724002 | 06/24



**LEGEND**

- LBP-29** ■ LEAD-CONTAINING PAINT SAMPLE
- LBP-30** ◆ SUSPECT LEAD-BASED PAINT SAMPLE, RESULTS BELOW DETECTION LIMIT

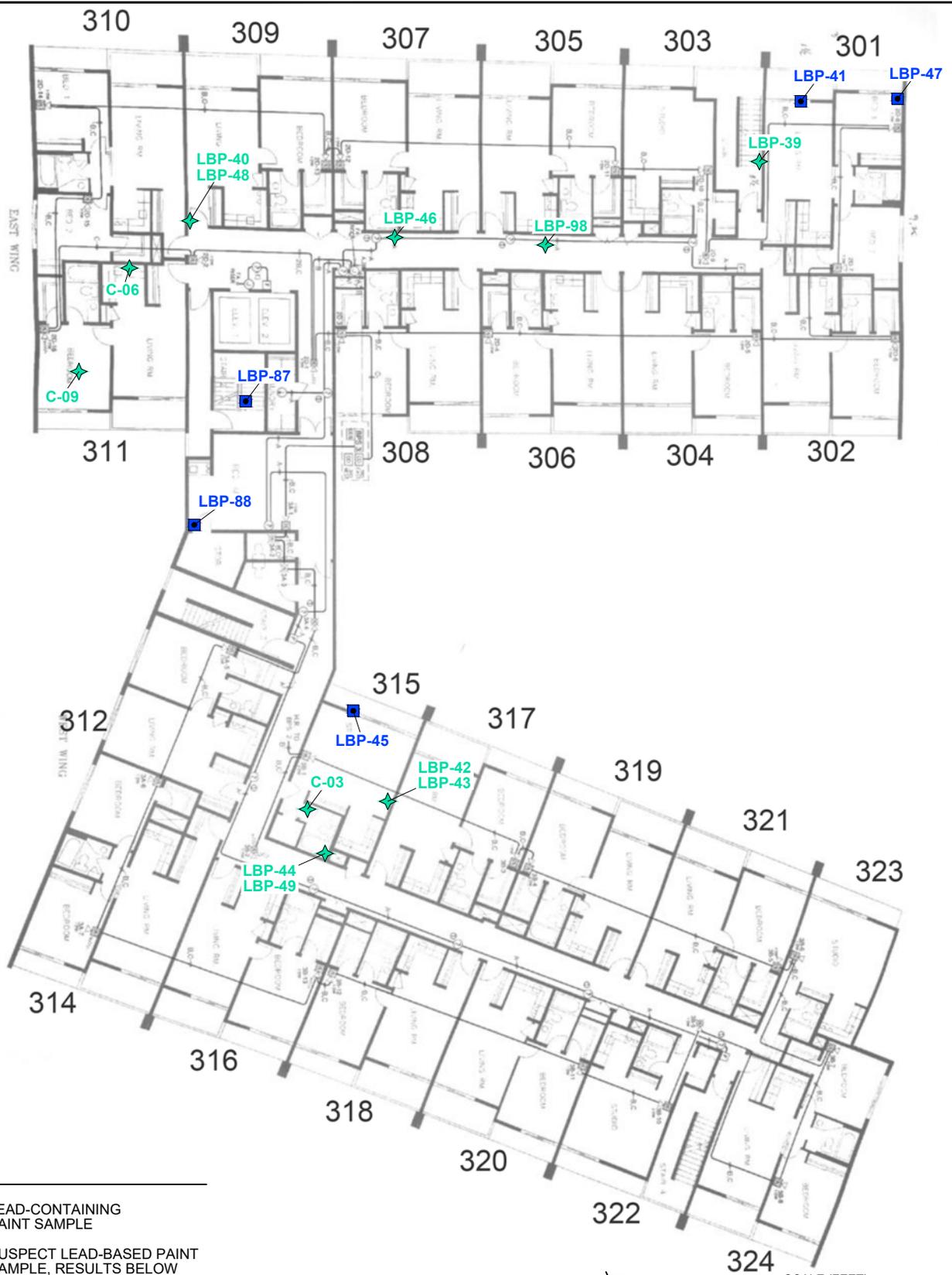
NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE



**FIGURE 6**

**SAMPLE LOCATIONS: SECOND FLOOR**

PAINT SURVEY  
 401 SANTA CLARA AVENUE  
 OAKLAND, CALIFORNIA  
 404724002 | 06/24



**LEGEND**

- LBP-41** ■ LEAD-CONTAINING PAINT SAMPLE
- LBP-39** ◆ SUSPECT LEAD-BASED PAINT SAMPLE, RESULTS BELOW DETECTION LIMIT

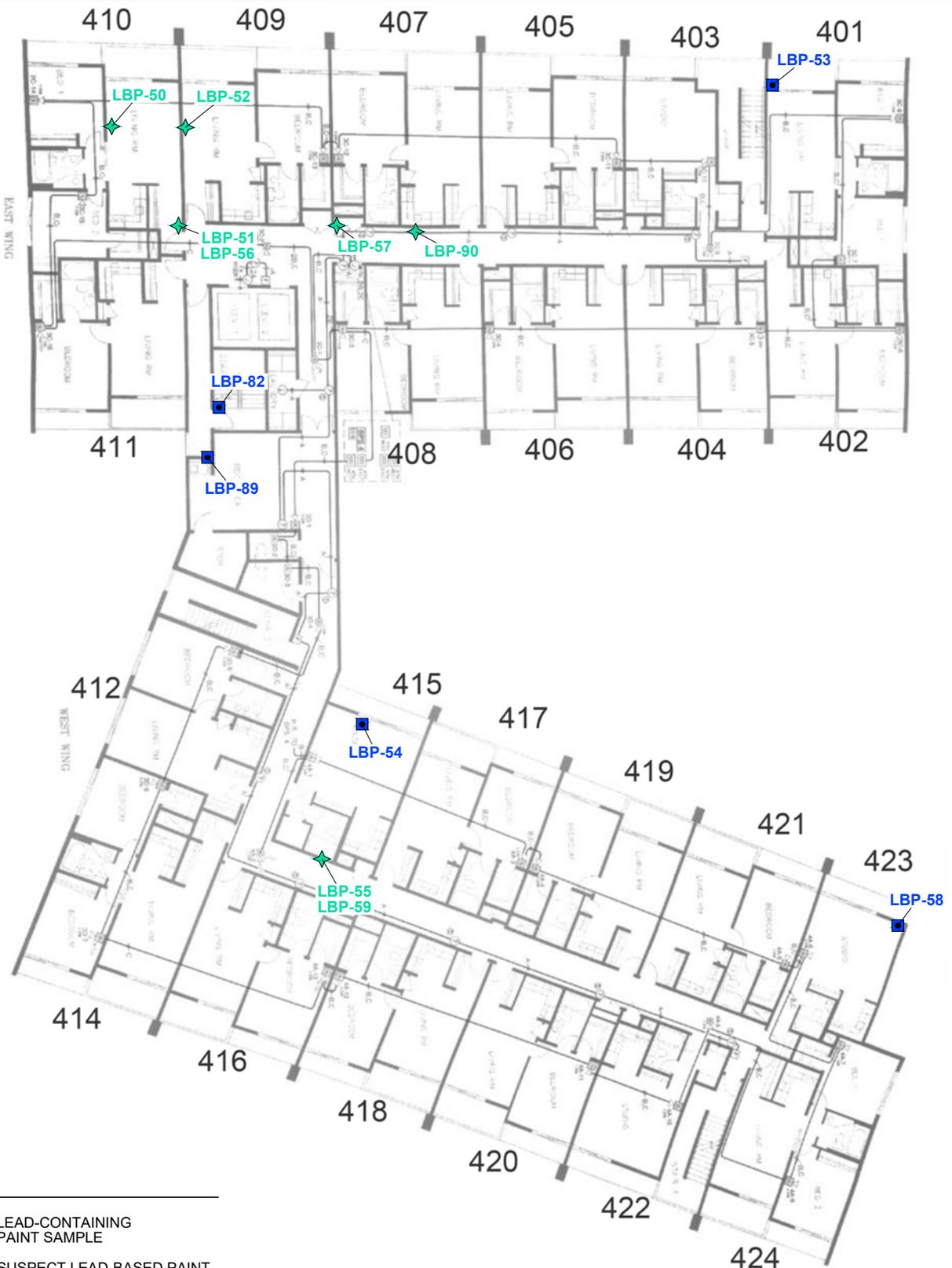
NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE



**FIGURE 7**

**SAMPLE LOCATIONS: THIRD FLOOR**

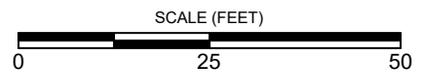
PAINT SURVEY  
 401 SANTA CLARA AVENUE  
 OAKLAND, CALIFORNIA  
 404724002 | 06/24



**LEGEND**

- LBP-53** ■ LEAD-CONTAINING PAINT SAMPLE
- LBP-50** ◆ SUSPECT LEAD-BASED PAINT SAMPLE, RESULTS BELOW DETECTION LIMIT

NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE



**FIGURE 8**

**SAMPLE LOCATIONS: FOURTH FLOOR**

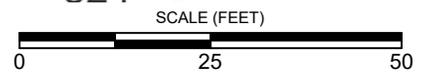
PAINT SURVEY  
 401 SANTA CLARA AVENUE  
 OAKLAND, CALIFORNIA  
 404724002 | 06/24



**LEGEND**

- LBP-61** ■ LEAD-CONTAINING PAINT SAMPLE
- LBP-60** ◆ SUSPECT LEAD-BASED PAINT SAMPLE, RESULTS BELOW DETECTION LIMIT

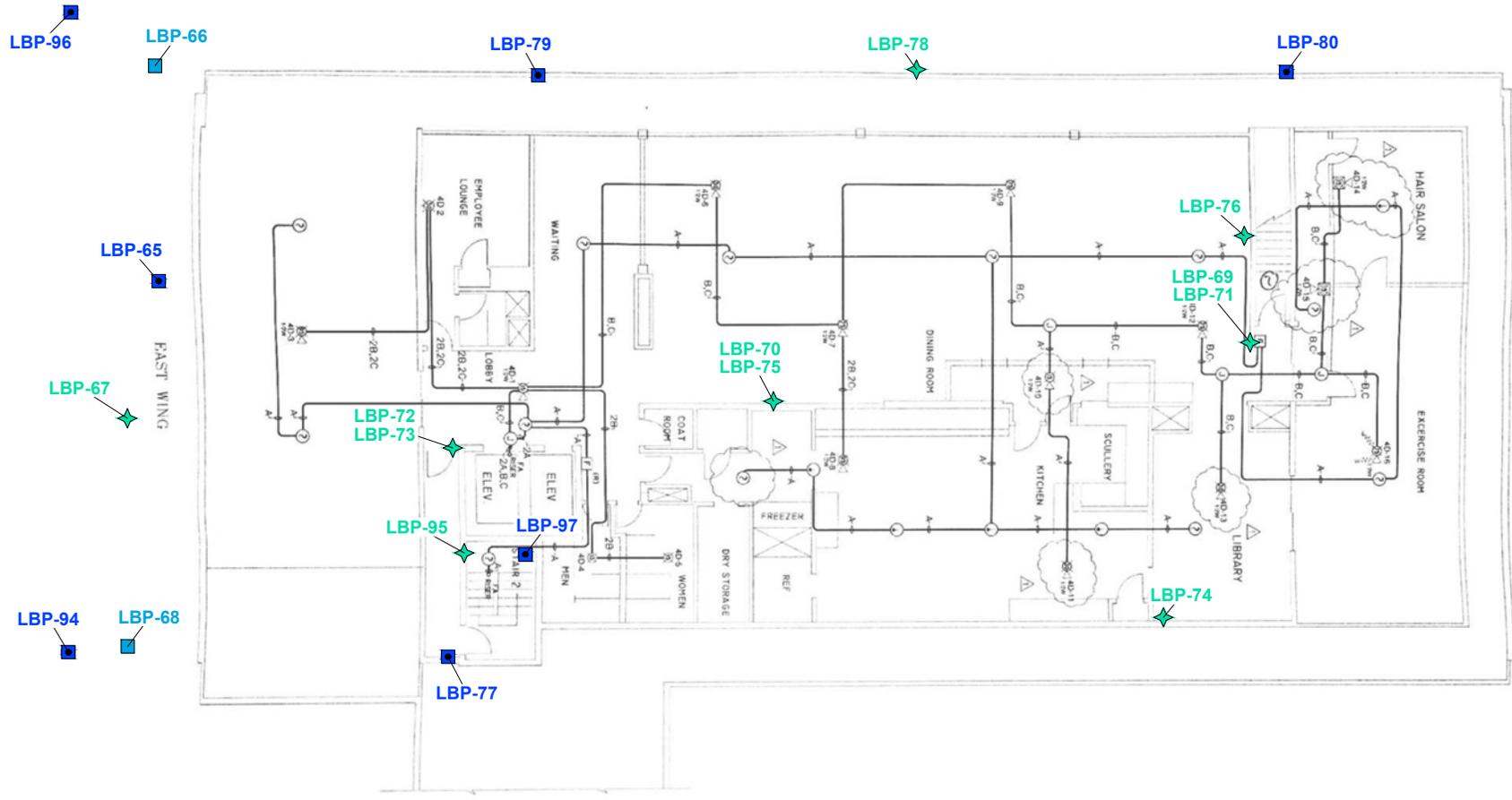
NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE



**FIGURE 9**

**SAMPLE LOCATIONS: FIFTH FLOOR**

PAINT SURVEY  
 401 SANTA CLARA AVENUE  
 OAKLAND, CALIFORNIA  
 404724002 | 06/24



**LEGEND**

- **LBP-65** LEAD-CONTAINING PAINT SAMPLE
- **LBP-66** LEAD-BASED PAINT SAMPLE
- ◆ **LBP-67** SUSPECT LEAD-BASED PAINT SAMPLE, RESULTS BELOW DETECTION LIMIT

NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE



**FIGURE 10**

**SAMPLE LOCATIONS: SIXTH FLOOR**

PAINT SURVEY  
 401 SANTA CLARA AVENUE  
 OAKLAND, CALIFORNIA  
 404724002 | 06/24



# APPENDIX A

## Certifications

DEPARTMENT OF INDUSTRIAL RELATIONS

**Division of Occupational Safety and Health-Asbestos Certification**

1750 Howe Avenue, Suite 460

Sacramento, CA 95825

(916) 574-2993 Office <http://www.dir.ca.gov/dosh/asbestos.html> [actu@dir.ca.gov](mailto:actu@dir.ca.gov)

911222688C

193

October 25, 2023

**William Patrick Larkin**  
**4 Miramonte Road**  
**Orinda CA 94563**

Dear Certified Asbestos Consultant or Technician:

Enclosed is your certification card. **To maintain your certification, you must abide by the rules printed on the back of the certification card.**

Your certification is valid for a period of one year. If you wish to renew your certification, you must apply for renewal at least 60 days before the expiration date shown on your card. [8 CCR 341.15(h)(1)].

Please hold and do not send copies of your required AHERA refresher renewal certificates to our office until you apply for renewal of your certification.

Certificates must be kept current if you are actively working as a CAC or CSST. The grace period is only for those who are not actively working as an asbestos consultant or site surveillance technician.

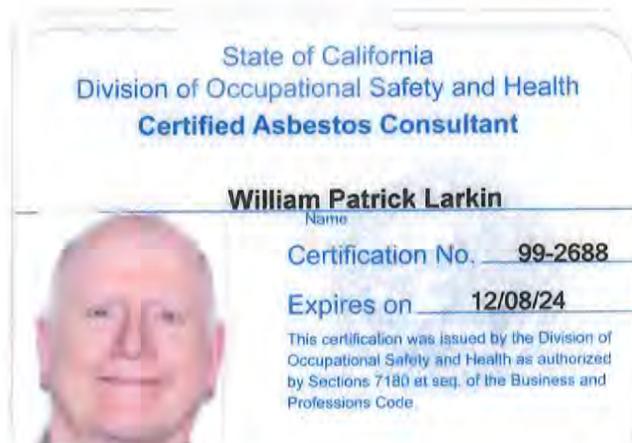
Please contact our office at the above address or email w any changes in your contact/ mailing information within 15 days of the change.

Sincerely,

Kevin Graulich  
 Principal Safety Engineer

Attachment: Certification Card

cc: File



Renewal – Card Attached



STATE OF CALIFORNIA  
DEPARTMENT OF PUBLIC HEALTH



# LEAD-RELATED CONSTRUCTION CERTIFICATE

<b>INDIVIDUAL:</b>	<b>CERTIFICATE TYPE:</b>	<b>NUMBER:</b>	<b>EXPIRATION DATE:</b>
 <b>William Larkin</b>	Lead Inspector/Assessor	LRC-00001285	7/3/2024
	Lead Project Monitor	LRC-00001284	7/3/2024

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at [www.cdph.ca.gov/programs/clppb](http://www.cdph.ca.gov/programs/clppb) or calling (800) 597-LEAD



STATE OF CALIFORNIA  
DEPARTMENT OF PUBLIC HEALTH



# LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:



**Nathan Eubanks**

CERTIFICATE TYPE:

Lead Sampling Technician

NUMBER:

LRC-00010612

EXPIRATION DATE:

11/14/2024

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at [www.cdph.ca.gov/programs/clppb](http://www.cdph.ca.gov/programs/clppb) or calling (800) 597-LEAD



# APPENDIX B

## Lead-Containing Material Laboratory Analytical Report and Chain-of-Custody Records



# EMSL Analytical, Inc

464 McCormick Street, San Leandro, CA 94577

Phone/Fax: (510) 895-3675 / (510) 895-3680

<http://www.EMSL.com>

[sanleandrolab@emsl.com](mailto:sanleandrolab@emsl.com)

EMSL Order: 092411614

CustomerID: NOMO22

CustomerPO:

ProjectID:

Attn: **William Larkin  
Ninyo & Moore  
2020 Challenger Drive  
Suite 103  
Alameda, CA 94501**

Phone: (510) 343-3000  
Fax: (510) 633-5646  
Received: 6/20/2024 09:45 AM  
Collected: 6/10/2024

Project: **401 SANTA CLARA; 404224002**

## Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)\*

Client Sample Description	Lab ID	Collected	Analyzed	Weight	Lead Concentration
LBP-01	092411614-0001	6/10/2024	6/20/2024	0.2555 g	<0.0080 % wt
Site: BASEMENT NE WALL WHITE WOOD					
LBP-02	092411614-0002	6/10/2024	6/20/2024	0.256 g	<0.0080 % wt
Site: BASEMENT PILLAR CONCRETE WHITE					
LBP-03	092411614-0003	6/10/2024	6/20/2024	0.1433 g	<0.014 % wt
Site: BASEMENT NORTH PIPE BLACK METAL					
LBP-04	092411614-0004	6/10/2024	6/20/2024	0.2174 g	<0.0092 % wt
Site: BASEMENT PILLAR WHITE CONCRETE					
LBP-05	092411614-0005	6/10/2024	6/20/2024	0.2015 g	0.21 % wt
Site: BASEMENT EAST DOOR GREEN METAL					
LBP-06	092411614-0006	6/10/2024	6/20/2024	0.1266 g	<0.016 % wt
Site: BASEMENT FIRE EXTINGUISHER CONTAINER RED METAL					
LBP-07	092411614-0007	6/10/2024	6/20/2024	0.2536 g	0.072 % wt
Site: BASEMENT ELEVATOR HALLWAY EAST WALL GRAY WOOD					
LBP-08	092411614-0008	6/10/2024	6/20/2024	0.1798 g	<0.011 % wt
Site: BASEMENT CENTRAL DOOR BY ELEVATORS BLACK METAL					
LBP-09	092411614-0009	6/10/2024	6/20/2024	0.2514 g	<0.0080 % wt
Site: BASEMENT SOUTH WALL WHITE CONCRETE					
LBP-10	092411614-0010	6/10/2024	6/20/2024	0.258 g	<0.0080 % wt
Site: LOBBY NORTH WALL WHITE WOOD					
LBP-11	092411614-0011	6/10/2024	6/20/2024	0.2543 g	0.0092 % wt
Site: LOBBY GARAGE PILLAR WHITE CONCRETE					
LBP-12	092411614-0012	6/10/2024	6/20/2024	0.2536 g	0.0082 % wt
Site: LOBBY EXT WALL WHITE CONCRETE					
LBP-13	092411614-0013	6/10/2024	6/20/2024	0.2628 g	0.016 % wt
Site: LOBBY GARAGE EXT WALL WHITE CONCRETE					
LBP-14	092411614-0014	6/10/2024	6/20/2024	0.1962 g	0.60 % wt
Site: LOBBY GARAGE RAILING GREEN METAL RAILING					
LBP-15	092411614-0015	6/10/2024	6/20/2024	0.1828 g	0.97 % wt
Site: LOBBY GARAGE ENTRANCE DOOR GREEN METAL					

Oscar Merino, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc San Leandro, CA AIHA LAP, LLC-ELLAP Accredited #101748

Initial report from 06/21/2024 16:30:56



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EMSL Order: 092411614

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Attn: **William Larkin  
Ninyo & Moore  
2020 Challenger Drive  
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Alameda, CA 94501**

Phone: (510) 343-3000  
Fax: (510) 633-5646  
Received: 6/20/2024 09:45 AM  
Collected: 6/10/2024

Project: **401 SANTA CLARA; 404224002**

## Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)\*

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Weight</i>	<i>Lead Concentration</i>
LBP-16	092411614-0016	6/10/2024	6/20/2024	0.2673 g	<0.0080 % wt
Site: LOBBY LOWER WALL DETAIL WHITE WOOD					
LBP-17	092411614-0017	6/10/2024	6/20/2024	0.1896 g	0.013 % wt
Site: LOBBY GARAGE FIRE EXTINGUISHER RED METAL					
LBP-18	092411614-0018	6/10/2024	6/20/2024	0.261 g	<0.0080 % wt
Site: 1ST FLR ELECTRICAL CLOSET CONTAINER TAN WOOD					
LBP-19	092411614-0019	6/10/2024	6/20/2024	0.2114 g	0.030 % wt
Site: 1ST FLR EXT WALL GRAY CONCRETE					
LBP-20	092411614-0020	6/10/2024	6/20/2024	0.2667 g	0.011 % wt
Site: 1ST FLR SOUTH APARTMENT WALL WHITE CONCRETE					
LBP-21	092411614-0021	6/10/2024	6/20/2024	0.2522 g	<0.0080 % wt
Site: 1ST FLR NE ROOM BEFORE ELEVATOR WEST WALL GRAY STUCCO					
LBP-22	092411614-0022	6/10/2024	6/20/2024	0.2486 g	<0.0080 % wt
Site: 1ST FLR SOUTH APARTMENT DOOR BLUE WOOD					
LBP-23	092411614-0023	6/10/2024	6/20/2024	0.2596 g	0.046 % wt
Site: 1ST FLR SOUTH APARTMENT EXT RAILING GRAY STUCCO					
LBP-24	092411614-0024	6/10/2024	6/20/2024	0.2507 g	<0.0080 % wt
Site: 1ST FLR EAST EXT WALL WHITE STUCCO					
LBP-25	092411614-0025	6/10/2024	6/20/2024	0.2576 g	<0.0080 % wt
Site: 1ST FLR SOUTH APARTMENT SOUTH WALL WHITE CONCRETE					
LBP-26	092411614-0026	6/10/2024	6/20/2024	0.2598 g	0.012 % wt
Site: 1ST FLR BALCONY RAILING GRAY CONCRETE					
LBP-27	092411614-0027	6/10/2024	6/20/2024	0.2531 g	<0.0080 % wt
Site: 1ST FLR WEST RM WINDOWSILL BURGUNDY WOOD					
LBP-28	092411614-0028	6/10/2024	6/20/2024	0.2684 g	<0.0080 % wt
Site: 1ST FLR NE EXT WALL WHITE STUCCO					
LBP-29	092411614-0029	6/10/2024	6/20/2024	0.2635 g	0.031 % wt
Site: 2ND FLR SOUTH APARTMENT WALL WHITE WOOD					

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Project: **401 SANTA CLARA; 404224002**

## Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)\*

Client Sample Description	Lab ID	Collected	Analyzed	Weight	Lead Concentration
LBP-30	092411614-0030	6/10/2024	6/20/2024	0.2672 g	<0.0080 % wt
Site: 2ND FLR ELECTRICAL CLOSET DOOR TAN WOOD					
LBP-31	092411614-0031	6/10/2024	6/20/2024	0.2322 g	<0.0086 % wt
Site: 2ND FLR DOOR SOUTH APARTMENT B LUE WOOD					
LBP-32	092411614-0032	6/10/2024	6/20/2024	0.2575 g	0.078 % wt
Site: 2ND FLR DOORFRAME NORTH APARTMENT WHITE WOOD					
LBP-33	092411614-0033	6/10/2024	6/20/2024	0.2536 g	<0.0080 % wt
Site: 2ND FLR WALL NORTH APARTMENT WHITE WOOD					
LBP-34	092411614-0034	6/10/2024	6/20/2024	0.2554 g	<0.0080 % wt
Site: 2ND FLR WEST APARTMENT WALL WHITE CONCRETE					
LBP-35	092411614-0035	6/10/2024	6/20/2024	0.176 g	0.026 % wt
Site: 2ND FLR SOUTH APARTMENT EXT WALL GRAY CONCRETE					
LBP-36	092411614-0036	6/10/2024	6/20/2024	0.26 g	<0.0080 % wt
Site: 2ND FLR NORTH APARTMENT DETAILING WHITE WOOD					
LBP-37	092411614-0037	6/10/2024	6/20/2024	0.2531 g	0.024 % wt
Site: 2ND FLR OUTSIDE STAIRWELL WALL DARK GRAY CONCRETE					
LBP-38	092411614-0038	6/10/2024	6/20/2024	0.2534 g	<0.0080 % wt
Site: 2ND FLR WEST APARTMENT DOORFRAME WHITE WOOD					
LBP-39	092411614-0039	6/10/2024	6/20/2024	0.2604 g	<0.0080 % wt
Site: 3RD FLR SOUTH APARTMENT WALL WHITE CONCRETE					
LBP-40	092411614-0040	6/10/2024	6/20/2024	0.2537 g	<0.0080 % wt
Site: 3RD FLR DOORFRAME NORTH APARTMENT WHITE WOOD					
LBP-41	092411614-0041	6/10/2024	6/21/2024	0.2513 g	0.015 % wt
Site: 3RD FLR SOUTH APARTMENT BALCONY RAIL GRAY CONCRETE					
LBP-42	092411614-0042	6/10/2024	6/21/2024	0.2532 g	<0.0080 % wt
Site: 3RD FLR WEST APARTMENT LOWER WALL DETAIL WHITE WOOD					
LBP-43	092411614-0043	6/10/2024	6/21/2024	0.2553 g	<0.0080 % wt
Site: 3RD FLR WEST APARTMENT WALL WHITE WOOD					

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or other approved signatory

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Project: **401 SANTA CLARA; 404224002**

## Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)\*

Client Sample Description	Lab ID	Collected	Analyzed	Weight	Lead Concentration
LBP-44	092411614-0044	6/10/2024	6/21/2024	0.2514 g	<0.0080 % wt
Site: 3RD FLR WEST APARTMENT DOORFRAME WHITE WOOD					
LBP-45	092411614-0045	6/10/2024	6/21/2024	0.2666 g	0.029 % wt
Site: 3RD FLR WEST APARTMENT BALCONY RAIL GRAY CONCRETE					
LBP-46	092411614-0046	6/10/2024	6/21/2024	0.2606 g	<0.0080 % wt
Site: 3RD FLR HALLWAY DOOR TAN WOOD					
LBP-47	092411614-0047	6/10/2024	6/21/2024	0.2255 g	0.019 % wt
Site: 3RD FLR SOUTH EXT WALL GRAY CONCRETE					
LBP-48	092411614-0048	6/10/2024	6/21/2024	0.2546 g	<0.0080 % wt
Site: 3RD FLR NORTH APARTMENT DOOR BLUE WOOD					
LBP-49	092411614-0049	6/10/2024	6/21/2024	0.2597 g	<0.0080 % wt
Site: 3RD FLR WEST APARTMENT DOOR BLUE WOOD					
LBP-50	092411614-0050	6/10/2024	6/21/2024	0.2527 g	<0.0080 % wt
Site: 4TH FLR NORTH APARTMENT DETAIL WHITE WOOD					
LBP-51	092411614-0051	6/10/2024	6/21/2024	0.2605 g	<0.0080 % wt
Site: 4TH FLR NORTH APARTMENT DOORFRAME WHITE WOOD					
LBP-52	092411614-0052	6/10/2024	6/21/2024	0.2509 g	0.082 % wt
Site: 4TH FLR NORTH APARTMENT WALL WHITE CONCRETE					
LBP-53	092411614-0053	6/10/2024	6/21/2024	0.2564 g	0.013 % wt
Site: 4TH FLR SOUTH APARTMENT BALCONY WALL GRAY STUCCO					
LBP-54	092411614-0054	6/10/2024	6/21/2024	0.2555 g	0.011 % wt
Site: 4TH FLR WEST APARTMENT BALCONY WALL GRAY STUCCO					
LBP-55	092411614-0055	6/10/2024	6/21/2024	0.2568 g	<0.0080 % wt
Site: 4TH FLR WEST APARTMENT DOOR BLUE WOOD					
LBP-56	092411614-0056	6/10/2024	6/21/2024	0.2606 g	<0.0080 % wt
Site: 4TH FLR NORTH APARTMENT DOOR BLUE WOOD					
LBP-57	092411614-0057	6/10/2024	6/21/2024	0.2543 g	<0.0080 % wt
Site: 4TH FLR HALLWAY DOOR TAN WOOD					

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Project: **401 SANTA CLARA; 404224002**

## Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)\*

Client Sample Description	Lab ID	Collected	Analyzed	Weight	Lead Concentration
LBP-58 Site: 4TH FLR EXT WALL SOUTH GRAY CONCRETE	092411614-0058	6/10/2024	6/21/2024	0.1892 g	0.025 % wt
LBP-59 Site: 4TH FLR WEST DOORFRAME WHITE WOOD	092411614-0059	6/10/2024	6/21/2024	0.251 g	0.0093 % wt
LBP-60 Site: 5TH FLR CENTRAL WALL WHITE CONCRETE	092411614-0060	6/10/2024	6/21/2024	0.2553 g	<0.0080 % wt
LBP-61 Site: 5TH FLR SOUTH BALCONY RAILING GRAY CONCRETE	092411614-0061	6/10/2024	6/21/2024	0.2525 g	0.011 % wt
LBP-62 Site: 5TH FLR WEST WALL WHITE CONCRETE	092411614-0062	6/10/2024	6/21/2024	0.2549 g	<0.0080 % wt
LBP-63 Site: 5TH FLR EXT SOUTH WALL GRAY CONCRETE	092411614-0063	6/10/2024	6/21/2024	0.2532 g	0.043 % wt
LBP-64 Site: 5TH FLR BALCONY RAILING GRAY CONCRETE	092411614-0064	6/10/2024	6/21/2024	0.2555 g	0.0081 % wt
LBP-65 Site: 6TH FLR EXT RAILING BURGUNDY CONCRETE	092411614-0065	6/10/2024	6/21/2024	0.2388 g	0.20 % wt
LBP-66 Site: 6TH FLR EXT PILLARS BLACK METAL	092411614-0066	6/10/2024	6/21/2024	0.2556 g	1.9 % wt
LBP-67 Site: 6TH FLR EXT WINDOWS BROWN WOOD	092411614-0067	6/10/2024	6/21/2024	0.2577 g	<0.0080 % wt
LBP-68 Site: 6TH FLR EXT PILLARS BLACK METAL	092411614-0068	6/10/2024	6/21/2024	0.2648 g	4.8 % wt
LBP-69 Site: 6TH FLR SOUTH APARTMENT DOORFRAME WHITE WOOD	092411614-0069	6/10/2024	6/21/2024	0.258 g	<0.0080 % wt
LBP-70 Site: 6TH FLR DETAIL LOWER WALL SOUTH APARTMENT WHITE WOOD	092411614-0070	6/10/2024	6/21/2024	0.2573 g	<0.0080 % wt
LBP-71 Site: 6TH FLR SOUTH APARTMENT DOOR WHITE WOOD	092411614-0071	6/10/2024	6/21/2024	0.25 g	<0.0080 % wt
LBP-72 Site: 6TH FLR WEST APARTMENT DOOR WHITE WOOD	092411614-0072	6/10/2024	6/21/2024	0.2416 g	<0.0083 % wt

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or other approved signatory

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## Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)\*

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Weight</i>	<i>Lead Concentration</i>
LBP-73	092411614-0073	6/10/2024	6/21/2024	0.2519 g	<0.0080 % wt
Site: 6TH FLR DOORFRAME WEST APARTMENT WHITE WOOD					
LBP-74	092411614-0074	6/10/2024	6/21/2024	0.2553 g	<0.0080 % wt
Site: 6TH FLR KITCHEN WALL WHITE WOOD					
LBP-75	092411614-0075	6/10/2024	6/21/2024	0.2596 g	<0.0080 % wt
Site: 6TH FLR MAIN DINING RM WALL WHITE WOOD					
LBP-76	092411614-0076	6/10/2024	6/21/2024	0.2621 g	<0.0080 % wt
Site: 6TH FLR MAIN DINING RM WALL WHITE WOOD					
LBP-77	092411614-0077	6/10/2024	6/21/2024	0.2547 g	0.046 % wt
Site: 6TH FLR EXT WALL GRAY CONCRETE					
LBP-78	092411614-0078	6/10/2024	6/21/2024	0.251 g	<0.0080 % wt
Site: 6TH FLR EXT WINDOWS BROWN WOOD					
LBP-79	092411614-0079	6/10/2024	6/21/2024	0.2553 g	0.011 % wt
Site: 6TH FLR BALCONY GRAY STUCCO					
LBP-80	092411614-0080	6/10/2024	6/21/2024	0.2652 g	0.010 % wt
Site: 6TH FLR BALCONY RAILING GRAY STUCCO					
LBP-81	092411614-0081	6/10/2024	6/21/2024	0.2701 g	<0.0080 % wt
Site: 1ST FLR STAIRWELL NORTH WALL GRAY CONCRETE					
LBP-82	092411614-0082	6/10/2024	6/21/2024	0.1772 g	0.35 % wt
Site: 4TH FLR STAIRWELL DOOR BLACK METAL					
LBP-83	092411614-0083	6/10/2024	6/21/2024	0.2533 g	0.42 % wt
Site: 2ND FLR STAIRWELL RAILING BLACK METAL					
LBP-84	092411614-0084	6/10/2024	6/21/2024	0.1805 g	0.40 % wt
Site: 1ST FLR STAIRWELL DOOR BLACK METAL					
LBP-85	092411614-0085	6/10/2024	6/21/2024	0.1675 g	0.63 % wt
Site: BASEMENT STAIRWELL CEILING BLACK METAL					
LBP-86	092411614-0086	6/10/2024	6/21/2024	0.2522 g	<0.0080 % wt
Site: BASEMENT STAIRWELL FLR GRAY CONCRETE					
LBP-87	092411614-0087	6/10/2024	6/21/2024	0.2583 g	0.48 % wt
Site: 3RD FLR RAILING STAIRWELL BLACK METAL					

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## Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)\*

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Weight</i>	<i>Lead Concentration</i>
LBP-88 Site: 3RD FLR WALL OUTSIDE STAIRWELL DARK GRAY CONCRETE	092411614-0088	6/10/2024	6/21/2024	0.2751 g	0.012 % wt
LBP-89 Site: 4TH FLR WALL OUTSIDE STAIRWELL DARK GRAY CONCRETE	092411614-0089	6/10/2024	6/21/2024	0.2578 g	0.026 % wt
LBP-90 Site: 1ST FLR HALLWAY WALL TAN WOOD	092411614-0090	6/10/2024	6/21/2024	0.2642 g	<0.0080 % wt
LBP-91 Site: STAIRWELL BASEMENT PIPE RED METAL	092411614-0091	6/10/2024	6/21/2024	0.2554 g	0.057 % wt
LBP-92 Site: 5TH FLR STAIRWELL WALL GRAY CONCRETE	092411614-0092	6/10/2024	6/21/2024	0.2601 g	<0.0080 % wt
LBP-93 Site: 5TH FLR STAIRWELL SOUTH WALL CONCRETE	092411614-0093	6/10/2024	6/21/2024	0.2526 g	<0.0080 % wt
LBP-94 Site: ROOF FLASHING BLACK METAL	092411614-0094	6/10/2024	6/21/2024	0.1047 g	<0.019 % wt
LBP-95 Site: ROOF DOORFRAME BLACK METAL	092411614-0095	6/10/2024	6/21/2024	0.2062 g	0.10 % wt
LBP-96 Site: ROOF FLASHING BLACK METAL	092411614-0096	6/10/2024	6/21/2024	0.1151 g	<0.017 % wt
LBP-97 Site: ROOF MACHINERY RM PIPE GREEN METAL	092411614-0097	6/10/2024	6/21/2024	0.1033 g	0.49 % wt
LBP-98 Site: 3RD FLR HALLWAY WALL TAN WOOD	092411614-0098	6/10/2024	6/21/2024	0.2664 g	<0.0080 % wt
LBP-99 Site: 2ND FLR HALLWAY WALL TAN WOOD	092411614-0099	6/10/2024	6/21/2024	0.2668 g	<0.0080 % wt

Oscar Merino, Laboratory Manager  
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted.

\* Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008% wt based on the minimum sample weight per our SOP. "<" (less than) result signifies the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. Definitions of modifications are available upon request.

Samples analyzed by EMSL Analytical, Inc San Leandro, CA AIHA LAP, LLC-ELLAP Accredited #101748

Initial report from 06/21/2024 16:30:56

092411614

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LEAD BASED PAINT BULK SAMPLE DATA SHEET

Sheet 1 of

Ninyo & Moore 2020 Challenger Dr., #103 Alameda, CA 94501 Tel: (510) 343-3000 Fax: (510) 343-3001	Project Name: <i>401 Santa Clara</i>	Sampled By: <i>WPL</i>	Laboratory:
	Project No.: <i>404224002</i>	Sampled By:	
	Project Manager: <i>WPL</i>	Sampled By:	
	Site Address:	Date Sampled: <i>6/10/24</i>	

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
<i>[Signature]</i>	<i>Ninyo &amp; Moore</i>	<i>6/20/24</i>		<i>[Signature]</i>	

Sample ID	Building Number	Room Number	Sample Location	Building Component	Sample Description (Color #/ Layers /Substrate)	Estimated Surface Area	Condition
LBP-01			Basement /NE wall	wood	white/2/wood		intact
LBP-02			Basement Pillar	concrete	white/2/concrete		
LBP-03			Basement North pipe	Metal	Black/2/metal		
LBP-04			Basement Pillar	concrete	white/2/concrete		
LBP-05			Basement East Door	Metal	green/2/metal		
LBP-06			Basement Fire Extingisher <sup>container</sup>	metal	red/2/metal		
LBP-07			Basement Elevator Hallway /East wall	wood	Gray/2/wood		
LBP-08			Basement Central Door by <sup>Elevators</sup>	metal	black/2/metal		
LBP-09			Basement south wall	concrete	white/2/concrete		
LBP-10			Lobby North wall	wood	white/2/wood		
LBP-11			Lobby garage pillar	concrete	white/1/concrete		
LBP-12			Lobby Ext. wall	concrete	white/1/concrete		
LBP-13			Lobby Garage Ext. wall	concrete	white/1/concrete		
LBP-14			Lobby Garage railing	Metal	green/2/metal		
LBP-15			Lobby Garage Entrance Door	Metal	green/2/metal		

Page 1 of 9

# LEAD BASED PAINT BULK SAMPLE DATA SHEET

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Sheet 1 of \_\_\_\_\_

Ninyo & Moore 2020 Challenger Dr., #103 Alameda, CA 94501 Tel: (510) 343-3000 Fax: (510) 343-3001	Project Name: <b>401 Santa Clara</b> Project No.: <b>404724002</b> Project Manager: <b>WPL</b> Site Address:	Sampled By: <b>WPL</b> Sampled By: Sampled By: Date Sampled: <b>6/10/24</b>	Laboratory:
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CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr)	Received By: (sign/print)	Laboratory
<i>Nathan Furbank</i>	Ninyo&Moore	6/10/24		<i>WPL</i>	
				<i>Enka Mivanneln</i>	6/20/24 9:45 AM

Sample ID	Building Number	Room Number	Sample Location	Building Component	Sample Description (Color #/ Layers /Substrate)	Estimated Surface Area	Condition
LBP-16			Lobby lower wall detail	wood	white/2/wood		intact
LBP-17			Lobby Garage Fire Extinguisher	Metal	red/1/metal		
LBP-18			1st Flr Electrical closet container	wood	tan/2/wood		
LBP-19			1st Flr Ext wall	concrete	gray/1/concrete		
LBP-20			1st Flr <sup>south</sup> Apartment wall	concrete	white/2/concrete		
LBP-21			1st Flr <sup>south</sup> Room before elevator	stucco	gray/2/stucco		
LBP-22			1st Flr <sup>south</sup> Apartment Door	wood	blue/2/wood		
LBP-23			1st Flr <sup>south</sup> Apartment Ext. railing	stucco	gray/2/stucco		
LBP-24			1st Flr East Ext. wall	stucco	white/1/stucco		
LBP-25			1st Floor <sup>south</sup> Apartment / <sup>south</sup> wall	concrete	white/2/concrete		
LBP-26			1st Flr balcony railing	concrete	gray/2/concrete		
LBP-27			1st Flr West Rm window sill	wood	burgandy/2/wood		
LBP-28			1st Flr NE Ext. wall	stucco	white/2/stucco		
LBP-29			2nd Flr <sup>south</sup> Apartment wall	wood	white/2/wood		
LBP-30			2nd Flr Electrical closet Door	wood	tan/2/wood		

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# LEAD BASED PAINT BULK SAMPLE DATA SHEET

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Sheet 1 of \_\_\_\_

Ninyo & Moore 2020 Challenger Dr., #103 Alameda, CA 94501 Tel: (510) 343-3000 Fax: (510) 343-3001	Project Name: <i>401 Santa Clara</i> Project No.: <i>404724002</i> Project Manager: <i>WPL</i> Site Address:	Sampled By: <i>WPL</i> Sampled By: Sampled By: Date Sampled: <i>6/10/24</i>	Laboratory:
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CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr)	Received By: (sign/print)	Laboratory
<i>[Signature]</i>	Ninyo & Moore	<i>6/10/24</i>		<i>WPL</i> <i>Miranda</i>	

Sample ID	Building Number	Room Number	Sample Location	Building Component	Sample Description (Color # Layers /Substrate)	Estimated Surface Area	Condition
LBP-31			2nd Flr <del>Door</del> <i>South Apartment</i>	wood	blue /2/ wood		intact
LBP-32			2nd Flr <del>Doorframe</del> <i>South North Apartment</i>	wood	white /2/ wood		
LBP-33			2nd Flr <del>Wall</del> <i>North Apartment</i>	wood	white /2/ wood		
LBP-34			2nd Flr <del>west Apartment Wall</del>	concrete	white /2/ concrete		
LBP-35			2nd Flr <del>South Apartment East Wall</del>	concrete	gray /2/ concrete		
LBP-36			2nd Flr <del>North Apartment</del> <i>detailing</i>	wood	white /2/ wood		
LBP-37			2nd Flr <del>Outside Stairwell wall</del>	concrete	dark gray /1/ concrete		
LBP-38			2nd Flr <del>west Apartment Doorframe</del>	wood	white /2/ wood		
LBP-39			3rd Flr <del>South Apartment concrete wall</del>	concrete	white /2/ concrete		
LBP-40			3rd Flr <del>North Apartment Doorframe</del>	wood	white /2/ wood		
LBP-41			3rd Flr <del>South Apartment Balcony rail</del>	concrete	gray /2/ concrete		
LBP-42			3rd Flr <del>west Apartment lower wall detail</del>	wood	white /2/ wood		
LBP-43			3rd Flr <del>west Apartment wall</del>	wood	white /2/ wood		
LBP-44			3rd Flr <del>west Apartment Doorframe</del>	wood	white /2/ wood		
LBP-45			3rd Flr <del>west Apartment Balcony rail</del>	concrete	gray /2/ concrete		

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LEAD BASED PAINT BULK SAMPLE DATA SHEET

Ninyo & Moore 2020 Challenger Dr., #103 Alameda, CA 94501 Tel: (510) 343-3000 Fax: (510) 343-3001	Project Name: <u>401 Santa Clara</u> Project No.: <u>404724002</u> Project Manager: <u>WPL</u> Site Address:	Sampled By: <u>WPL</u> Sampled By: Sampled By: Date Sampled: <u>6/11/24</u>	Laboratory:
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CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
<u>Nathan Eubanks</u>	Ninyo&Moore	<u>6/11/20</u>		<u>ENICA Miranda</u> 6/20/24 9:45AM	

Sample ID	Building Number	Room Number	Sample Location	Building Component	Sample Description (Color # Layers /Substrate)	Estimated Surface Area	Condition
LBP-46			3rd Flr Hallway Door	wood	tan / 2 / wood		intact
LBP-47			3rd Flr South Ext Wall	concrete	gray / 2 / concrete		
LBP-48			3rd Flr North Apartment Door	wood	blue / 2 / wood		
LBP-49			3rd Flr West Apartment Door	wood	blue / 2 / wood		
LBP-50			4th Flr North Apartment Detail	wood	white / 2 / wood		
LBP-51			4th Flr North Apartment Doorframe	wood	white / 2 / wood		
LBP-52			4th Flr North Apartment wall	concrete	white / 2 / concrete		
LBP-53			4th Flr South Apartment Balcony wall	Stucco	gray / 2 / stucco		
LBP-54			4th Flr West Apartment Balcony wall	Stucco	gray / 2 / Stucco		
LBP-55			4th Flr. west Apartment Door	wood	blue / 2 / wood		
LBP-56			4th Flr North Apartment Door	wood	blue / 2 / wood		
LBP-57			4th Flr Hallway Door	wood	tan / 2 / wood		
LBP-58			4th Ext. Wall South	concrete	gray / 2 / concrete		
LBP-59			4th Flr West Doorframe	wood	white / 2 / wood		
LBP-60			5th Flr Central Wall	Concrete	white / 2 / concrete		

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# LEAD BASED PAINT BULK SAMPLE DATA SHEET

<b>Ninyo &amp; Moore</b> 2020 Challenger Dr., #103 Alameda, CA 94501 Tel: (510) 343-3000 Fax: (510) 343-3001	<b>Project Name:</b> 401 Santa Clara <b>Project No.:</b> 404224002 <b>Project Manager:</b> WPL <b>Site Address:</b>	<b>Sampled By:</b> WPL <b>Sampled By:</b> <b>Sampled By:</b> <b>Date Sampled:</b> 6/11/24	<b>Laboratory:</b>
--	--	--	--------------------

**CHAIN OF CUSTODY INFORMATION:**

Relinquished By: (sign/print)	Company	Date	Time(24 hr)	Received By: (sign/print)	Laboratory
<i>[Signature]</i> Nathan Eubank	Ninyo&Moore	6/11/24		Oliver Miranda 6/20/24 9:45AM	

Sample ID	Building Number	Room Number	Sample Location	Building Component	Sample Description (Color # Layers /Substrate)	Estimated Surface Area	Condition
LBP-61			5th Flr <sup>South</sup> Balcony Railing	concrete	gray/2/concrete		intact
LBP-62			5th Flr west Wall	concrete	white/2/concrete		
LBP-63			5th Flr <sup>South</sup> Ext. Wall	concrete	gray/2/concrete		
LBP-64			5th Flr Balcony railing	concrete	gray/2/concrete		
LBP-65			6th Flr Ext. Railing	concrete	gray/2/concrete		
LBP-66		Page 5 OF 9	6th Flr Ext Pillars	<del>Black</del> Metal	butandy/1/ <del>metal</del>		
LBP-67			6th Flr Ext. Windows	<del>Black</del> Wood	Black/2/metal		
LBP-68			6th Flr Ext. Pillars	Metal	brown/2/wood		
LBP-69			6th Flr <sup>South</sup> Apartment Doorframe	Wood	black/2/metal		
LBP-70			6th Flr Detail lower <sup>South</sup> Apartment wall	Wood	white/2/wood		
LBP-71			6th Flr South Apartment Door wood	wood	white/2/wood		
LBP-72			6th Flr west Apartment Door wood	wood	white/2/wood		
LBP-73			6th Flr Doorframe <sup>to west</sup> Apartment wood	wood	white/2/wood		
LBP-74			6th Flr Kitchen wall	wood	white/2/wood		
LBP-75			6th Flr Main Dining Rm wall	wood	white/2/wood		

OrderID: 092411614

# LEAD BASED PAINT BULK SAMPLE DATA SHEET

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Sheet 1 of \_\_\_\_\_

Ninyo & Moore 2020 Challenger Dr., #103 Alameda, CA 94501 Tel: (510) 343-3000 Fax: (510) 343-3001	Project Name: 401 Santa Clara Project No.: 404724002 Project Manager: WPL Site Address:	Sampled By: WPL Sampled By: Sampled By: Date Sampled: 6/11/24	Laboratory:
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CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr)	Received By: (sign/print)	Laboratory
<i>Nathan Eubank</i>	Ninyo&Moore	6/11/20		<i>ENKA Miranda</i> 6/20/24 9:45AM	

Sample ID	Building Number	Room Number	Sample Location	Building Component	Sample Description (Color # Layers /Substrate)	Estimated Surface Area	Condition
LBP-76			6th Flr Main Dining Rm Wall	wood	white/2/wood		intact
LBP-77			6th Flr Ext Wall	concrete	gray/2/concrete		
LBP-78			6th Flr Ext windows	wood	Brown/2/wood		
LBP-79			6th Flr window <del>to</del> Balcony	stucco	gray/2/stucco		
LBP-80			6th Flr Balcony Railing	stucco	gray/2/stucco		
LBP-81			1st Flr stairwell North wall	concrete	gray/2/concrete		
LBP-82			4th Flr Stairwell Door	Metal	Black/2/metal		
LBP-83			2nd Flr Stairwell railing	Metal	black/2/metal		
LBP-84			1st Flr stairwell Door	Metal	black/2/metal		
LBP-85			Basement stairwell ceiling	Metal	black/2/metal		
LBP-86			Basement stairwell Flr	concrete	gray/1/concrete		
LBP-87			3rd Flr railing <sup>stairwell</sup>	Metal	black/2/metal		
LBP-88			3rd flr Wall <sup>outside stairwell</sup>	concrete	dark gray/1/concrete		
LBP-89			4th Flr wall outside stairwell	concrete	dark gray/1/concrete		
LBP-90			Hallway wall	wood	tan/2/wood		

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### Lead Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.  
200 Route 130 North  
Cinnaminson, NJ 08077

EMSL ANALYTICAL, INC.  
TESTING LABS • PRODUCTS • TRAINING

PHONE: (800) 220-3675

EMAIL: CinnaminsonLeadLab@emsl.com

<b>Customer Information</b> Customer ID: Company Name: <i>Ningo &amp; Moore</i> Contact Name: <i>William Larkin</i> Street Address: City, State, Zip: <i>Alameda</i> Country: Phone: Email(s) for Report: <i>wlarkin@ningoandmoore.com</i>	<b>Billing Information</b> Billing ID: Company Name: Billing Contact: Street Address: City, State, Zip: Country: Phone: Email(s) for Invoice:
---	--

<b>Project Information</b> Project Name/No: <i>401 Santa Clara</i>		Purchase Order: US State where samples collected:	State of Connecticut (CT) must select project location: <input type="checkbox"/> Commercial (Taxable) <input type="checkbox"/> Residential (Non-Taxable)
Sampled By Name: <i>WPL</i>	Sampled By Signature:	No. of Samples in Shipment:	

Turn-Around-Time (TAT)

3 Hour  
  6 Hour  
  24 Hour  
  32 Hour  
  48 Hour  
  72 Hour  
  96 Hour  
  1 Week  
  2 Week

Please call ahead for large projects and/or turnaround times 6 Hours or Less. \*32 Hour TAT available for select tests only, samples must be submitted by 11:30am

MATRIX	METHOD	INSTRUMENT	REPORTING LIMIT	SELECTION
CHIPS <input checked="" type="checkbox"/> % by wt. <input type="checkbox"/> ppm (mg/kg) <input type="checkbox"/> mg/cm <sup>2</sup> <small>*Reporting Limit based on a minimum 0.25g sample weight.                      **Not appropriate for Ceramic Tiles - XRF is recommended</small>	SW 846-7000B	Flame Atomic Absorption	0.008% (80ppm)	<input type="checkbox"/>
	SW 846-6010D*	ICP-OES	0.0004% (4ppm)	<input type="checkbox"/>
	NIOSH 7082	Flame Atomic Absorption	4µg/filter	<input type="checkbox"/>
AIR	NIOSH 7303M	ICP-OES	1.0µg/filter	<input type="checkbox"/>
	NIOSH 7303M	ICP-MS	0.05µg/filter	<input type="checkbox"/>
WIPE <input type="checkbox"/> ASTM <input type="checkbox"/> NON-ASTM <small>*If no box is checked, non-ASTM Wipe is assumed</small>	SW 846-7000B	Flame Atomic Absorption	10µg/wipe	<input type="checkbox"/>
	SW 846-6010D*	ICP-OES	1.0µg/wipe	<input type="checkbox"/>
TCLP	SW 846-1311 / 7000B / SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
	SW 846-1311 / SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)	<input type="checkbox"/>
SPLP	SW 846-1312 / 7000B / SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
	SW 846-1312 / SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)	<input type="checkbox"/>
TTL	22 CCR App. II, 7000B	Flame Atomic Absorption	40mg/kg (ppm)	<input checked="" type="checkbox"/>
	22 CCR App. II, SW 846-6010D*	ICP-OES	2mg/kg (ppm)	<input type="checkbox"/>
STLC	22 CCR App. II, 7000B	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
	22 CCR App. II, SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)	<input type="checkbox"/>
Soil	SW 846-7000B	Flame Atomic Absorption	40mg/kg (ppm)	<input type="checkbox"/>
	SW 846-6010D*	ICP-OES	2mg/kg (ppm)	<input type="checkbox"/>
	SM 3111B / SW 846-7000B	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
Wastewater Unpreserved <input type="checkbox"/> Preserved with HNO3 <input type="checkbox"/> PH<2	EPA 200.7	ICP-OES	0.020 mg/L (ppm)	<input type="checkbox"/>
	EPA 200.5	ICP-OES	0.003 mg/L (ppm)	<input type="checkbox"/>
Drinking Water Unpreserved <input type="checkbox"/> Preserved with HNO3 <input type="checkbox"/> PH<2	EPA 200.8	ICP-MS	0.001 mg/L (ppm)	<input type="checkbox"/>
	40 CFR Part 50	ICP-OES	12 µg/filter	<input type="checkbox"/>
Other:				<input type="checkbox"/>

Sample Number	Sample Location	Volume / Area	Date / Time Sampled
<i>C-01</i>	<i>1st Flr South Apartment</i>	<i>12"x12" Brown Ceramic Floor tile</i>	<i>6/11</i>
<i>C-02</i>	<i>2nd Flr North Apartment</i>		
<i>C-03</i>	<i>3rd Flr West Apartment</i>		
<i>C-04</i>	<i>1st Flr South Apartment Kitchen</i>	<i>4"x4" Gray Ceramic wall tile</i>	
<i>C-05</i>	<i>2nd Flr North Apartment Kitchen</i>		

Method of Shipment:		Sample Condition Upon Receipt:	
Relinquished by: <i>Nathan Eubanks</i>	Date/Time: <i>6/20</i>	Received by: <i>EM Enika Mirvander wli</i>	Date/Time: <i>6/20/24 9:45am</i>
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - COC-25 Lead R16 04/04/2024

\*6010C Available Upon Request

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

Page 1 of 2





# EMSL Analytical, Inc

464 McCormick Street, San Leandro, CA 94577

Phone/Fax: (510) 895-3675 / (510) 895-3680

<http://www.EMSL.com>

[sanleandrolab@emsl.com](mailto:sanleandrolab@emsl.com)

EMSL Order: 092411614

CustomerID: NOMO22

CustomerPO:

ProjectID:

Attn: **William Larkin  
Ninyo & Moore  
2020 Challenger Drive  
Suite 103  
Alameda, CA 94501**

Phone: (510) 343-3000  
Fax: (510) 633-5646  
Received: 6/20/2024 09:45 AM  
Collected: 6/10/2024

Project: **401 SANTA CLARA; 404224002**

## Test Report: Total Threshold Limit Concentration (7000B)

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Weight (g)</i>	<i>Lead Concentration</i>
C-01 Site: 1ST FLR SOUTH APARTMENT BROWN CERAMIC FLOOR TILE	092411614-0100	6/10/2024	6/21/2024	0.5064 g	<40 mg/Kg
C-02 Site: 2ND FLR NORTH APARTMENT BROWN CERAMIC FLOOR TILE	092411614-0101	6/10/2024	6/21/2024	0.5128 g	<40 mg/Kg
C-03 Site: 3RD FLR WEST APARTMENT BROWN CERAMIC FLOOR TILE	092411614-0102	6/10/2024	6/21/2024	0.5154 g	<40 mg/Kg
C-04 Site: 1ST FLR SOUTH APARTMENT KITCHEN GRAY CERAMIC WALL TILE	092411614-0103	6/10/2024	6/21/2024	0.516 g	<40 mg/Kg
C-05 Site: 2ND FLR NORTH APARTMENT KITCHEN GRAY CERAMIC WALL TILE	092411614-0104	6/10/2024	6/21/2024	0.5091 g	<40 mg/Kg
C-06 Site: 3RD FLR NW APARTMENT KITCHEN GRAY CERAMIC WALL TILE	092411614-0105	6/10/2024	6/21/2024	0.5069 g	<40 mg/Kg
C-07 Site: 1ST FLR SOUTH APARTMENT TOILET CERAMIC	092411614-0106	6/10/2024	6/21/2024	0.5037 g	<40 mg/Kg
C-08 Site: 2ND FLR NORTH APARTMENT TOILET CERAMIC	092411614-0107	6/10/2024	6/21/2024	0.5056 g	<40 mg/Kg
C-09 Site: 3RD FLR NW APARTMENT TOILET CERAMIC	092411614-0108	6/10/2024	6/21/2024	0.5049 g	<40 mg/Kg

Oscar Merino, Laboratory Manager  
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. Reporting limit is 40 mg/kg based on a 0.5 gram sample weight. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. Definitions of modifications are available upon request.

Samples analyzed by EMSL Analytical, Inc San Leandro, CA Method SW 846 7000B replaces EPA 7420 for lead analysis and is an equivalent method. CA ELAP 1628, AIHA LAP, LLC-ELLAP Accredited #101748

Report Amended: 06/21/2024 16:35:25 Replaces the Initial Report 06/21/2024 16:30:56. Reason Code: Data Entry-Change to Appearance



**Lead Chain of Custody**  
EMSL Order Number / Lab Use Only

LIVON ANALYTICAL, INC.  
200 Route 130 North  
Cinnaminson, NJ 08077

**EMSL ANALYTICAL, INC.**  
TESTING LABS • PRODUCTS • TRAINING

PHONE: (800) 220-3675

EMAIL: CinnaminsonLeadLab@emsl.com

Customer Information	Customer ID:	Billing ID:
	Company Name: <i>Ningo &amp; Moore</i>	Company Name:
	Contact Name: <i>William Larkin</i>	Billing Contact:
	Street Address:	Street Address:
	City, State, Zip: <i>Alameda</i> Country:	City, State, Zip: Country:
	Phone:	Phone:
Email(s) for Report: <i>wlarkin@ningoandmoore.com</i>	Email(s) for Invoice:	

Project Information	
Project Name/No: <i>401 Santa Clara</i>	Purchase Order:
EMSL LMS Project ID: (If applicable, EMSL will provide)	US State where samples collected: <input type="checkbox"/> Connecticut (CT) must select project location: <input type="checkbox"/> Commercial (Taxable) <input type="checkbox"/> Residential (Non-Taxable)
Sampled By Name: <i>WPL</i>	Sampled By Signature: <i>[Signature]</i> No. of Samples in Shipment:

Turn-Around-Time (TAT)

3 Hour  
  6 Hour  
  24 Hour  
  32 Hour  
  48 Hour  
  72 Hour  
  86 Hour  
  1 Week  
  2 Week

Please call ahead for large projects and/or turnaround times 6 Hours or Less. \*32 Hour TAT available for select tests only, samples must be submitted by 11:30am

MATRIX	METHOD	INSTRUMENT	REPORTING LIMIT	SELECTION
CHIPS <input checked="" type="checkbox"/> by wt. <input type="checkbox"/> ppm (mg/kg) <input type="checkbox"/> mg/cm <sup>2</sup>	SW 846-7000B	Flame Atomic Absorption	0.008% (80ppm)	<input type="checkbox"/>
*Reporting Limit based on a minimum 0.25g sample weight.	SW 846-6010D*	ICP-OES	0.0004% (4ppm)	<input type="checkbox"/>
**Not appropriate for Ceramic Tiles - XRF is recommended	NIOSH 7082	Flame Atomic Absorption	4µg/filter	<input type="checkbox"/>
AIR	NIOSH 7303M	ICP-OES	1.0µg/filter	<input type="checkbox"/>
	NIOSH 7303M	ICP-MS	0.05µg/filter	<input type="checkbox"/>
WIPE <input type="checkbox"/> ASTM <input type="checkbox"/> NON-ASTM	SW 846-7000B	Flame Atomic Absorption	10µg/wipe	<input type="checkbox"/>
*If no box is checked, non-ASTM Wipe is assumed	SW 846-6010D*	ICP-OES	1.0µg/wipe	<input type="checkbox"/>
TCLP	SW 846-1311 / 7000B / SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
	SW 846-1311 / SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)	<input type="checkbox"/>
SPLP	SW 846-1312 / 7000B / SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
	SW 846-1312 / SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)	<input checked="" type="checkbox"/>
TTLC	22 CCR App. II, 7000B	Flame Atomic Absorption	40mg/kg (ppm)	<input type="checkbox"/>
	22 CCR App. II, SW 846-6010D*	ICP-OES	2mg/kg (ppm)	<input type="checkbox"/>
STLC	22 CCR App. II, 7000B	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
	22 CCR App. II, SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)	<input type="checkbox"/>
Soil	SW 846-7000B	Flame Atomic Absorption	40mg/kg (ppm)	<input type="checkbox"/>
	SW 846-6010D*	ICP-OES	2mg/kg (ppm)	<input type="checkbox"/>
Wastewater	SM 3111B / SW 846-7000B	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
Unpreserved <input type="checkbox"/>	EPA 200.7	ICP-OES	0.020 mg/L (ppm)	<input type="checkbox"/>
Preserved with HNO <sub>3</sub> <input type="checkbox"/> PH<2	EPA 200.5	ICP-OES	0.003 mg/L (ppm)	<input type="checkbox"/>
Drinking Water	EPA 200.8	ICP-MS	0.001 mg/L (ppm)	<input type="checkbox"/>
Unpreserved <input type="checkbox"/>	40 CFR Part 50	ICP-OES	12 µg/filter	<input type="checkbox"/>
Preserved with HNO <sub>3</sub> <input type="checkbox"/> PH<2	Other:			<input type="checkbox"/>

Sample Number	Sample Location	Volume / Area	Date / Time Sampled
<i>C-01</i>	<i>1st Flr South Apartment</i>	<i>12" x 12" Brown Ceramic Floor tile</i>	<i>6/11</i>
<i>C-02</i>	<i>2nd Flr North Apartment</i>		
<i>C-03</i>	<i>3rd Flr West Apartment</i>		
<i>C-04</i>	<i>1st Flr South Apartment Kitchen</i>	<i>4" x 4" Gray Ceramic wall tile</i>	
<i>C-05</i>	<i>2nd Flr North Apartment Kitchen</i>		

Method of Shipment:	Sample Condition Upon Receipt:
Relinquished by: <i>Nathan Eubanks</i>	Received by: <i>EM Enka Mirvander wll</i>
Date/Time: <i>6/20</i>	Date/Time: <i>6/20/24 9:45am</i>
Relinquished by:	Received by:
Date/Time:	Date/Time:

Controlled Document - COC-26 Lead R116 6/19/2024

\*6010C Available Upon Request

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.





# APPENDIX C

## CDPH Form 5881 – Lead Hazard Evaluation Report

## LEAD HAZARD EVALUATION REPORT

**Section 1 – Date of Lead Hazard Evaluation** 6/10/2024

**Section 2 – Type of Lead Hazard Evaluation (Check one box only)**

Lead Inspection   
  Risk assessment   
  Clearance Inspection   
  Other (specify) Chip Sampling

**Section 3 – Structure Where Lead Hazard Evaluation Was Conducted**

Address [number, street, apartment (if applicable)]		City	County	Zip Code
<u>401 Santa Clara Avenue</u>		<u>Oakland</u>	<u>Alameda</u>	<u>94610</u>
Construction date (year) of structure	Type of structure		Children living in structure?	
<u>1960s</u>	<input type="checkbox"/> Multi-unit building <input type="checkbox"/> School or daycare <input type="checkbox"/> Single family dwelling <input checked="" type="checkbox"/> Other <u>Residential Bldg</u>		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Don't Know	

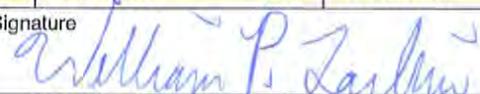
**Section 4 – Owner of Structure (if business/agency, list contact person)**

Name		Telephone number	
<u>Oakland Housing Authority/Paige Peltzer</u>		<u>510/587-2147</u>	
Address [number, street, apartment (if applicable)]		City	State
<u>1619 Harrison Street</u>		<u>Oakland</u>	<u>California</u>
			Zip Code
			<u>94612</u>

**Section 5 – Results of Lead Hazard Evaluation (check all that apply)**

No lead-based paint detected   
  Intact lead-based paint detected   
  Deteriorated lead-based paint detected  
 No lead hazards detected   
  Lead-contaminated dust found   
  Lead-contaminated soil found   
  Other \_\_\_\_\_

**Section 6 – Individual Conducting Lead Hazard Evaluation**

Name		Telephone number	
<u>William P. Larkin</u>		<u>510/343-3000</u>	
Address [number, street, apartment (if applicable)]		City	State
<u>1301 Marina Village Parkway, Suite 110</u>		<u>Alameda</u>	<u>California</u>
			Zip Code
			<u>94501</u>
CDPH certification number	Signature	Date	
<u>1284/1285</u>		<u>6/20/24</u>	

Name and CDPH certification number of any other individuals conducting sampling or testing (if applicable)

N/A

**Section 7 – Attachments**

- A. A foundation diagram or sketch of the structure indicating the specific locations of each lead hazard or presence of lead-based paint;
- B. Each testing method, device, and sampling procedure used;
- C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

First copy and attachments retained by inspector  
 Second copy and attachments retained by owner

Third copy only (no attachments) mailed or faxed to:  
 California Department of Public Health  
 Childhood Lead Poisoning Prevention Branch Reports  
 850 Marina Bay Parkway, Building P, Third Floor  
 Richmond, CA 94804-6403  
 Fax: (510) 620-5656



1301 Marina Village Parkway, Suite 110 | Alameda, California 94501 | p. 510.343.3000

SAN DIEGO | IRVINE | LOS ANGELES | FONTANA | OAKLAND | SAN FRANCISCO | SACRAMENTO  
SAN JOSE | PHOENIX | TUCSON | PRESCOTT | LAS VEGAS | DENVER | BROOMFIELD | HOUSTON

[www.ninyoandmoore.com](http://www.ninyoandmoore.com)

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**APPENDIX G**  
**RADON TEST REPORT**

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## Interim Radon Test Report

**Date:** May 30, 2024

**Client:** Orion Environmental  
2955 Redondo Avenue  
Long Beach, CA. 90806

**Site:** Grand Lake Garden Apartments  
401 Santa Clara  
Oakland, CA. 94610

**KELLCO Job #** 2405-03

**Inspector:** Bonnie Lee Kellogg NRRP #102253 RT  
Derrick Quach NRRP 10458T RT

**Analytical Lab:** Air Chek - NRSB: NELAP: #11441  
1936 Butler Bridge Rd  
Mill River, NC. 28759

**Device Information:** Air Chek Pro Chek Real Estate Radon Test kit, using activated charcoal to absorb radon gas in the air. These are sometimes referred to as “CAD” (Charcoal Absorption Detector) monitors.

**Protocol Used:** Testing followed the ANSI/AARST Standard MA-MFLB 2023 “Protocol for Conducting Measurements of Radon and Radon Decay Products in Multifamily, School, Commercial and Mixed-Use Buildings.”

**Notes:** The protocol was modified as described below due to the condition of the buildings at the time of the testing

### Background

Grand Lake Garden Apartments was previously damaged by a fire on the 5<sup>th</sup> floor, resulting in water damage down to the first floor in some areas. At the time of the radon testing, renovations were ongoing. In some locations, damaged drywall had been removed and not yet replaced, creating difficulty in establishing true “close house conditions.” In each location where samples were deployed, it was possible to establish “close house condition” for that portion of the unit (for example, a sample may have been deployed in a closed bedroom, but the other rooms of the unit were missing drywall and did not meet closed house conditions). Because of these conditions, the testing was considered an interim radon test.

## Executive Summary

Although radon was not detected at or above the EPA recommended remediation level of 4.0 pCi/L, in Building B radon was detected as high as 3 pCi/L, indicating the presence of radon within the structure. The basement samples (office and break room) were voided, having the doors left open during the testing period. Since these are areas where people are known to spend time and since the potential for radon has been determined, timely re-testing of these areas is recommended.

Radon below 2 pC/L was detected in the Building A community room and Building B rooms 214, 217, 224 & 223.

## Method

Short Term Activated Charcoal (AC) radon test kits, provided and analyzed by Air Chek, were deployed in each ground floor residential and office location, each unit above a garage and 10% of the units of floors above, with exceptions as noted. If a targeted unit did not meet the “closed house conditions,” it was omitted from the sampling. Because the fifth-floor units had interior walls removed (due to water damage), it was omitted from this round of testing, as was the 6<sup>th</sup> floor.

As noted above, each tested area (room) was in “closed house conditions” with the doors and windows closed for the duration of the testing period, except for normal entry and exit.

A total of 30 detectors were deployed including 2 duplicate and 2 blanks. They were placed between 20 and 30 inches above the floor, away from walls and drafts. Signs advising of the testing and the requirements for doors to remain closed were placed on each door during the testing period.

Tests that last from 2-90 days are considered “short term.”

No HVAC systems were in use.

Except as noted with “void” samples, no irregularities were noted when the monitors were retrieved ~71 hours later.

## Sampling Results

The results of the radon testing are as follows. Note that these results include 2 duplicate samples 2 and 2 blanks. Green highlights indicate levels above 2 pC/L, the EPA recommended action level. Blue highlights indicated detectible radon below 2 pC/L.

GRAND LAKE GARDEN APARTMENTS RADON TESTING MAY 2024					
DETECTOR	DUP	UNIT	NOTES	RADON pCi/L	HOURS
11739179		Bldg A 1st floor office	front desk	< 0.3	70
11739180		Bldg A 1st floor office	open space	< 0.3	71

**GRAND LAKE GARDEN APARTMENTS RADON TESTING MAY 2024**

<b>DETECTOR</b>	<b>DUP</b>	<b>UNIT</b>	<b>NOTES</b>	<b>RADON pCi/L</b>	<b>HOURS</b>
11739181		Bldg A Room 107	Liv/Kit	< 0.3	71
11739182		Bldg A Room 107	Bedroom	< 0.3	71
11739183		Bldg A Room 104	M Bedroom	< 0.3	71
11739184		Bldg A Room 103	Bedroom	< 0.3	71
11739185		Bldg A Room 101	Bedroom	< 0.3	72
11739186		Bldg A Room 102	Liv/Kit	< 0.3	72
11739187		Bldg A Room 105	Liv/Kit	< 0.3	72
11739188	D	Bldg B Room 212	Liv/Kit	3	72
11739189	D	Bldg B Room 212	Liv/Kit	2.9	72
11739190		Bldg B Room 214	Bedroom	1.5	72
11739191		Bldg B Room 217	Liv/Kit	0.8	72
11739192		Bldg B Room 224	Bedroom	0.7	72
11739193		Bldg B Room 223	Bedroom	0.6	72
11739194		Junction Bldg A/B	Community Room	< 0.3	72
11739195		Bldg A 2nd Floor	Corridor	< 0.3	72
11739196		Bldg A 3rd Floor	307 Corridor	< 0.3	72
11739197		Bldg B 3rd Floor	317 Corridor	< 0.3	72
11739198		Bldg B 4th Floor	Room 419	< 0.3	72
11739199	D	Bldg A 4th Floor	Ouside 405 corridor	< 0.3	72
11739200	D	Bldg A 4th Floor	Ouside 405 corridor	< 0.3	72
7420431		Bldg A 1st Floor	Community Room	0.8	72
7420432		Basement office	VOID - door was left open	VOID	
7420433		Basement break room	VOID - door was left open	VOID	
7420434		Lobby	Lounge	< 0.3	72
7420435	D	Lobby	Library	< 0.3	72

GRAND LAKE GARDEN APARTMENTS RADON TESTING MAY 2024					
DETECTOR	DUP	UNIT	NOTES	RADON pCi/L	HOURS
7420436	D	Lobby	Library	< 0.3	72
7420437		Blank	Blank	< 0.3	72
7420438		Blank	Blank	< 0.3	72

The following units had detectible radon. Green highlights indicate levels above 2 pCi/L, the EPA recommended action level.

RADON DETECTED IN INTERIM TESTING AT GRAND LAKE GARDEN APARTMENTS - MAY 2024					
DETECTOR	DUP	UNIT	NOTES	RADON pCi/L	HOURS
11739193		Bldg B Room 223	Bedroom	0.6	72
11739192		Bldg B Room 224	Bedroom	0.7	72
11739191		Bldg B Room 217	Liv/Kit	0.8	72
7420431		Bldg A 1st Floor	Community Room	0.8	72
11739190		Bldg B Room 214	Bedroom	1.5	72
11739189	D	Bldg B Room 212	Liv/Kit	2.9	72
11739188	D	Bldg B Room 212	Liv/Kit	3	72

Void samples occur when the retrieval inspector notices an irregularity in the conditions of the unit being tested or the sample itself. The following samples from this inspection were void:

VOID Samples – Grand Lake Garden Apartments Interim Radon Inspection May 2024		
DETECTOR	UNIT	NOTES
7420432	Basement office	VOID - door was left open
7420433	Basement break room	VOID - door was left open

## Radon Health Risk Information

Radon is the second leading cause of lung cancer, after smoking. The concentration of radon in a home, school or office environment is measured in picoCuries per liter of air (pCi/L). The U.S. Environmental Protection Agency (EPA) and the Surgeon General strongly recommend taking further action when the radon test results are 4.0 pCi/L or greater.

Radon levels less than 4.0 pCi/L still pose risk and, in many cases, may be reduced. According to the EPA it is difficult to reduce the radon below 2.0 pCi/L.

The national average indoor radon level is about 1.3 pCi/L. The higher a building's radon level, the greater the health risk to occupants.

**Smokers and former smokers are at especially high risk.**

## Interpreting Test Results

Short term test results above 4 pCi/L indicate occupants may be exposed to radon concentrations that meet or exceed EPA's recommended remediation level. The EPA recommends remediation for radon levels at or above 4 pCi/L.

If your radon level is 4.0 pCi/L, you can check the CDPH radon website for information, including a list of EPA or California approved radon contractors who can fix or can help you develop a plan for fixing the radon problem: <https://www.cdph.ca.gov/Programs/CEH/DRSEM/Pages/EMB/Radon/Radon.aspx>

You may call the **Radon Fix-It Line at 800-644-6999** between noon and 8:00 p.m., M-F, EST/EDT for information and assistance. This toll-free line is operated by EPA and Kansas State University.

The Environmental Protection Agency (EPA) recommends acting even if radon levels are below 4 picocuries per liter (pCi/L). Specifically, the EPA suggests the following for levels detected below 4 pCi/L:

1. **Between 2 and 4 pCi/L:** Consider fixing the units. Although this level is below the 4 pCi/L action level, the EPA suggests considering mitigation because any radon exposure carries some risk, and lowering radon levels can further reduce lung cancer risk.
2. **Below 2 pCi/L:** No immediate action is necessary. However, it is advisable to retest the radon levels periodically to ensure they remain low, as levels can fluctuate.

Additionally, it is recommended to:

- Test your building every 2 years or after any significant renovations or changes to your building's structure, which could alter radon levels
- Test in different seasons, as radon levels can vary with weather conditions and ventilation patterns.

Taking these steps helps ensure that radon levels remain low and minimizes the risk of long-term health issues associated with radon exposure

The testing performed followed that prescribed for multi-family housing, modified for the prevailing conditions. For a more accurate evaluation consider installing “long term” detectors for 91-180 days. Long term detectors do not require closed house conditions and are not affected by weather conditions.

Radon testing should also be conducted when any of the following circumstances occur:

- A new addition is constructed or alterations for building reconfiguration or rehabilitation occur;
- Ground contact area(s) not previously tested are occupied, or a building is newly occupied;
- Heating or cooling systems are significantly altered, resulting in changes to air pressures or pressure relationships;
- Ventilation is significantly altered by extensive weatherization, changes to mechanical systems or comparable procedures
- There are significant openings to soil occur due to:
  - Groundwater or slab surface water control systems that are altered or added (e.g., sumps, perimeter drain tile, shower/tub retrofits, etc.) or
  - Natural settlement causing major cracks to develop;
  - Earthquakes or construction blasting, fracking or formation of sink holes nearby; or
  - A mitigation system is altered, modified or repaired.

Should testing indicate concentrations that meet or exceed the action level, conduct evaluations, corrections and further testing until radon concentrations have been mitigated to below the action level.

### QA/QC

Quality Control/Quality Assurance measures to ensure the integrity of the sample results. The three means of assurance are Blank Samples, Duplicate Samples and Spike Samples.

#### Duplicate Samples

DUPLICATE SAMPLES FOR GLENVIEW GARDEN APTS – MAY 2024					
DETECTOR	DUP	UNIT	NOTES	RADON pCi/L	HOURS
7420435	D	Lobby	Library	< 0.3	72
7420436	D	Lobby	Library	< 0.3	72
11739188	D	Bldg B Room 212	Liv/Kit	3	72
11739189	D	Bldg B Room 212	Liv/Kit	2.9	72
11739199	D	Bldg A 4th Floor	Outside 405 corridor	< 0.3	72
11739200	D	Bldg A 4th Floor	Outside 405 corridor	< 0.3	72

The duplicate samples above show consistent analysis.

### Blank Samples

The following blank samples were submitted to the laboratory. If blank samples indicate radon detected, the reason for exposure must be investigated. The results of blank testing for this project are:

BLANKS FOR GRAND LAKE GARDEN APARTMENTS		
DETECTOR	NOTE	Radon pC/L
7420437	Blank	< 0.3
7420438	Blank	< 0.3

The blank samples for this project do not indicate any irregularities in storage, handling or laboratory analysis.

### Spike Samples

Four test kits were submitted to Bowser Morner testing laboratories, where the samples were subjected to a known amount of radon. The samples were then submitted to Air Chek for analysis as if they were field samples:

Radon Spike Report      4/15/24  
 Spike Lab                      Bowser Morner  
 Spike Lab Job #            214505  
 Analytical Lab Report    Air Chek

SPIKE SAMPLE RELATIVE PERCENT DIFFERENCE				
Sample Numbers	7390613	7390614	7390615	7390616
Spiked Radon (TV)	52.5	52.5	52.5	52.5
Lab Radon (MV)	54.8	57.8	57.1	58.4
Difference	2.3	5.3	4.6	5.9
RPD	0.4%	1.0%	0.8%	1.1%
RPD Acceptable Level %	5.3	5.3	5.3	5.3
RPD Questionable but OK %	10.5	10.5	10.5	10.5

<b>SPIKE SAMPLE RELATIVE PERCENT DIFFERENCE</b>				
<b>Sample Numbers</b>	7390613	7390614	7390615	7390616
RPD In control / Allowable %	15.8	15.8	15.8	15.8
Spike Status	<b>Passed</b>	<b>Passed</b>	<b>Passed</b>	<b>Passed</b>

The spike samples for do not indicate any irregularities in laboratory analysis.

Thank you for using KELLCO.

Sincerely,

KELLCO

Bonnie Lee Kellogg, NRRP #102253 RT

Attachments:

- Chain of Custody
- AirChek Results
- Photos taken at the site during deployment

Kit #	pCi/L	Hours	Started	Ended	Analyzed	NOTES	MST%	°F
7420431	0.8 ± 0.3	70	2024-05-17 @ 11:00 am	2024-05-20 @ 9:00 am	2024-05-22		5.2%	70
7420434	< 0.3	71	2024-05-17 @ 11:00 am	2024-05-20 @ 10:00 am	2024-05-22		4.4%	70
7420435	< 0.3	71	2024-05-17 @ 11:00 am	2024-05-20 @ 10:00 am	2024-05-22		5.2%	70
7420436	< 0.3	71	2024-05-17 @ 11:00 am	2024-05-20 @ 10:00 am	2024-05-22		3.6%	70
7420437	< 0.3	71	2024-05-17 @ 11:00 am	2024-05-20 @ 10:00 am	2024-05-22		2.9%	70
7420438	< 0.3	71	2024-05-17 @ 11:00 am	2024-05-20 @ 10:00 am	2024-05-22		2.0%	70
11739179	< 0.3	72	2024-05-17 @ 9:00 am	2024-05-20 @ 9:00 am	2024-05-22		4.3%	70
11739180	< 0.3	72	2024-05-17 @ 9:00 am	2024-05-20 @ 9:00 am	2024-05-22		5.9%	70
11739181	< 0.3	72	2024-05-17 @ 9:00 am	2024-05-20 @ 9:00 am	2024-05-22		5.1%	70
11739182	< 0.3	72	2024-05-17 @ 9:00 am	2024-05-20 @ 9:00 am	2024-05-22		5.1%	70
11739183	< 0.3	72	2024-05-17 @ 9:00 am	2024-05-20 @ 9:00 am	2024-05-22		5.1%	70
11739184	< 0.3	72	2024-05-17 @ 9:00 am	2024-05-20 @ 9:00 am	2024-05-22		5.1%	70
11739185	< 0.3	72	2024-05-17 @ 9:00 am	2024-05-20 @ 9:00 am	2024-05-22		5.9%	70
11739186	< 0.3	72	2024-05-17 @ 9:00 am	2024-05-20 @ 9:00 am	2024-05-22		5.1%	70
11739187	< 0.3	72	2024-05-17 @ 9:00 am	2024-05-20 @ 9:00 am	2024-05-22		5.9%	70
11739188	3.0 ± 0.3	72	2024-05-17 @ 10:00 am	2024-05-20 @ 10:00 am	2024-05-22		5.8%	70
11739189	2.9 ± 0.3	72	2024-05-17 @ 10:00 am	2024-05-20 @ 10:00 am	2024-05-22		5.9%	70
11739190	1.5 ± 0.3	72	2024-05-17 @ 10:00 am	2024-05-20 @ 10:00 am	2024-05-22		7.3%	70
11739191	0.8 ± 0.3	72	2024-05-17 @ 10:00 am	2024-05-20 @ 10:00 am	2024-05-22		5.1%	70
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11739200	< 0.3	72	2024-05-17 @ 10:00 am	2024-05-20 @ 10:00 am	2024-05-22		5.1%	70

**KELLCO RADON DEPLOYMENT CHAIN OF CUSTODY**

JOB #

2405-03

CLIENT: Orion Environmental

DETECTOR: Airchek Rac

OBSITE NAME Grandview Garden Apartments

RELEASED BY \_\_\_\_\_

ADDRESS 401 Santa Clara

DATE/TIME \_\_\_\_\_

ADDRESS Oakland, CA. 94610

ZIPCODE 94610

RECEIVED BY \_\_\_\_\_

DATE/TIME \_\_\_\_\_

INSPECTOR		B KELLOGG NRRP #102253 RT		D QUACH 10458TRT			
DETECTOR	D	UNIT	NOTES	D-date	D-time	R-date	R-time
11739179		1st floor office	Front desk	5/17/2024	0900	5/20/24	0900
11739180		office	open space				
11739181		Room 107	Kitch / Lv				
11739182		Room 108	Bedroom				
11739183		Room 104	M- Bedroom				
11739184		Room 103	Bedroom				
11739185		Room 101	Bedroom				
11739186		Room 102	Kitch / Lv				
11739187		Room 105					
11739188	D	Room 212	/	5/17/2024	1000		
11739189	D	Room 212					
11739190		Room 214	Bedroom				
11739191		Room 217	Kitch / Lv				
11739192		Room 224	Bedroom	5/17/2024	1000	5/20/24	0900

11739193		Room 223	Bedroom	5/17/24	1000	5/20/24	1000
11739194		Junction Bldg A/B	Community Rm				
11739195		Bldg A 2nd floor	305/307 Corridor				
11739196		3rd floor	305/307 Corridor				
11739197		Bldg B 3rd floor	318 Corridor				
11739198		4th floor	Room 419				
11739199	D	Bldg A 4th	bet 405 Corridor				
11739200	D	Bldg A 1	bet. 405 Corridor		1000		
7420431		1st floor	Community Room		1100	5/20/24	0900
7420432	Void	Basement	door was open office				1000
7420433	Void		door was open Break room				
7420434		Lobby	Lounge				
7420435	D		Library				
7420436	D		Library	5/17/24	1100	5/20/24	1000
7420437		401 Santa Clara	Apartment				
7420438		401 Santa Clara	Apartment				
7420439							
7420440							
7420441							
7420442							
7420443							
7420444							
7420445							
7420446							
7420447							



# Bonnie Lee Kellogg



Has satisfactorily fulfilled the requirements set forth by the National Radon Proficiency Program and is therefore certified as a:

## Radon Measurement Professional with Standard Services

NRPP ID 102253-RMP

Issued On: 2023-10-26 Expires: 2025-10-31

Valid for specific activities or measurement devices, which can be verified with NRPP. State and local agencies may have additional requirements.



In witness Whereof,  
I have subscribed my name as a  
Representative of NRPP

*Christina Johnson*

Christina Johnson  
NRPP Credentialing Manager

**National Radon Proficiency Program**



**Derrick Quach**  
**Radon Measurement Professional**

**ID Number: #104582-RMP Valid 2024-01-02 - 2026-01-31**

To confirm validity of this certification call 828-348-0185. Verification of adherence to state and local regulations is advised. See reverse for specific certification designations.

**Derrick Quach # 104582-RMP**

This individual is certified for the use of passive measurement devices to be analyzed by NRPP certified Analytical Laboratories and also certified to provide Analytical Services using the following device(s):

**AC-8200 Air Chek Foil Bag**  
**AT-8207 RSSI AT-101**

The radon office for the state in which this person resides may be contacted for information on radon and local requirements. For additional information contact NRPP at 828-348-0185, or visit the NRPP web-site at [nrpp.info](http://nrpp.info)  
**State Radon Program Contact Number: (916) 650-6884**







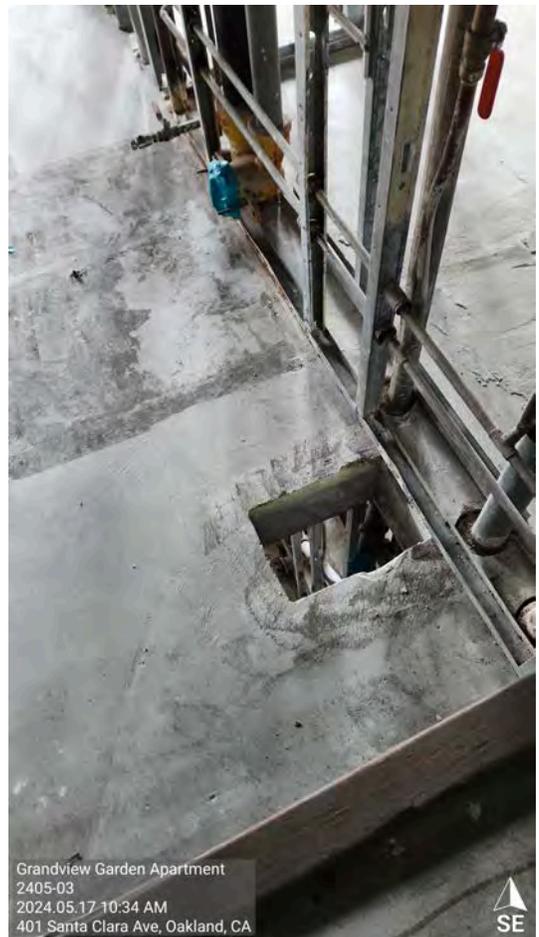
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401 Santa Clara Ave, Oakland, CA



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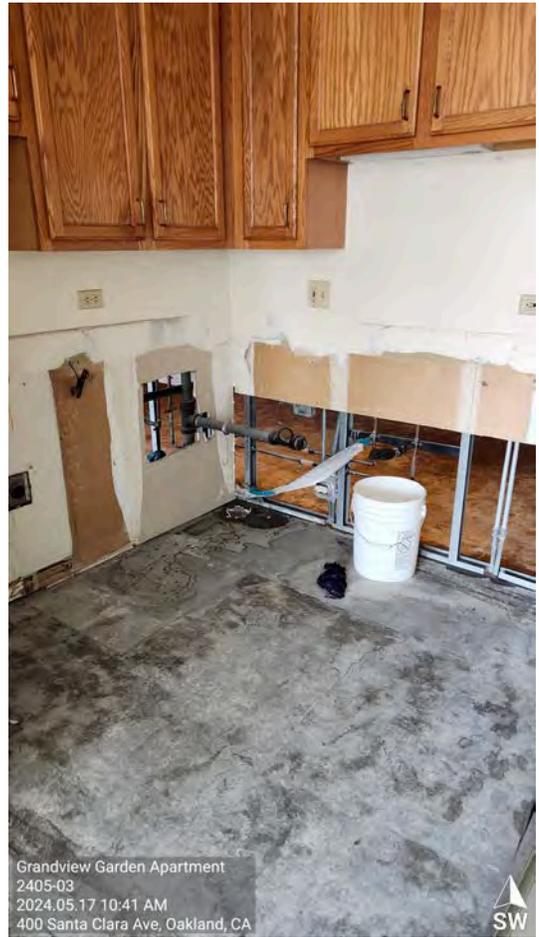








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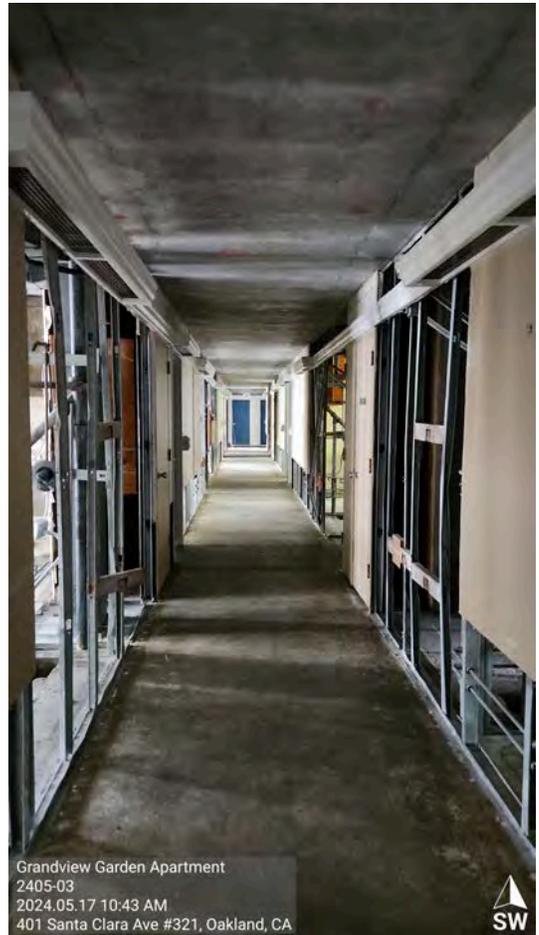
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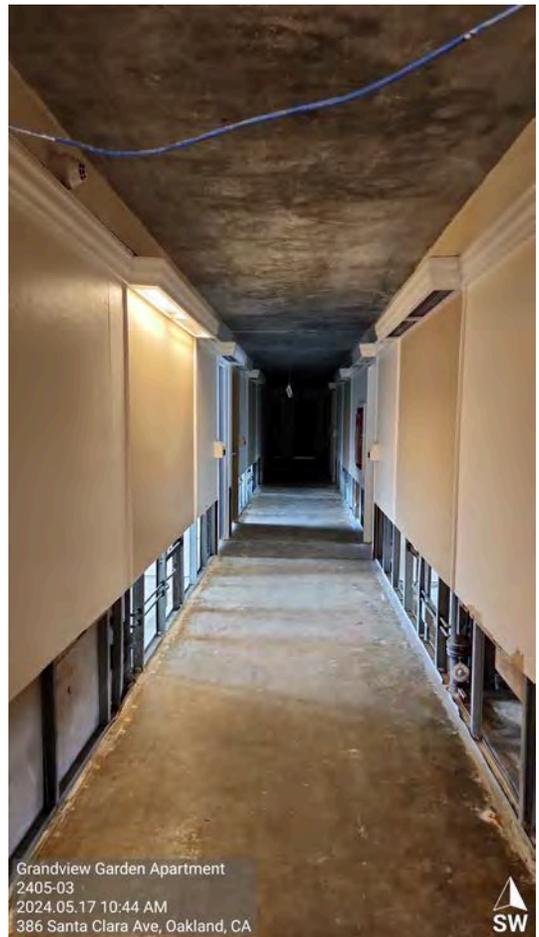


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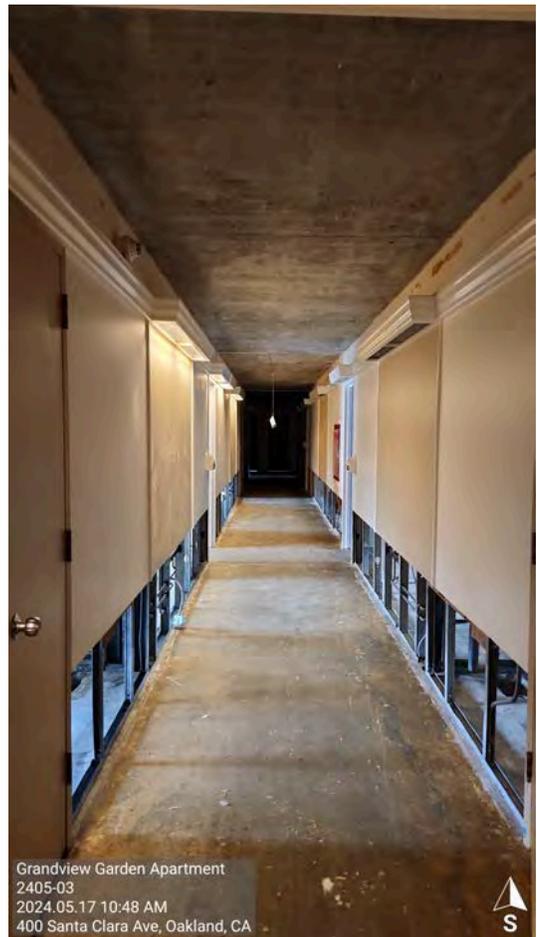


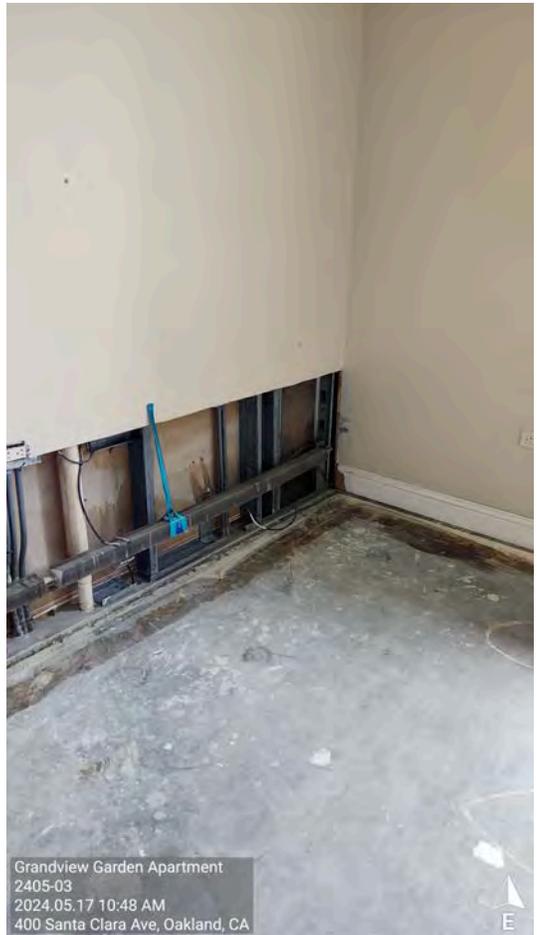
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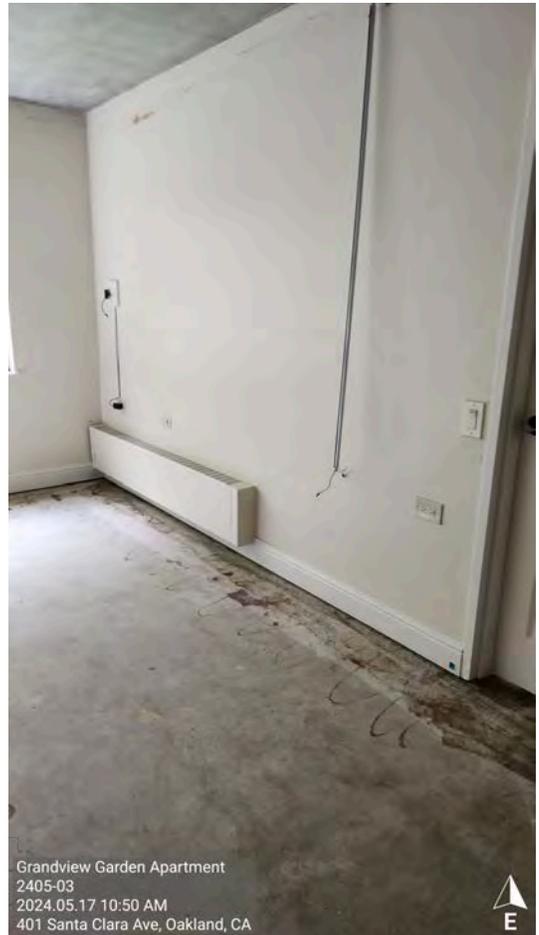
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400 Santa Clara Ave, Oakland, CA



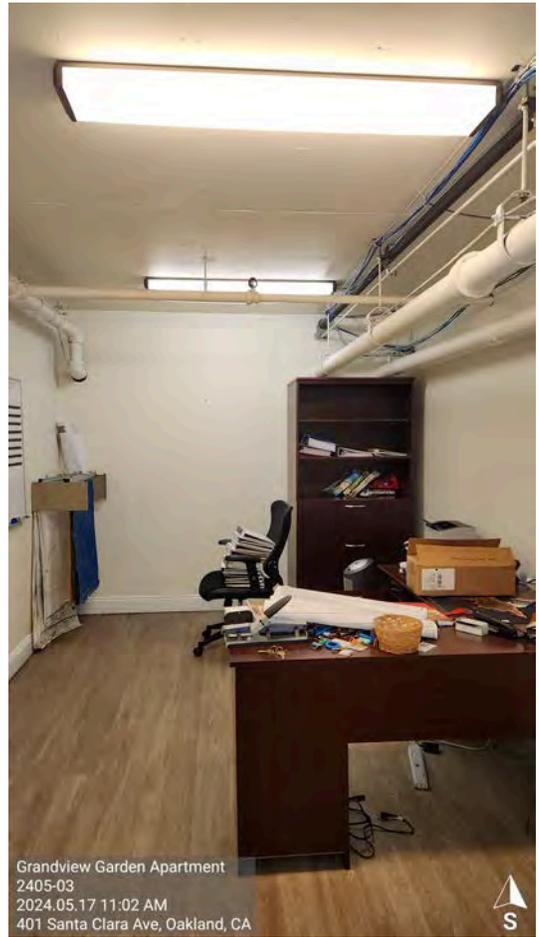
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Grandview Garden Apartment  
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Grandview Garden Apartment  
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Grandview Garden Apartment  
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Grandview Garden Apartment  
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400 Santa Clara Ave, Oakland, CA



Grandview Garden Apartment  
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400 Santa Clara Ave, Oakland, CA

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APPENDIX H  
CULTURAL RESOURCES STUDY

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# Phase I Cultural Resources Study

APN 010-0823-015-05 and 010-0823-039-02,  
401 Santa Clara Avenue, Oakland  
Alameda County, California 94610

August 2024; Updated November 2024



**Prepared for:**

Raney Planning & Management, Inc.  
1501 Sports Drive, Suite A  
Sacramento, CA 95834

**Prepared by:**

Dana E. Supernowicz, M.A., RPA  
Historic Resource Associates  
3142 Bird Rock Road  
Pebble Beach, CA 93953

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### **PHOTOGRAPH RECORD**

### **DPR 523 SITE RECORDS**

## ABSTRACT

The Phase I Cultural Resources Study for the proposed affordable housing project located at 401 Santa Clara Avenue, Oakland, Alameda County, California, was prepared by Dana E. Supernowicz, M.A., RPA, of Historic Resource Associates. The project site is delineated on the United States Geological Survey (USGS) 7.5' *Oakland East, California* topographic map in unsectioned land within Township 1 South, Range 3 West, MDM (Figure 1). The proposed undertaking is located on the north side of Santa Clara Avenue, east of the interchange of East Park Avenue and the CA-580 freeway. The project parcels, identified as Assessor's Parcel Numbers (APNs) 010-0823-015-05 and 010-0823-039-02, are developed with a 103-unit, six-story apartment building constructed in 1966 and occupied in 1967 (Figures 2-3).

The existing apartment building was previously used for senior housing, but has been vacant since 2022 after suffering significant fire damage. The planning and entitlement for the rehab and additional units for the project has not been approved and therefore no California Environmental Quality Act (CEQA) determination has been made. The proposed project is receiving funding through the United States Department of Housing and Urban Development (HUD) program that requires National Environmental Policy Act (NEPA) compliance for the HUD Home financing. The National Historic Preservation Act of 1966 requires federal agencies to consider the impact of their projects on historic properties through the Section 106 review process and its implementing regulations – 36 CFR Part 800.

The area of potential effect-direct effects (APE-DE) for the project includes the entirety of APNs 010-0823-015-05 and 010-0823-039-02, which includes the apartment building located at 401 Santa Clara Avenue, commonly known as “Grand Lake Gardens,” an affiliation related to the district in which the property is located. The area of potential effect-visual effects (APE-VE) includes any surrounding properties on the first block flanking the project site (Figures 2-3).

On July 16, 2024, a record search (NWIC File No. 24-0052) was conducted at the Northwest Information Center (NWIC), utilizing the California Historical Resources Information System (CHRIS) in Rohnert Park. Review of NWIC records indicated that there had been zero (0) cultural resource studies conducted within the project APE-DE and one (1) cultural resource study conducted within the APE-VE: Scott and Whitaker 2023 (S-57382a).

According to the NWIC records, there are zero (0) recorded archaeological resources identified in the APE-DE and APE-VE. The State Office of Historic Preservation (OHP) Built Environment Resources Directory (BERD), which includes listings of the California Register of Historical Resources (CRHR), California State Historical Landmarks (CHL), California State Points of Historical Interest (CPHI), and the National Register of Historic Places (NRHP), listed no buildings or structures within the project APE-DE or APE-VE. The subject property does not appear to have been assessed for its significance based upon the aforementioned repositories nor does the City of Oakland list the subject property in any historic resource inventory. The nearest built environment resource listed in the BERD is the Kendall-Greuner Building (P-01-000961/HRI #4623-1316-0000), built in 1926,

rated 7R, and located at 430-466 Santa Clara Avenue, approximately 1/2 block to the southwest of the project site.

A further review of geophysical data does not suggest that the project site is sensitive for precontact resources, as opposed to the sloughs and bay front near Lake Merritt. On-site soils are categorized as 151 Urban land-Tierra complex with 5%-15% slopes. The geomorphology of the project area is classified as alluvium with loam, clay, and sandy clay loam below 5' feet (NRCS Website 2024).

On July 14, 2024, Dana E. Supernowicz, M.A., RPA of HRA conducted a physical inspection of the project APE-DE. Photographs were taken of the project building and 523 DPR site records were prepared. There was no indication of native soils present within the project site as a result of the construction of the existing apartment building and landscaping. Archival research was conducted at the Oakland History Center, the Oakland City Planning Department, historic newspapers, photographs, maps, and the internet.

In summary, following a physical inspection of the subject property located at 401 Santa Clara Avenue, and after conducting archival research, the Grand Lake Gardens Apartments, designed in the International style of architecture, does not appear to be eligible for the National Register of Historic Places (NRHP) under Criterion A-D.

No precontact or historical archaeological sites, features, or artifacts were identified within the project parcels, which are largely covered by the building's footprint. Construction of the subject property would have involved extensive excavation, likely disturbing or destroying any below-grade archaeological deposits. As previously noted, the probability of uncovering subsurface archaeological properties is extremely low.

Based on the results of the Phase I CRS and NAHC SLF search, as well as the incorporation of recommendations from the Muwekma Ohlone Tribe and the City's Standard Conditions of Approval into a Tribal Monitoring and Discovery Plan to which the project would be subject, the City has determined that the **proposed project would result in no affect to historic properties and no adverse effect on archaeological resources with the mitigations and City standard conditions proposed.**

## INTRODUCTION AND PROJECT DESCRIPTION

The Phase I Cultural Resources Study for the proposed affordable housing project located at 401 Santa Clara Avenue, Oakland, Alameda County, California, was prepared by Dana E. Supernowicz, M.A., RPA, of Historic Resource Associates. The project site is delineated on the United States Geological Survey (USGS) 7.5' *Oakland East, California* topographic map in unsectioned land within Township 1 South, Range 3 West, MDM (Figure 1). The proposed undertaking is located on the north side of Santa Clara Avenue, east of the interchange of East Park Avenue and the CA-580 freeway. The project location is developed with a 103-unit, six-story apartment building constructed in 1966 (Figures 2-3).

The existing apartment building was previously used for senior housing, but has been vacant since 2022 after suffering significant fire damage. The affordable housing project has been determined to be exempt from the California Environmental Quality Act (CEQA), but is receiving funding through the United States Department of Housing and Urban Development (HUD) program that requires National Environmental Policy Act (NEPA) compliance for the HUD Home financing. The National Historic Preservation Act of 1966 requires federal agencies to consider the impact of their projects on historic properties through the Section 106 review process and its implementing regulations – 36 CFR Part 800.

The area of potential effect-direct effects (APE-DE) for the project includes the entirety of APNs 010-0823-015-05 and 010-0823-039-02, which includes the apartment building located at 401 Santa Clara Avenue, commonly known as “Grand Lake Gardens,” an affiliation related to the district in which the property is located. The vertical APE-DE varies from 2'-9' in depth. The area of potential visual effects (APE-VE) includes any surrounding properties on the first block flanking the project site.

This historical and archaeological study was completed by Dana E. Supernowicz, M.A., RPA on August 9, 2024, in accordance with state and federal guidelines (California State Historic Preservation Office). It is intended to provide information that will enable the California State Historic Preservation Office (CASHPO) to review the subject project. The Principal Investigator meets and/or exceeds the qualifications described in the Secretary of the Interior's Professional Guidelines (Federal Register 48:190:44738-44739) (United States Department of the Interior 1983). Background research was conducted at the Northwest Information Center (NWIC) utilizing the California Historical Resources Information System (CHRIS), as well as archival information curated from the library of Historic Resource Associates.

The 0.93-acre sloping project site at 401 Santa Clara Avenue is developed with a 77,076-square-foot, seven-story, multi-family residential building and associated garden areas. The building, which was constructed in 1966 and occupied in early 1967, previously operated under the name of the “Grand Lake Gardens” and has been vacant since 2022, after suffering fire damage. Surrounding existing uses include multi-family residences immediately to the north; single-family and multi-family residences to the east, across Santa Clara Avenue; multi-family residences immediately to the south; Oakland Unified School District (OUSD) classrooms and surface parking areas further to the south; and multi-

family residences to the west. The City of Oakland General Plan designates the project site as Urban Residential and the site is zoned Urban Residential-3 Zone (RU-3).

The proposed project would consist of renovations to the existing apartment complex, which would eventually serve as affordable housing. The project applicant, the Oakland Housing Authority, intends to purchase the property and rehabilitate the building to livable conditions, and anticipating adding five residential units within the interior of the building for a new total of 108 units. Because the building was constructed in 1966, the proposed project would also include seismic retrofitting improvements to ensure the building is in compliance with current building standards. The project would require only limited ground disturbance, which would be associated with trenching to a depth from 2'-9' for new footings to support new exterior walls constructed for the purposes of load-bearing support. The new footings and exterior walls would be adjacent to the existing structure and would require excavation of three feet from the existing exterior and interior walls to a depth of two feet below ground surface to match the existing footing depths.

## **ENVIRONMENTAL SETTING**

According to the 1986 United States Geological Survey (USGS) 7.5' *Oakland East, California* Topographic Quadrangle Map, the subject property and project site are located at an elevation of approximately 57' feet above mean sea level (msl). The topography of the subject property is moderately sloping to the southeast. Soils are classified as 151 Urban land-Tierra complex with 5%-15% slopes. The geological characteristics of the project site are classified as alluvium with sandy clay loam (NRCS Website 2024).

## **PREHISTORIC OVERVIEW**

The coastal region stretching from San Francisco to the East Bay including Oakland and other nearby communities has been the subject of numerous archaeological surveys and excavations since the early 1900s. The earliest of these investigations reflected an amateur archaeological approach, which included collecting museum specimens for display purposes or for private collections. In general, these studies were extremely limited in scope and provided little understanding of prehistoric culture of the Central Coast.

The first stratigraphic excavations made in California were conducted at the Emeryville Site in 1902 by Max Uhle and J.C. Merriam, as part of the anthropology program developed by A. L. Kroeber, with the financial support of Phoebe Hearst. A trench and tunnel on the west side revealed ten strata with ten burials confined to the five middle strata. Three phases of mound development were evidenced by the excavation, including the Early, Middle and Late periods. In 1908, N.C. Nelson, S.A. Barrett, P.E. Goddard, and A.V. Wepfer, working under the direction of J.C. Merriam, stratigraphically excavated a small, but deep, shaft in the east side of the mound and found four burials and unassociated artifacts, representing both the Middle and Late periods (Bennyhoff 1983). By 1939, excavations at interior sites had finally established a succession of three prehistoric periods, termed "horizons."

By 1947, R. K. Beardsley had re-examined all the major excavations in the Bay Area and had found stratigraphic support for the Middle and Late Horizons on San Francisco Bay. Coyote Hills Regional Park, near Fremont on the southeastern shore of San Francisco Bay, contains three prehistoric shell-mound sites. One, the Patterson Mound Site (CA-Ala-328), originally 10 feet high and 100 feet across, was first occupied around 1500 B.C. (Chartkoff and Chartkoff 1984:386). Ultimately, Bennyhoff and others believe that the Emeryville Site remains of “key importance” in the re-evaluation of the region, because it provides stratigraphic evidence for significant cultural change through some 3,000 years of Bay region prehistory (Bennyhoff 1983).

The Diablo Range divides two environmentally and culturally distinct regions: the Central Valley to the east and the eastern reaches of the San Francisco Bay area to the west. In recent years, work conducted in this region was discussed in some detail in *California Prehistory* (2007), edited by Terry Jones and Katherine Klar. Authors Jeffrey Rosenthal, Gregory White, and Mark Sutton (2007:147) discuss research conducted in the Central Valley and anthropologist Randall Milliken addresses research conducted specifically in the San Francisco Bay area, as it relates to the region’s ethnography (Milliken et al. 2007:104). Recent models of language migrations within the study area were prepared by Golla (2007) based upon Moratto’s chapter on Linguistic Prehistory in *California Archaeology* (Moratto 1984:529–574).

Pollen evidence collected from lake sediment samples in northwestern California indicate that the climate became progressively wetter at the end of the Pleistocene. Coastal environments appear to have sustained themselves into the Holocene (Huesser and Barron 2002, cited in West et al. 2007:20). One interior site in California, CA-SIS-218, may reflect such an early occupation, dating to roughly 11,300 cal B.C. (Beaton 1991). Some of the earliest dates along the coastline come from Arlington Springs on Santa Rosa Island, where human bone fragments were radiocarbon-dated to between 11,000 and 10,000 cal B.C. (Erlandson et al. 2007:57).

The earliest occupation of the Central Valley appears to be around Tracy Lake and in the southern end of the Central Valley, within Merced and King counties (Rosenthal, White, and Sutton 2007:151). The sites are represented by basally thinned and fluted projectile points, similar to Clovis points, which have been dated to 11,500 to 9550 B.C. Sites reflective of Paleo Indian occupation or culture within the San Francisco Bay area have yet to be identified. Such sites have likely been covered by alluvium, eroded away by streams or along ocean cliffs, or are submerged as a result of rising sea levels (Newland 2009; Milliken et al. 2007:114).

As the early Holocene progressed, environmental conditions became progressively drier, with periods of summer drought and the beginning of the development of contemporary forest communities (Huesser and Barron 2002, cited in West et al. 2007:20, 21). Central Valley climate changes at the end of the Pleistocene triggered alluvial fan and floodplain development throughout low areas within Central California, marking the transition from Pleistocene to early Holocene (Rosenthal and Meyer 2004:21). The Lower Archaic is still poorly represented, with isolated finds consisting of stemmed points, crescents, and early concave-based points found along the ancient shorelines of Tulare Lake (Hartzell 1992, cited in Rosenthal, White, and Sutton 2007:151; Newland 2009).

The emphasis on large, wide-stemmed points suggests an emphasis on artiodactyl hunting during the Lower Archaic. Geomorphological processes at the end of the Lower Archaic capped much of the archaeological evidence of this time period beneath alluvium, as a result of a shift to wetter and cooler climate. The Early Holocene reportedly denotes the earliest identified occupation of the San Francisco Bay Area. Milling slabs, hand stones, and large, wide-stemmed and leaf-shaped projectile points characterize this time period. The earliest reported date for a San Francisco Bay Area site, derived from C14 dating of charcoal associated with a milling slab, is 7920 cal B.C. (Milliken et al. 2007:114). Based on archaeobotanical remains, it appears that acorn, wild cucumber, and manzanita berries played important roles in the economy of this culture (Wohlgemuth 1997:H-33). The artifact assemblage and botanical remains suggest a culture with a highly mobile, foraging subsistence strategy (Milliken et al. 2007:114; Wohlgemuth 1997:H-33; Newland 2009). Increased global temperatures starting around 6000 B.C. influenced the movement and subsistence patterns of prehistoric populations. Milling slabs and hand stones begin to appear during this time. By the Middle Holocene, temperatures had risen, while precipitation decreased. Summer drought was a common occurrence and a jump in seasonal fires. During the Middle Archaic/Early Period, the vegetation communities seen at the time of contact within the Sacramento-San Joaquin Delta likely became established (Newland 2009; West et al. 2007:20-21, 24).

## **ETHNOGRAPHIC CONTEXT**

Prior to 6000 B.C., it is believed that the first inhabitants of the region probably spoke a language ancestral to the Hokan language family, i.e. Proto-Hokan. Hokan speakers at the time of contact with Europeans fell generally into six language families and five isolated languages. The time depth required for these languages and language families to split off suggests some antiquity to Proto-Hokan. Moratto (1984:543-545) proposes that Proto-Hokan speakers migrated into California from the east, rather than directly down the coast as a handful of other early languages likely had, and may have carried the Western Fluted Point Tradition with them, including the Clovis point examples found at Tracy Lake (Newland 2009). Speakers of what would become the Esselen language, one of the Hokan language isolates, split off from Hokan during this time (Hester 1978:496; Moratto 1984:551). Esselen speakers occupied areas just south of Monterey Bay at the time of contact, but ancestrally may have extended east into the Central Valley and north as far as San Francisco (Moratto 1984:551; Shaul 1984:47).

During this time, approximately 2500 B.C., a population that spoke an early Penutian language linguists refer to as “Utian” and directly ancestral to the Ohlone and Miwok arrived, probably from Great Basin or southern Columbia Plateau into the lower Sacramento Valley. Their arrival is marked by the advent of the Windmill Pattern and reflects an emphasis on riparian-marshland resources, an expansive bone toolkit, extended burials, and substantial grave goods (Moratto 1984:552). The territory of the ancestral Ohlone expanded either pushing ancestral Esselen speakers out of the San Francisco and East Bay areas or absorbing Esselen populations.

The Berkeley Pattern, which arose during this time period, may represent a fusion of Esselen material technology and resource emphasis on acorn with that of the more riparian marshland-based emphasis of the ancestral Ohlone, represented by the Windmill Pattern. Linguistic data may support this merger, as the vocabulary for coastal resources within Ohlone appears to borrow words from Esselen. The first evidence of Berkeley Pattern artifacts appeared in approximately 1910 B.C. in San Ramon

Valley. It seems plausible that the Penutian population from which Ohlone speakers descend was located in or near the Carquinez straits, subsequently branching out into the East Bay (Moratto 1984:554; Newland 2009). Approximately 500 to 1,000 years after the arrival of ancestral Ohlone speakers, a second wave of Penutian-speaking peoples settled in the Delta area. It appears likely that they too came from the northwestern Great Basin or southern Columbia Plateau. This population would spread throughout the San Joaquin Valley and into the Sierra and represent the ancestral Yokuts (Moratto 1984:555-557).

It is during the Middle Archaic/Early Period that Utian-speaking peoples arrived in the San Francisco Bay area. Ancestral Ohlone come in contact with ancestral Esselen, resulting in what seems to be a merger of the two cultures. The resulting material culture assemblage has been defined as the Berkeley Pattern. Esselen subsistence patterns continued to focus on acorns but included newly introduced fishing techniques. Appearing for the first time, cut shell beads, particularly *Haliotis* and *Olivella*, were common in Berkeley Pattern assemblages. Burials tended to be flexed in variable orientations (Milliken et al. 2007:114–115; Moratto 1984:209-210). Grave goods also appeared for the first time but were less common than those found in Windmill Pattern sites. The predominance of a variety of beads found throughout the region during this time period indicates that local populations shared common cultural traits and were part of a much wider trade network (Milliken 2007:114–115; Moratto 1984:210).

This time period also marks the first evidence of indigenous buildings via the discovery of elliptical structures having floors with postholes (Price et al. 2006, cited in Milliken et al. 2007:115). The presence of structural remnants and artifact assemblages signals a more sedentary or semi-sedentary lifeway than was seen during the Lower Archaic/Early Holocene (Milliken et al. 2007:114). As the ancestral Ohlone and Bay Miwok populations expanded, the Berkeley Pattern was introduced into the lower Sacramento and northern San Joaquin valleys.

During the Late Holocene, precipitation increased and cooler conditions set in (West et al. 2007:25). By A.D. 1 ancestral Ohlone likely occupied most of the territory they held during the time of contact with the Spanish. The Bay Miwok and the Ohlone appear to have been focused largely on riparian resources (Moratto 1984:552). Some time around A.D. 500, ancestral Wintuan-speaking people, probably originating in southern Oregon, expanded southward through the lower Sacramento Valley (Fredrickson 1984:485; Moratto 1984:211). Though this population does not directly inhabit the project vicinity, its arrival had a dramatic effect on the local cultural groups. The ancestral Wintu appear to have introduced the bow and arrow; intensive fishing, hunting and gathering strategies that could have supported large, highly-populated villages. This new pattern of artifacts is referred to as the Augustine Pattern (Moratto 1984:211).

This period represented a major cultural shift in the region as a result of contact with Augustine Pattern material culture traditions brought south by ancestral Wintuan populations. The rectangular shell bead types found in Early Period components disappear from Lower Middle Period components in archaeological sites both in the Bay Area and the Central Valley, replaced with split-beveled and saucer *Olivella* (Elsasser 1978:41-43; Milliken et al. 2007:115). As in the Central Valley, a new bone tool kit, including barbless fish spears and elk femur spatulae, and basketry awls appears. Net sinkers also

appear, and the mortar and pestle continue to be the primary food-processing tools. Burial complexes dating to this time period illustrate the ceremonial change that local cultures adopted in addition to changes in subsistence strategies.

The first evidence of well-developed middens can be dated to this time period. By circa A.D. 700, ancestral Wintuan speakers arrived in the lower Sacramento Valley, possibly pushing the Bay Miwok into the Mount Diablo region (Moratto 1984:562). Evidence of conflict can be seen in human remains recovered from several south and east Bay Area sites that date to this time (Milliken et al. 2007:113, 116). The Ohlone had been firmly established in the areas they occupied for millennia at the time of Spanish contact (Moratto 1984:555). Local variations of the Augustine Pattern material culture assemblage continued to develop up to the time of contact with Euroamericans.

As Newland notes, the east side of the Livermore Valley appears to straddle lands that may have been occupied by both Costanoan, also known as Ohlone, and Northern Valley Yokut-speaking peoples. The Diablo Range including the Santa Clara Valley is generally considered the boundary between the two languages (Newland 2009; Levy 1978:485; Wallace 1978:462). The territory of the aboriginal Ohlone extended from San Francisco Bay in the north, east through Oakland into the Livermore Valley, and as far south as Point Sur and the upper Salinas River. Within this area there were recorded eight uniquely different languages of the Costanoan language family (Levy 1978:485). Like Northern Valley Yokut, the Costanoan language family is part of the larger Penutian language stock (Golla 2007:75).

At the time of contact, the Costanoan-speaking people lived in approximately 50 separate and politically autonomous nations, or tribelets. The East Bay area was included within the territory of people who spoke the Chochenyo language, which comprised about 10 tribelets of around 2,000 speakers (Levy 1978:485; Milliken 1997:9–10). Aboriginal groups of the San Francisco and Monterey Bay area came to be known collectively as Costanoan, a word derived from the Spanish word *Costaños* meaning 'coast people.'

The term Costanoan refers to a linguistic family consisting of eight languages: Karkin was spoken in a single tribelet on the southern edge of the Carquinez Strait; Chochenyo or East Bay Costanoan was spoken among the tribelets occupying the east shore of San Francisco Bay between Richmond and Mission San Jose; Tamyen or Santa Clara Costanoan was spoken around the south end of San Francisco Bay and in the lower Santa Clara Valley; Ramaytush or San Francisco Costanoan was spoken in San Mateo and San Francisco counties; Awaswas or Santa Cruz Costanoan was spoken among the people living along the ocean shore between Davenport and Aptos in Santa Cruz County; Mutsun was spoken among the tribelets of the Pajaro River drainage; Rumsen speakers occupied the lower Carmel, Sur, and lower Salinas rivers; and Chalon or Soledad was spoken on the Salinas River (Levy 1978).

Materials crafted by the Costanoans and used in subsistence activities included baskets, mortars, pestles, nets, net sinkers, anchors, and a variety of chipped stone tools. Trade with the surrounding Plains Miwok, Sierra Miwok and Yokuts allowed nonindigenous materials and food (i.e. piñon nuts)

to be brought into the area as well. In exchange, the Costanoan are thought to have exported bows, salt, and salmon to neighboring groups (Levy 1978). Economic reciprocity, in addition to intermarriage, is thought to have linked settlements together, some of which, by Spanish accounts, indicate stable and prosperous villages with as many as 200 people (Milliken 1993). Overall population density along this part of the coast was, nevertheless, very sparse.

Costanoan-speaking peoples had an abundant range of natural resources available to them. They collected and processed acorns from coast live oak, black oak, and valley oak, and, to a lesser degree, also used buckeye nuts, hazelnuts, and laurel nuts. Seeds from dock, tarweed, chia, and foothill pine were parched in basketry trays and eaten or ground into meal. Berries including blackberry, elderberry, strawberries, manzanita and madrone berries, and wild grapes were also eaten. Edible roots that were collected include wild onion, cattail roots, wild carrots, and several other species (Levy 1978:491).

Animal species were hunted, including black-tailed deer, Roosevelt elk, antelope, grizzly bear, and mountain lion, as well as smaller animals such as dog, wildcat, skunk, rabbits, raccoons, squirrels, and small rodents. Larger game was hunted by individual hunters, while smaller game was hunted communally with traps, snares, and nets (Levy 1978:491). Waterfowl, including several species of goose and duck, were important food sources as were dove, quail, robin, and hawk. Fish also held an important role in the Costanoan diet, particularly steelhead, salmon, sturgeon, and lamprey (Levy 1978:492).

Several building types were used by the Costanoan-speaking peoples. A domed thatched structure with rectangular doorway and central firepit was the most common house type. Semi-subterranean sweathouses were built adjacent to stream banks and could hold up to eight people. For dances, circular or oval enclosures were built, delineated by laurel branch or brush fencing. Both the dance enclosures and domed assembly houses, some of which were historically known to hold up to 200 people, were built in the center of villages (Levy 1978:492).

Costanoan-speaking peoples appear to have traded primarily with their eastern neighbors, the Plains Miwok, Northern Yokut, and Sierra Miwok, rather than their northern neighbors across the bay and Sacramento Delta, the Miwok and Patwin. Important hematite and cinnabar quarries were located in the Oakland hills and New Almaden; these minerals were used in face and body paint and were so important that conflict between Costanoan groups over access to the quarries often arose.

The Rumsen were reportedly the first of the Costanoan peoples to be encountered by Spanish exploring expeditions in 1602 and between 1769 and 1776. Between 1770 and 1797, seven missions were established within Costanoan territory (Levy 1978). During the mission period, 1770-1835, significant changes occurred for the Costanoan people. The population was recruited into nearby missions and their traditional subsistence economy was replaced by an agricultural one. Most of the Ohlone groups in the region went to Mission San Jose from 1802 through 1805, with the largest group being baptized in 1805 (Milliken 1997:28).

Missionization, disease, and displacement from their lands significantly impacted the Ohlone-speaking people (Levy 1978:486–487). Analyses of mission baptismal records demonstrate that the last Costanoan tribelets living a traditional existence had disappeared by 1810 (Cook 1943; Levy 1978). The population declined from 10,000 in 1770 to less than 2,000 in 1832, due to the introduction of European diseases and falling birth rates. The mission culture that had absorbed and to some degree supported the Costanoans was short-lived. The secularization or abandonment of the missions by the Mexican government in 1832 caused the Costanoan to relocate to different areas and establish small settlements, fragmenting the survivors and separating them farther away from their cultural heritage. It is believed that the Costanoan languages were probably extinct by 1935 (Levy 1978).

## HISTORIC CONTEXT

During the Spanish occupation of California, the land that included Oakland belonged to Don Luis Maria Peralta (1759-1851). After California gained statehood, Peralta's vast land holdings in the East Bay were largely lost (Bagwell 1982:12). The area owes its early history to the development of industries related to logging and lumber. Following the discovery of gold at Coloma in January 1848, one of the first industries in what was to become Oakland was lumber manufacturing. In the hills surrounding the town, a coastal redwood (*sequoia sempervirens*) forest flourished. In just ten short years, almost all of the virgin timber had been logged off the nearby hills (Bagwell 1982:15). Most of the logs were dragged from the woods via teams of oxen to the wharves and sawmills. It is likely that present-day Park Boulevard once provided relatively easy access into the groves of coastal redwoods that lined the hills above Oakland.

During the early 1850s, Carpentier, Moon, and Adams leased land from Vicente Peralta and began to subdivide the property into lots. They hired Swiss engineer Julius Kellerberger to map out the streets in a standard grid pattern (Bagwell 1982:27). On May 4, 1852, Oakland was incorporated as a city. The original townsite was located on the west side of the marsh that was to later become Lake Merritt. East of San Antonio Slough, the region became known as Brooklyn and ultimately merged with Oakland to form one city (Bagwell 1982:34). By 1860, according to the United States Federal Census, there were 1,543 residents living in Oakland and 1,341 in Brooklyn (Bagwell 1982:41).

Oakland's central location in the East Bay and proximity to the waterfront made it an ideal candidate as a terminus for the Central Pacific Railroad in 1869. The railroad influenced the development of industry in Oakland and provided jobs and passenger service to various points to the east. By the 1870s, besides its rail service, Oakland had its share of industries, which included planing mills, breweries, canneries, and cotton mills. Child labor was still quite common in America's factories during the 1870s and 1880s, and Oakland was beginning to see its fair share of crime and social problems. During this same period, Oakland's population was becoming more ethnically diverse, with Irish, German, Chinese, and African-Americans contributing significantly to the shaping of Oakland's cultural heritage.

Oakland thrived through World War II, propelled by new industry related to wartime production. The post-World War II years led to increased social problems, including unemployment, poverty, and the physical deterioration of the inner city. But, like other cities surrounding the bay, Oakland has witnessed an economic rebirth during the last decade of the twentieth century. Many of Oakland's

historic buildings have been renovated or are in the process of being restored, and migration back to the inner city has begun.

While Oakland fared much better than San Francisco following the 1906 earthquake, considerable damage to its infrastructure and buildings did occur. Following the earthquake, Oakland became a sanctuary for individuals and families who had lost everything in San Francisco. Between 1900 to 1910, Oakland's population grew from 67,000 to over 150,000 (Bagwell 1982:179). The 1910s through the 1930s were a progressive era for Oakland, characterized by growth in transportation, improvements in sanitation, city streets, and continued expansion of the city's boundaries. In 1908, the Oakland Park Commission was formed (Bagwell 1982:183). Shortly afterward, Lakeside Park at Lake Merritt was developed. During the 1910s, Major Mott defended municipal planning and, in 1912, Oakland's City Hall was constructed followed by other civic buildings of stature. As the downtown developed so did the city's waterfront district. By the 1920s shipbuilding became one of the city's dominant industries and the Port of Oakland witness major expansion (Bagwell 1982:191). With the growth of industry came the need to provide adequate housing, so during the 1910s through the 1930s housing projects sprang up throughout the city, including hundreds of new apartment and commercial buildings.

The City of Oakland had two major renaissance periods in commercial construction – the 1920s prior to the Great Depression and the 1950s associated with the post-World War II expansion of the city and its growth as a leader in attracting large corporations to its core downtown area. Unlike the 1920s when most of the high-rise architecture included Neo-Classical, Classical Revival, Renaissance Revival, and Beaux-Arts designs, while the 1950s ushered in a period of contemporary architects who adapted modern designs to their buildings using state of the art materials, such as cast steel, aluminum, and precast concrete.

The subject property is located in the Grand Lake neighborhood of East Oakland, east of the 580 Freeway. Lake Park Avenue forms the key roadway through the neighborhoods, which were developed in the 1910s-1930s with later infill through the 1960s, as the city expanded to the east into the hills above the central city (Gebhard 1985:304-306). The Sanborn Fire Insurance map for Oakland, published in 1911 and revised in 1950, indicates that the project site was located in a residential neighborhood dating back to the 1910s (Figure 4).

In order to address the shortage of affordable housing in Oakland after World War II, both the city and other organizations, including religious organization, began a concerted effort to fill the need for new housing. The subject property was financed by the American Baptist Homes and Hospitals in Northern California, originally known as the American Baptist Homes of the West (ABHOW). The first project reportedly in California was construction of Pilgrim Haven in 1949 at 373 Pine Lane, Los Altos, California. Another facility nearby is referred to as the Terraces of Los Gatos (*The Berkeley Gazette*, June 13, 1967).

The seven-story Modernist reinforced concrete International style apartment complex at 401 Santa Clara Avenue was designed by architect Elso B. DiLuck, AIA, whose office was located at 57 North Fulton Street, Fresno, California. DiLuck received his education at the University of Washington, and served in World War II as a Lieutenant-Col. within the Army Corps of Engineers. Apparently DiLuck had an ongoing relationship with the American Baptist Homes and Hospitals of Northern California, because in 1968, he was responsible for designing an independent living addition to the San Joaquin Gardens Apartments I Fresno (*The Fresno Bee*, May 5, 1968: 134). DiLuck's penchant for designing civic, educational, and other types of commercial buildings, including shopping centers, is born-out in newspaper accounts throughout the 1950s-1960s. One of DiLuck's designs for a retirement center in West Fresno was published in the *Fresno Bee* on October 26, 1956 (Figure 5). Another example of a design by DiLuck is the Piedmont Garden Apartments at 110 41<sup>st</sup> Street in Oakland, constructed in 1968 (Figure 6). The similarity between the Piedmont Garden Apartments and Grand Lake Gardens Apartments is apparent. Both buildings have a geometric vocabulary and rely on reinforced concrete construction with minimal ornamentation.

During the summer of 1966, preparations were underway for the "model apartments" known as the Grand Lake Gardens, which were anticipated to be ready in the fall of that year. As described in the *Oakland Tribune*:

#### Apartment Models Go On Display –

Model apartments in Grand Lake Gardens, the \$2.3 million Oakland retirement center of American Baptist Homes and Hospitals of Northern California, are now open and the building will be ready for occupancy this fall. Officials of the Baptist organization were on hand yesterday for a ceremony marking the opening. They included the Rev. Harold Bottemiller, executive director; Edward E. Waller, chairman of the board of managers for the center and Rolland Peterson, president of the corporation's board of trustees. The model apartments will be open until 5 p.m. today and again tomorrow from 1 to 5 p.m. Robert L. Mathews, administrator for the center at 401 Santa Clara Ave., said more than half of the apartments in the six-story structure are rented. Rentals will range from \$85 to \$135 a month, including utilities. An entry fee is also required to help pay the cost of limited medical care, periodic housekeeping, counseling and an activities and recreation program. A full life medical care program is available as an optional service with monthly rates or a prepayment plan. Evening meals will be served in a sixth floor dining room on the west wing of the structure. Grand Lake Gardens is open to persons of all religious denominations (*Oakland Tribune*, June 23, 1966).

On January 15, 1967, the Grand Lake Gardens apartment complex was dedicated. The following article was published by the *Oakland Tribune* describing the building and its benefactors during the dedication:

#### Baptist Home Dedication Wednesday –

Grand Lake Gardens, the 103-unit retirement center erected at 401 Santa Clara Ave., by American Baptist Homes and Hospitals of Northern California, will be dedicated at 8 p.m. Wednesday. The Rev. Gerald Gingrich of American Baptist headquarters at Valley Forge, Pa., secretary of the Division of Health and Social Ministries for the

American Baptist Home Mission Societies, will be the principal speaker. Other participants include Oakland Mayor John Reading, Roy Pryor, president-elect of the California Association of Homes for the Aging, the Rev. Harold Bottemiller, executive director of American Baptist Homes, Edward Waller, chairman of the board of managers of Grand Lake Gardens, Roland Peterson, president of American Baptist Homes, and the Rev. Dr. Russell Orr, executive minister of the American Baptist Churches of Northern California. A quartet from Berkeley Baptist Divinity School will provide special music for both programs. Robert Mathews is the administrator of the right-story retirement center. Mrs. Gordon Forbes, wife of the assistant pastor of the First Baptist Church, Berkeley, is assistant administrator and director of activities. The project includes studio, one and two bedroom apartments. Most apartments have balconies overlooking one of the five garden areas surrounding the U-shaped building. According to the Rev. Mr. Bottemiller, the center will be 80 per cent occupied at the time of dedication (*Oakland Tribune*, January 15, 1967: 23).

American Baptist Homes of the West (ABHOW) reportedly began in 1949 with the establishment of the Pilgrim Haven Retirement Community, now known as The Terraces at Los Altos in Los Altos, California. The Grand Lake Apartments were reportedly funded through the Northern California Chapter of the American Baptist Homes and Hospital Association, part of ABHOW whose headquarters was located in Valley Forge, Pennsylvania. The Association, as previously described, was active in building non-secular retirement facilities during the late-1940s through the late-1960s. The Northern California Chapter appears to have been dissolved. In 2022, still under ownership with ABHOW, the Grand Lake Apartments suffered a damaging fire, after which the facility closed and remains vacant.

## **KNOWN ARCHAEOLOGICAL AND HISTORICAL SITES**

On July 16, 2024, a record search (NWIC File No. 24-0052) was conducted at the Northwest Information Center (NWIC), utilizing the California Historical Resources Information System (CHRIS) in Rohnert Park. According to the NWIC records, there are zero (0) recorded archaeological resources identified in the APE-DE and APE-VE.

## **PRIOR CULTURAL RESOURCE SURVEYS**

Review of NWIC records indicated that there had been zero (0) cultural resource studies conducted within the project APE-DE and one (1) cultural resource study conducted within the APE-VE: Scott and Whitaker 2023 (S-57382a).

## **NATIONAL AND STATE REGISTER FILES**

The State Office of Historic Preservation (OHP) Built Environment Resources Directory (BERD), which includes listings of the California Register of Historical Resources (CRHR), California State Historical Landmarks (CHL), California State Points of Historical Interest (CPHI), and the National Register of Historic Places (NRHP), listed no buildings or structures within the project APE-DE or APE-VE. The subject property does not appear to have been assessed for its significance based upon the aforementioned repositories nor does the City of Oakland list the subject property in any historic

resource inventory. The nearest built environment resource listed in the BERD is the Kendall-Greuner Building (P-01-000961/HRI #4623-1316-0000), built in 1926, rated 7R, and located at 430-466 Santa Clara Avenue, approximately ½ block to the southwest of the project site.

## **HISTORIC MAP AND AERIAL PHOTOGRAPH REVIEW**

A review of historic topographic quadrangle maps and aerial photographs from 1906-2024 indicates that the project APE-DE was developed with residential houses beginning in the early-1900s. Beginning in the 1960s, urban renewal projects demolished many of the residential homes on the north side of Santa Clara Avenue to make way for large apartment complexes, such as the one located at 401 Santa Clara Avenue.

## **PROPERTY DESCRIPTION**

The subject property consists of a four-story and six-story, reinforced concrete garden apartment building, characterized by “U-shaped” massing; a below-grade parking area under the building; uniform banks of apartments, each having a deck with vertical railing overlooking Santa Clara Avenue the inner courtyard, with concrete vertical columns running from the ground to the sixth-floor separating each apartment; a plain horizontal roof, perhaps designed to block the sun above the sixth-floor dining room; and an upper-level deck having closed or filled railing with vertical incised decorations that reflect the building’s geometric vocabulary. The roof eave above the second floor is wide and finished with smooth concrete. Vertical steel columns support the left and right sides of the slightly elevated roof that reflects the building geometric design elements.

The northern wing rises four stories as opposed to the six-stories of the main wing facing Santa Clara Avenue. Although the wall surfaces on the front façade of the building are flat, the sidewalls have an irregular or rusticated finish. The northern wing of the building features a similar architectural design as the main building along Santa Clara Avenue. The main entrance to the building faces Santa Clara Avenue via a series of concrete stairs from the sidewalk, and is sheltered by a large cloth awning. The building is accessed through replaced anodized aluminum lighted entry doors. The interior lobby appears to have been remodeled.

The overall design of the subject property is consistent with the transcendence of Modern commercial architecture towards Post-Modern architecture. The 1960s marked a transformational era in commercial architecture evidenced by a shift in thinking and values. It was a period in which local and regional architects broke free from traditional architectural styles and explored new ways of design and construction. Architecture during this period was often viewed not just as a functional art form but also as an expression of political and social views. With this transformation came more daring and innovative designs. Music, art, and construction all help shaped the architecture of the time, that emphasized creativity, individuality, and progress. The architecture of the 1960s was a reflection of the broader cultural and social changes of the era, representing a new way of thinking about the built environment. Examples include the “Brutalist” forms of architecture evident at U.C. Berkeley during the 1960s.

## SIGNIFICANCE ASSESSMENT

The subject property located at 401 Santa Clara Avenue was evaluated for the NRHP. The subject property was evaluated for the National Register of Historic Places (NRHP), under Criteria A, B, C, and D:

- A. Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B. Property is associated with the lives of persons significant in our past.
- C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D. Applies to properties that have yielded, or may be likely to yield, information important in prehistory or history.

For a property to be significant it must also retain integrity. Integrity is defined by the National Park Service as follows:

### Location

**Location is the place where the historic property was constructed or the place where the historic event occurred.** The relationship between the property and its location is often important to understanding why the property was created or why something happened. The actual location of a historic property, complemented by its setting, is particularly important in recapturing the sense of historic events and persons. Except in rare cases, the relationship between a property and its historic associations is destroyed if the property is moved.

### Design

**Design is the combination of elements that create the form, plan, space, structure, and style of a property.** It results from conscious decisions made during the original conception and planning of a property (or its significant alteration) and applies to activities as diverse as community planning, engineering, architecture, and landscape architecture. Design includes such elements as organization of space, proportion, scale, technology, ornamentation, and materials. A property's design reflects historic functions and technologies as well as aesthetics. It includes such considerations as the structural system; massing; arrangement of spaces; pattern of fenestration; textures and colors of surface materials; type, amount, and style of ornamental detailing; and arrangement and type of plantings in a designed landscape. Design can also apply to districts, whether they are important primarily for historic association, architectural value, information potential, or a combination thereof. For districts, significant primarily for historic association or architectural value, design concerns more than just the individual buildings or structures located within the boundaries. It also applies to the way in which buildings, sites, or structures are related: for example, spatial relationships between major features; visual rhythms in a streetscape or landscape plantings; the layout and materials of walkways and roads; and the relationship of other features, such as statues, water fountains, and archeological sites.

## Setting

**Setting is the physical environment of a historic property.** Whereas location refers to the specific place where a property was built or an event occurred, setting refers to the *character* of the place in which the property played its historical role. It involves *how*, not just where, the property is situated and its relationship to surrounding features and open space.

Setting often reflects the basic physical conditions under which a property was built and the functions it was intended to serve. In addition, the way in which a property is positioned in its environment can reflect the designer's concept of nature and aesthetic preferences.

The physical features that constitute the setting of a historic property can be either natural or manmade, including such elements as:

- Topographic features (a gorge or the crest of a hill);
- Vegetation;
- Simple manmade features (paths or fences); and
- Relationships between buildings and other features or open space.

These features and their relationships should be examined not only within the exact boundaries of the property, but also between the property and its *surroundings*. This is particularly important for districts.

## Materials

**Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.** The choice and combination of materials reveal the preferences of those who created the property and indicate the availability of particular types of materials and technologies. Indigenous materials are often the focus of regional building traditions and thereby help define an area's sense of time and place.

A property must retain the key exterior materials dating from the period of its historic significance. If the property has been rehabilitated, the historic materials and significant features must have been preserved. The property must also be an actual historic resource, not a recreation; a recent structure fabricated to look historic is not eligible. Likewise, a property whose historic features and materials have been lost and then reconstructed is usually not eligible (refer to Criteria Consideration E in Part VII: *How to Apply the Criteria Considerations* for the conditions under which a reconstructed property can be eligible.)

## Workmanship

**Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.** It is the evidence of artisans' labor and skill in constructing or altering a building, structure, object, or site. Workmanship can apply to the property as a whole or to its individual components. It can be expressed in vernacular methods of construction and plain finishes or in highly sophisticated configurations and ornamental detailing. It can be based

on common traditions or innovative period techniques. Workmanship is important because it can furnish evidence of the technology of a craft, illustrate the aesthetic principles of a historic or prehistoric period, and reveal individual, local, regional, or national applications of both technological practices and aesthetic principles. Examples of workmanship in historic buildings include tooling, carving, painting, graining, turning, and joinery.

### Feeling

**Feeling is a property's expression of the aesthetic or historic sense of a particular period of time.** It results from the presence of physical features that, taken together, convey the property's historic character. For example, a rural historic district retaining original design, materials, workmanship, and setting will relate the feeling of agricultural life in the 19th century. A grouping of prehistoric petroglyphs, unmarred by graffiti and intrusions and located on its original isolated bluff, can evoke a sense of tribal spiritual life.

### Association

**Association is the direct link between an important historic event or person and a historic property.** A property retains association if it is the place where the event or activity occurred and is sufficiently intact to convey that relationship to an observer. Like feeling, association requires the presence of physical features that convey a property's historic character. For example, a Revolutionary War battlefield whose natural and manmade elements have remained intact since the 18th century will retain its quality of association with the battle. Because feeling and association depend on individual perceptions, their retention *alone* is never sufficient to support eligibility of a property for the National Register.

## FINDING OF SIGNIFICANCE

In determining the significance of the property located at 401 Santa Clara Avenue, historic documents and photographs were examined, and the subject property was compared to other similar buildings erected in Oakland and northern California during the 1960s. Furthermore, a building must retain integrity for it to be considered a significant resource for the NRHP. Since its construction in 1967, the building retains good integrity of location, design, setting, feeling, and association. Due to all the windows being replaced, the building's integrity of workmanship, and feeling are slightly diminished, however, as a whole, the building still reads as it was originally designed.

Under NRHP Criterion A, no evidence has been found to suggest that the subject property played a significant role in the history of Oakland during the late-1960s.

Under NRHP Criterion B, no evidence has been found to suggest that the subject property is associated with a person or persons of significance in the history of Oakland. The apartment complex was among a number of similar housing units funded by the Northern California Chapter of the American Baptist Homes and Hospital Association., whose headquarters were in Valley Forge, Pennsylvania. The building's architect, Elso B. DiLuck, AIA, had his office in Fresno and was involved with numerous projects, many associated with the American Baptist Homes and Hospitals

Association, including the other Association's senior housing project in Oakland known as Piedmont Garden Apartments which was built in 1968.

Under NRHP Criterion C, the subject property retains fair to good integrity, the major alteration being replacement of all the building's original doors and windows. The most interesting feature of the apartment complex is its "garden" design, which is also evidenced in much older apartments built from the 1920s forward in Oakland. Thus, this design element was not new, but certainly practical for tenants to easily access safe and functional outdoor spaces. As a whole, the subject property lacks many of the features that are notable as cutting-edge designs adapted by other Modernist architects working in the 1950s and 1960s in the International style of architecture in the East Bay Area. A review of listed or significant low and high rise commercial buildings, including apartments, in Oakland, appears to indicate that most date from the 1920s-1950s. Many represent important designs by significant local architectural firms as well as innovative architecture designs by an important architect generally recognized to be a master in his or her field, whose work is clearly distinguishable from other architects or craftsman.

Under NRHP Criterion D, there is no evidence that the subject property could yielded, or may be likely to yield, information important in prehistory or history.

Therefore, the subject property does not appear to be individually eligible for the National Register of Historic Places (NRHP) under Criteria A, B, and C, nor does the subject property appear to be a potential contributing element to a historic district.

### **ARCHAEOLOGICAL AND HISTORICAL SENSITIVITY OF THE APE-DE**

Archaeological and historical site sensitivity was deemed to be low, due to the lack of precontact archaeological resources identified within a ¼ mile radius of the proposed project site, lack of nearby natural water sources, extensive grading throughout the parcel, and subsequent construction of a building on the project site.

### **PEDESTRIAN SURVEY**

On July 11, 2024, a pedestrian survey of the APE-DE was completed by Dana E. Supernowicz, M.A., RPA. The surface reconnaissance focused on assessing and photographing the general surface conditions found within the project area. The archaeological potential was evaluated based on several factors, including proximity to recorded sites, creeks, rivers and wetlands, as well as the presence of early historic development. The entirety of the APE-DE is covered with the existing apartment complex, hardscape, and other landscaping. Soils displacement would have been substantial since the apartment includes parking underneath the apartment units and is cut in a moderately sloping hillside. No evidence of precontact or historical archaeological sites, features, or artifacts were observed during the pedestrian survey. Photographs were taken of the existing building and used to form the historic assessment detailed in the DPR 523 site records.

## NATIVE AMERICAN CONSULTATION

In accordance with Section 106 of the NHPA, an invitation to consult was distributed on August 16, 2024, to representatives of the following tribes, which were identified by the NAHC as potentially having knowledge of cultural resources in the project area: Amah Mutsun Tribal Band, Amah Mutsun Tribal Band of Mission San Juan Bautista, Confederated Villages of Lisjan Nation, Costanoan Rumsen Carmel Tribe, Indian Canyon Mutsun Band of Costanoan, Muwekma Ohlone Indian Tribe of the San Francisco Bay Area Region (Muwekma Ohlone Tribe), Northern Valley Yokut/Ohlone Tribe, The Ohlone Indian Tribe, and Wuksachi Indian Tribe/Eshon Valley Band.

The Muwekma Ohlone Tribe confirmed its desire to consult in a letter to the City on September 5, 2024, which included recommendations that were ultimately incorporated into the Tribal Monitoring and Discovery Plan prepared for the proposed project. The City sent the Tribal Monitoring and Discovery Plan to the Muwekma Ohlone Tribe for the tribe's review and approval on October 14, 2024. The Tribal Leadership responded that they approve of the Monitoring and Discovery Plan and recommended that if an ancestral heritage site is discovered educational signage about the history and heritage of the Muwekma Ohlone Tribe be developed and established on site for the community, and, if a precontact archaeological site is discovered, the Tribe would like to contribute either a stand-alone or a contributing ethnohistory chapter as part of the final report.

Additionally, the Costanoan Rumsen Carmel Tribe notified the City of its desire to consult on August 28, 2024; however, efforts by the City to consult with the Costanoan Rumsen Carmel Tribe were not responded to by the tribe. Subsequently a Monitoring and Discovery Plan has been prepared for the project, which was forwarded to the City of Oakland and accepted by Muwekma Ohlone Tribe.

## CONCLUSION AND RECOMMENDATIONS

In summary, following a physical inspection of the proposed project located at 401 Santa Clara Avenue, and after conducting archival research, the Grand Lake Gardens Apartments do not appear to be eligible for the National Register of Historic Places (NRHP) under Criterion A-D. No precontact or historical archaeological sites, features, or artifacts were identified within the project parcels, which are largely covered by the building's footprint. Construction of the subject property would have involved extensive excavation, likely disturbing or destroying any below-grade archaeological deposits.

Based on the results of the Phase I CRS and NAHC SLF search, as well as the incorporation of recommendations from the Muwekma Ohlone Tribe and the City's Standard Conditions of Approval into a Tribal Monitoring and Discovery Plan to which the project would be subject, the City has determined that the **proposed project would result in no affect to historic properties and no adverse effect on archaeological resources with the mitigations and City standard conditions proposed.**

## MITIGATION MEASURES

The following mitigation measures apply to the project to reduce the adverse effect on archeological resources.

### Archeological and Tribal Monitoring Plan

The project applicant shall implement the Tribal Monitoring and Discovery Plan, dated October 2024 that was approved by the Tribes and included the following measures:

- The project applicant shall prepare a construction ALERT sheet developed by a qualified archaeologist for review and approval by the City prior to soil-disturbing activities occurring on the project site. The ALERT sheet shall contain, at a minimum, visuals that depict each type of artifact that could be encountered on the project site. Training by the qualified archaeologist shall be provided to the project's prime contractor, any project subcontractor firms (including demolition, excavation, grading, foundation, and pile driving), and utility firms involved in soil-disturbing activities within the project site.
- The ALERT sheet shall state, in addition to the basic archaeological resource protection measures contained in other standard conditions of approval, all work must stop and the City's Environmental Review Officer contacted in the event of discovery of the following cultural materials: concentrations of shellfish remains; evidence of fire (ashes, charcoal, burnt earth, fire-cracked rocks); concentrations of bones; recognizable Native American artifacts (arrowheads, shell beads, stone mortars [bowls], humanly shaped rock); building foundation remains; trash pits, privies (outhouse holes); floor remains; wells; concentrations of bottles, broken dishes, shoes, buttons, cut animal bones, hardware, household items, barrels, etc.; thick layers of burned building debris (charcoal, nails, fused glass, burned plaster, burned dishes); wood structural remains (building, ship, wharf); clay roof/floor tiles; stone walls or footings; or gravestones.
- The ALERT sheet shall also include that the project applicant must keep the Muwekma Ohlone and other consulting tribes, if needed, informed on the construction schedule of the proposed project and allow a Native American monitor to be present during ground-disturbing activities. In the event of the discovery of ancestral heritage cultural features and/or artifacts, the Muwekma Ohlone, and, if needed, other consulting tribes, shall also be notified.
- Prior to any soil-disturbing activities, each contractor shall be responsible for ensuring that the ALERT sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, and supervisory personnel. The ALERT sheet shall also be posted in a visible location at the project site.
- In the event of excavation of paleontological resources, the project applicant shall submit an excavation plan prepared by a qualified paleontologist to the City for review and approval. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by a qualified paleontologist, as appropriate, according to current professional standards and at the expense of the project applicant.

- If any find is determined by the Native American monitor to be of cultural importance, appropriate avoidance measures recommended by the monitor and approved by the City shall be followed, unless avoidance is determined infeasible by the City. Should Native American cultural resources be identified during ground disturbance, the project applicant shall install a plaque or other educational display honoring the history and heritage of the tribe in a public location on or within the building.
- In the event of data recovery of archaeological resources, the project applicant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified archaeologist for review and approval by the City. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practicable. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant. The project applicant shall implement the ARDTP at his/her expense. Furthermore, the tribe will coordinate with the archeologist to prepare either a stand-alone or contributing ethnohistory chapter as part of the final report.

### **Human Remains – Discovery During Construction**

In the event that human skeletal remains are uncovered at the project site during construction activities, all work shall immediately halt and the project applicant shall notify the City and the Alameda County Coroner. If the County Coroner determines that an investigation of the cause of death is required or that the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made. In the event that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of Section 7050.5 of the California Health and Safety Code. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance, and avoidance measures (if applicable) shall be completed expeditiously and at the expense of the project applicant.

Should any Native American human remains be discovered during the course of project construction, the project applicant shall allow the tribe to coordinate with the qualified archaeologist on the exposure, removal, documentation, analysis, writing of a final report, and reburial of the tribe's ancestral remains, which shall occur as close to the location of discovery as practical.

### **Paleontological Resources – Discovery During Construction**

In the event that any historic or precontact subsurface cultural resources are discovered during ground-disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as

applicable, to assess the significance of the find. In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented.

## PROFESSIONAL QUALIFICATIONS

Dana E. Supernowicz, M.A., RPA, principal of Historic Resource Associates, received his B.A. degree at the University of California, Irvine in Social Ecology with an emphasis on cultural history and environmental planning, and earned his M.A. degree in History at California State University, Sacramento in 1983, with an emphasis on Native American and Western United States history. Supernowicz worked in southern California as a consulting archaeologist and later with the U.S. Forest Service, National Park Services, Bureau of Land Management, and State of California as an archaeologist and historian, having over 40 years of experience working in the field of cultural resource management. He is a member of the Society for California Archaeology and National Trust for Historic Preservation. Supernowicz is a Registered Professional Archaeologist (RPA), meets the Secretary of Interior Professional Standards in Architectural History, Archaeology, and History, and is listed throughout many California municipalities as an approved Archaeological and Historical Consultant.

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## FIGURES

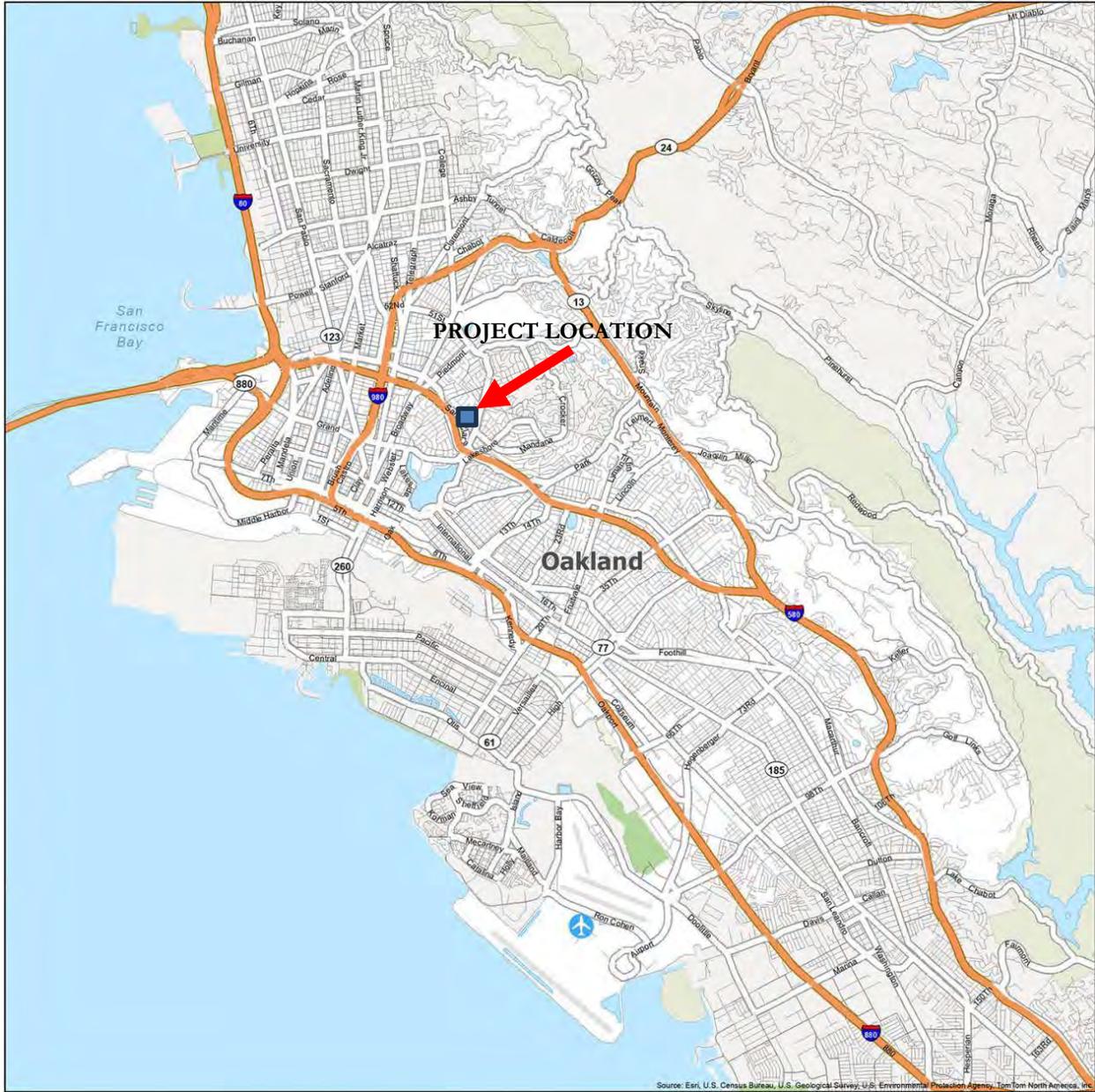


Figure 1: Project Vicinity Map.



Figure 2: Project APE and Aerial Location Map looking north (Google Earth 2024).

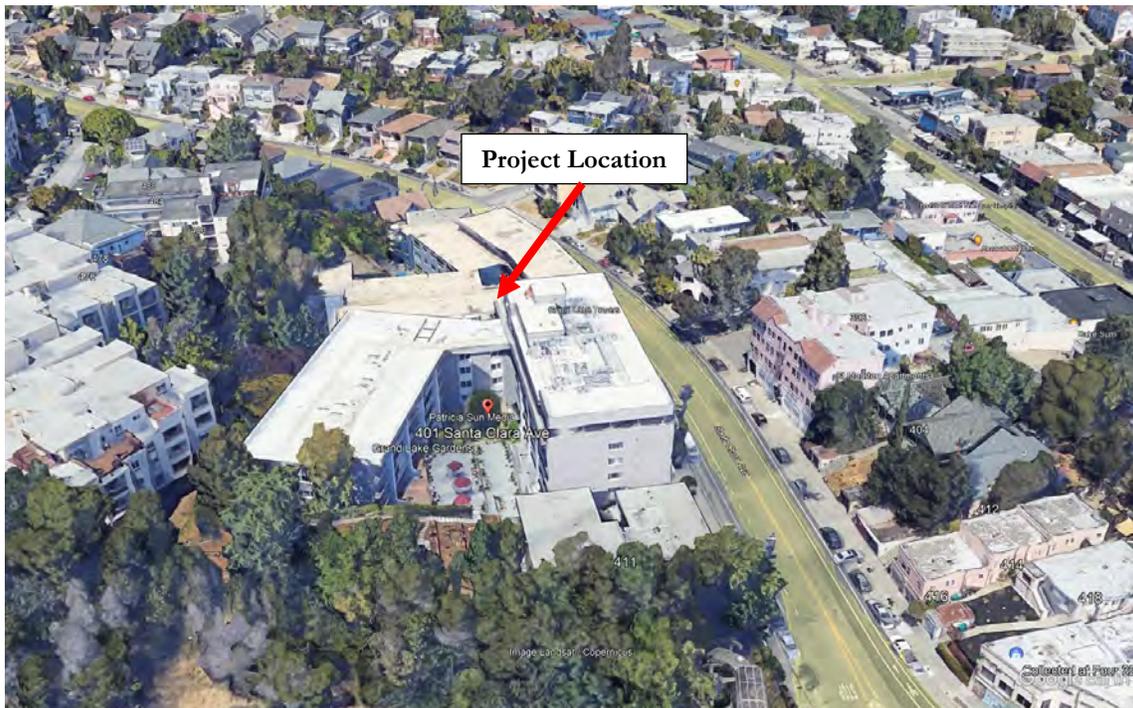


Figure 3: Project Aerial Location Map looking east (Google Earth 2024).



Figure 4: Sanborn Fire Insurance Map, Oakland, California (Volume 12, 1911-revised 1950).



Figure 5: A design by Architect Elso DiLuck for a retirement center in West Fresno (*Fresno Bee*, October 26, 1956: 1-B).



**Figure 6: The Piedmont Garden Apartments at 110 41<sup>st</sup> Street in Oakland, constructed in 1968, is an example of a similar design by DiLuck.**



**Figure 7: Photograph of Grand Lake Garden Apartments (*Oakland Tribune*, January 15, 1967: 23).**

## PHOTOGRAPH RECORD



1. View looking northwest at the Grand Lake Apartments.



2. View looking west across Santa Clara Avenue at the Grand Lake Apartments.



3. View looking at the entrance to the subject apartments from Santa Clara Avenue.



4. View looking at the below-grade entrance to the garage and architectural detail on the balconies facing Santa Clara Avenue.



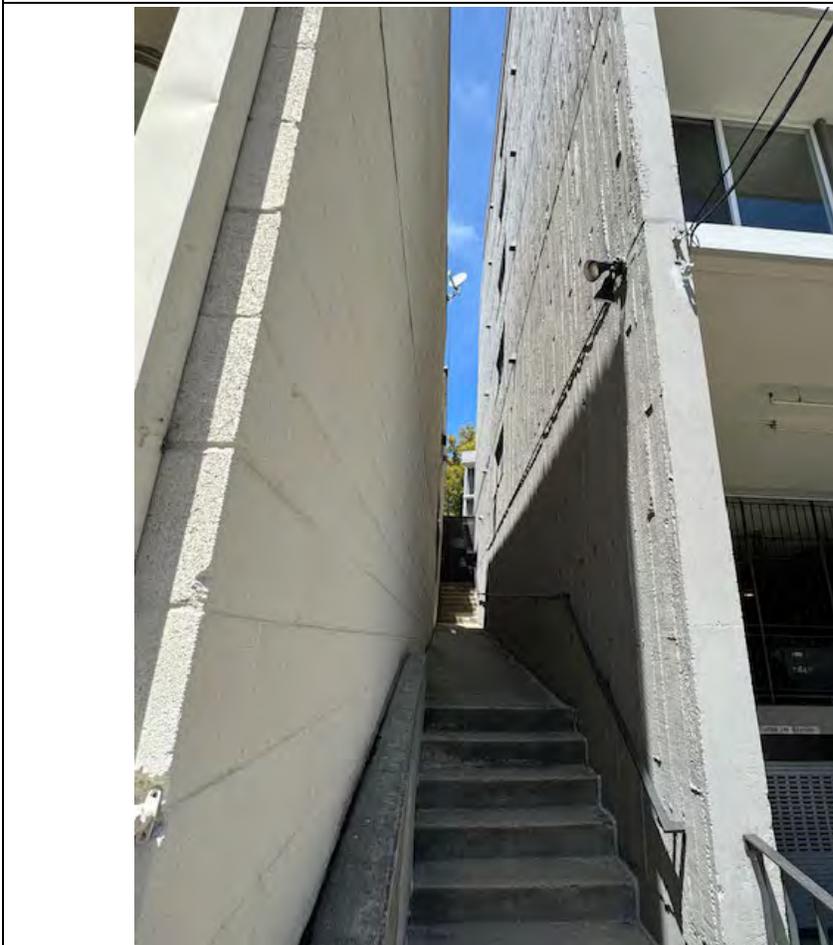
5. View looking at the remodeled entrance leading to the foyer of the apartments.



6. View looking at the remodeled foyer or lobby for the apartments.



7. View looking east up Santa Clara Avenue at the Grand Lake Apartments on the left.



8. View looking at the side entrance access and the concrete wall surfacing.



9. Classical Revival circa late-1920s era apartment building across the street.

**P1. Other Identifier:** Grand Lake Gardens

**\*P2. Location:**  Not for Publication  Unrestricted

**\*a. County:** Alameda

**b. USGS 7.5' Quadrangle:** Oakland West, CA **Date:**

**c. Address:** 401 Santa Clara Avenue **City:** Oakland **Zip:** 94610

**d. UTM:** N/A

**e. Other Locational Data (APN #):** The subject property is located on the north side of Santa Clara Avenue, east of the interchange of East Park Avenue and the CA-580 freeway. APN 010-0823-015-05 and 010-0823-039-02.

**\*P3a. Description:** The 0.93-acre sloping parcel at 401 Santa Clara Avenue is developed with a 77,076-square-foot, seven-story, multi-family residential building and associated garden areas. The building, which was constructed in 1966 and occupied in early 1967, previously operated under the name of the "Grand Lake Gardens" and has been vacant since 2022, after suffering fire damage. The subject property consists of a four-story and six-story, reinforced concrete garden apartment building, characterized by "U-shaped" massing; a below-grade parking area under the building; uniform banks of apartments, each having a deck with vertical railing overlooking Santa Clara Avenue the inner courtyard, with concrete vertical columns running from the ground to the sixth-floor separating each apartment; a plain horizontal roof, perhaps designed to block the sun above the sixth-floor dining room; and an upper-level deck having closed or filled railing with vertical incised decorations that reflect the building's geometric vocabulary. The roof eave above the second floor is wide and finished with smooth concrete. Vertical steel columns support the left and right sides of the slightly elevated roof that reflects the building geometric design elements. The northern wing rises four stories as opposed to six-story main wing facing Santa Clara Avenue. Although the wall surfaces on the front façade of the building are flat, the sidewalls have an irregular or rusticated finish. The northern wing of the building rises four stories instead of six-stories and features a similar architectural design as the main building along Santa Clara Avenue. The main entrance to the building faces Santa Clara Avenue via a series of concrete stairs from the sidewalk, and is sheltered by a large cloth awning. The building is accessed through replaced anodized aluminum lighted entry doors. The interior lobby appears to have been remodeled. The overall design of the subject property is consistent with the transcendence of Modern commercial architecture towards Post-Modern architecture. The 1960s marked a transformational era in commercial architecture evidenced by a shift in thinking and values. It was a period in which local and regional architects broke free from traditional architectural styles and explored new ways of design and construction. Architecture during this period was often viewed not just as a functional art form but also as an expression of political and social views. With this transformation came more daring and innovative designs. Music, art, and construction all help shaped the architecture of the time, which emphasized creativity, individuality, and progress. The architecture of the 1960s was a reflection of the broader cultural and social changes of the era, representing a new way of thinking about the built environment. Examples include the "Brutalist" forms of architecture evident at U.C. Berkeley during the 1960s.

**\*P3b. Resource Attributes:** HP7 - Seven-story commercial building

**\*P4. Resources Present:**  Building  Structure  Object  Site  District  Element of District

**P5a. Photograph or Drawing** (Photograph required for buildings, structures, and objects.)



**P5b. Description of Photo:** Looking northeast at the southeast elevation of the building from Santa Clara Avenue.

**\*P6. Date Constructed/Age and Sources:**  Historic 1967, based upon Alameda County Tax Assessors records and newspaper accounts.

**\*P7. Owner and Address:**

**\*P8. Recorded by:** Dana E. Supernowicz, Architectural Historian, Historic Resource Associates, 3142 Bird Rock Road, Pebble Beach, CA 93953

**\*P9. Date Recorded:** August 8, 2024

**\*P10. Type of Survey:**  Architectural

**\*P11. Report Citation:** Phase I Cultural Resources Study of Assessor's Parcel Numbers 010-0823-015-05 and 010-0823-039-02, 401 Santa Clara Avenue, Oakland, Alameda County, California 94610. Prepared for Raney Planning & Management, Inc., 1501 Sports Drive, Suite A, Sacramento, CA 95834. Prepared by Historic Resource Associates, 3142 Bird Rock Road, Pebble Beach, CA 93953. August 2024.

**\*Attachments:** Building, Structure, and Object Record

**BUILDING, STRUCTURE, AND OBJECT RECORD**

- B1. Historic Name:** Grand Lake Gardens
- B2. Common Name:** 401 Santa Clara Avenue
- B3. Original Use:** Apartments
- B4. Present Use:** Vacant
- \***B5. Architectural Style:** Modernist/International Style
- \***B6. Construction History:** According to newspaper articles, the subject property was completed in 1967. Since its construction the most obvious modification was replacement of all the original metal or aluminum windows with vinyl clad windows. In addition, the front lobby has been remodeled, as have most of the apartment units.
- \***B7. Moved?**  No  Yes  Unknown
- Date:** N/A
- Original Location:**
- \***B8. Related Features:** The subject property is located on the west side of Santa Clara Avenue along a gentle curve just east of Lake Park Avenue and the CA-580 freeway, flanked on both sides by multi-story apartments.
- B9a. Architect:** Elso B. DiLuck
- B9b. Builder:** Possibly Hollis Sons Construction of Fresno
- \***B10. Significance: Theme:** Modern Commercial International Style Architecture
- Area:** Oakland
- Period of Significance:** 1967
- Property Type:** Low-rise apartment
- Applicable Criteria:** A, B, C, and D

During the Spanish occupation of California, the land that included Oakland belonged to Don Luis Maria Peralta (1759-1851). After California gained statehood, Peralta's vast land holdings in the East Bay were largely lost (Bagwell 1982:12). The area owes its early history to the development of industries related to logging and lumber. Following the discovery of gold at Coloma in January 1848, one of the first industries in what was to become Oakland was lumber manufacturing. In the hills surrounding the town, a coastal redwood (*sequoia sempervirens*) forest flourished. In just ten short years, almost all of the virgin timber had been logged off the nearby hills (Bagwell 1982:15). Most of the logs were dragged from the woods via teams of oxen to the wharves and sawmills. It is likely that present-day Park Boulevard once provided relatively easy access into the groves of coastal redwoods that lined the hills above Oakland. During the early 1850s, Carpentier, Moon, and Adams leased land from Vicente Peralta and began to subdivide the property into lots. They hired Swiss engineer Julius Kellerberger to map out the streets in a standard grid pattern (Bagwell 1982:27). On May 4, 1852, Oakland was incorporated as a city. The original townsite was located on the west side of the marsh that was to later become Lake Merritt. East of San Antonio Slough, the region became known as Brooklyn and ultimately merged with Oakland to form one city (Bagwell 1982:34). By 1860, according to the U.S. Federal Census, there were 1,543 residents living in Oakland and 1,341 in Brooklyn (Bagwell 1982:41). Refer to BSO, Page 3 of 16.

- B11. Additional Resource Attributes:** N/A
- \***B12. References:** Bagwell, Beth. *Oakland: The Story of a City*. Novato, CA: Presidio Press. 1982; Curtis, William J. *Modern Architecture since 1900*. Englewood Cliffs, New Jersey: Prentice-Hall, Inc. 1987; Durham, David L. *California's Geographic Names: A Gazetteer of Historic and Modern Names of the State*. Clovis, Calif.: Word Dancer Press. 1998; Gebhard, David. *The Guide to Architecture in San Francisco and Northern California*. 1976, revised 1985; Google Earth. [www.googleearth.com](http://www.googleearth.com). Accessed August 2024; Gudde, Erwin G. *California Place Names: The Origin and Etymology of Current Geographical Names*. Berkeley: University of California Press. 1969; Hoover, Mildred Brooke, Hero Eugene Rensch, Ethel Grace Rensch, and William N. Abeloe. *Historic Spots in California*. Fourth edition, revised by Douglas E. Kyle. Stanford University Press, Stanford, California. 1990; NETRonline Website. Historic Aerial Photographs. [www.historicaerials.com](http://www.historicaerials.com). 1896-2024. Accessed August 2024; NRCS Website. Web Soil Survey. [www.nrcs.usda.gov](http://www.nrcs.usda.gov). Natural Resources Conservation Service. United States Department of Agriculture. Accessed August 2024; Oakland Tribune. Newspaper, Oakland, California. 1920-1970; Sanborn Fire Insurance Maps, Oakland, CA, 1912-1970; The Berkeley Gazette. Newspaper. Berkely, California. June 13, 1967; The Fresno Bee. Newspaper. Fresno, California. May 5, 1968; Thompson and West, pub. *Official and Historical Atlas Map of Alameda County, California*. Thompson and West, Oakland, California. 1878; Wilson, Mark A. *East Bay Heritage: A Potpourri of Living History*. San Francisco: California Living Books. 1979.

- B13. Remarks:** None
- \***B14. Evaluator:** Dana E. Supernowicz, Architectural Historian, Historic Resource Associates, 3142 Bird Rock Road, Pebble Beach, CA 93953.
- \***Date of Evaluation:** August 2024

**AERIAL PHOTOGRAPH (Google Earth 2024)**



(This space reserved for official comments.)

## BUILDING, STRUCTURE, AND OBJECT RECORD

### \*B10. Significance: (Continued):

Oakland's central location in the East Bay and proximity to the waterfront made it an ideal candidate as a terminus for the Central Pacific Railroad in 1869. The railroad influenced the development of industry in Oakland and provided jobs and passenger service to various points to the east. By the 1870s, besides its rail service, Oakland had its share of industries, which included planing mills, breweries, canneries, and cotton mills. Child labor was still quite common in America's factories during the 1870s and 1880s, and Oakland was beginning to see its fair share of crime and social problems. During this same period, Oakland's population was becoming more ethnically diverse, with Irish, German, Chinese, and African-Americans contributing significantly to the shaping of Oakland's cultural heritage.

Oakland thrived through World War II, propelled by new industry related to wartime production. The post-World War II years led to increased social problems, including unemployment, poverty, and the physical deterioration of the inner city. But, like other cities surrounding the bay, Oakland has witnessed an economic rebirth during the last decade of the twentieth century. Many of Oakland's historic buildings have been renovated or are in the process of being restored, and migration back to the inner city has begun. The subject property lies near the Glenview neighborhoods of East Oakland, east of the 580 Freeway. Park Boulevard forms the key roadway through the neighborhoods which were developed in the 1920s, as the city expanded to the east into the hills above the central city (Gebhard 1985:304-306).

While Oakland fared much better than San Francisco following the 1906 earthquake, considerable damage to its infrastructure and buildings did occur. Following the earthquake, Oakland became a sanctuary for individuals and families who had lost everything in San Francisco. Between 1900 to 1910, Oakland's population grew from 67,000 to over 150,000 (Bagwell 1982:179). The 1910s through the 1930s were a progressive era for Oakland, characterized by growth in transportation, improvements in sanitation, city streets, and continued expansion of the city's boundaries. In 1908, the Oakland Park Commission was formed (Bagwell 1982:183). Shortly afterward, Lakeside Park at Lake Merritt was developed. During the 1910s, Major Mott defended municipal planning and, in 1912, Oakland's City Hall was constructed followed by other civic buildings of stature. As the downtown developed so did the city's waterfront district. By the 1920s shipbuilding became one of the city's dominant industries and the Port of Oakland witness major expansion (Bagwell 1982:191). With the growth of industry came the need to provide adequate housing, so during the 1910s through the 1930s housing projects sprang up throughout the city, including hundreds of new apartment and commercial buildings.

The city of Oakland had two major renaissance periods in commercial construction – the 1920s prior to the Great Depression and the 1950s and early 1960s associated with the post-World War II expansion of the city and its growth as a leader in attracting large corporations to its core downtown area. Unlike the 1920s when most of the high-rise architecture included Neo-Classical, Classical Revival, Renaissance Revival, and Beaux-Arts designs, the 1950s ushered in a period of contemporary architects who adapted modern designs to their buildings using state of the art materials, such as cast steel, aluminum, and precast concrete.

The subject property reflects the architectural theme of Modernism as it applies to commercial low-rise architecture in Oakland after World War II. In the years following World War II, California experienced a period of unparalleled prosperity and optimism spurred by unprecedented urban growth and economic expansion. California's population increased by fifty-three percent between 1940 and 1950. This increase in population created a new problem, one of accommodating this influx of new residents. In 1948, Governor Earl Warren noted that the increase in California's population resulted in unprecedented civic problems, such as an appalling housing shortage, packed schools, and inadequate and dangerous highways.

**BUILDING, STRUCTURE, AND OBJECT RECORD**

**\*B10. Significance: (Continued):**

In order to address the shortage of affordable housing in Oakland, both the city and other organizations, including religious organization, began a concerted effort at fill the need for new housing. The subject property was financed by the American Baptist Homes and Hospitals in Northern California, originally known as the American Baptist Homes of the West (ABHOW). The first project reportedly in California was construction of Pilgrim Haven in 1949 at 373 Pine Lane, Los Altos, California. Another facility nearby is referred to as the Terraces of Los Gatos (*The Berkeley Gazette*, June 13, 1967). The seven-story Modernist reinforced concrete International style apartment complex at 401 Santa Clara Avenue was designed by architect Elso B. DiLuck, AIA, whose office was located at 57 North Fulton Street, Fresno, California. DiLuck received his education at the University of Washington, and served in World War II as a Lieutenant-Col. within the Army Corps of Engineers. Apparently DiLuck had an ongoing relationship with the American Baptist Homes and Hospitals of Northern California, because in 1968, he was responsible for designing an independent living addition to the San Joaquin Gardens Apartments I Fresno (*The Fresno Bee*, May 5, 1968: 134). DiLuck's penchant for designing civic, educational, and other types of commercial buildings, including shopping centers, is born-out in newspaper accounts throughout the 1950s-1960s. One of DiLuck's designs for a retirement center in West Fresno was published in the *Fresno Bee* on October 26, 1956 (Figure 1). Another example of a design by DiLuck is the Piedmont Garden Apartments at 110 41<sup>st</sup> Street in Oakland, constructed in 1968 (Figure 2). The similarity between the Piedmont Garden Apartments and Grand Lake Gardens Apartments is apparent. Both buildings have a geometric vocabulary and rely on reinforced concrete construction with minimal ornamentation.



Figure 1: Design for Cross Church Home for the Aged (*The Fresno Bee*, October 26, 1956).

## BUILDING, STRUCTURE, AND OBJECT RECORD

**\*B10. Significance: (Continued):**



**Figure 2: View looking east at 110 41<sup>st</sup> Street, Oakland, designed by DiLuck and known as the Piedmont Garden Apartments, constructed in 1968.**

During the summer of 1966, preparations were underway for the “model apartments” known as Grand Lake Gardens, which were anticipated to be ready in the fall of that year. As described in the *Oakland Tribune*:

*Apartment Models Go On Display –*

Model apartments in Grand Lake Gardens, the \$2.3 million Oakland retirement center of American Baptist Homes and Hospitals of Northern California, are now open and the building will be ready for occupancy this fall. Officials of the Baptist organization were on hand yesterday for a ceremony marking the opening. They included the Rev. Harold Bottemiller, executive director; Edward E. Waller, chairman of the board of managers for the center and Rolland Peterson, president of the corporation’s board of trustees. The model apartments will be open until 5 p.m. today and again tomorrow from 1 to 5 p.m. Robert L. Mathews, administrator for the center at 401 Santa Clara Ave., said more than half of the apartments in the six-story structure are rented. Rentals will range from \$85 to \$135 a month, including utilities. An entry fee is also required to help pay the cost of limited medical care, periodic housekeeping, counseling and an activities and recreation program. A full life medical care program is available as an optional service with monthly rates or a prepayment plan. Evening meals will be served in a sixth-floor dining room on the west wing of the structure. Grand Lake Gardens is open to persons of all religious denominations (*Oakland Tribune*, June 23, 1966).

## BUILDING, STRUCTURE, AND OBJECT RECORD

**\*B10. Significance: (Continued):**

On January 15, 1967, the Grand Lake Gardens apartment complex was dedicated (Figure 3). The following article was published by the *Oakland Tribune* describing the building and its benefactors during the dedication:

Baptist Home Dedication Wednesday –

Grand Lake Gardens, the 103-unit retirement center erected at 401 Santa Clara Ave., by American Baptist Homes and Hospitals of Northern California, will be dedicated at 8 p.m. Wednesday. The Rev. Gerald Gingrich of American Baptist headquarters at Valley Forge, Pa., secretary of the Division of Health and Social Ministries for the American Baptist Home Mission Societies, will be the principal speaker. Other participants include Oakland Mayor John Reading, Roy Pryor, president-elect of the California Association of Homes for the Aging, the Rev. Harold Bottemiller, executive director of American Baptist Homes, Edward Waller, chairman of the board of managers of Grand Lake Gardens, Roland Peterson, president of American Baptist Homes, and the Rev. Dr. Russell Orr, executive minister of the American Baptist Churches of Northern California. A quartet from Berkeley Baptist Divinity School will provide special music for both programs. Robert Mathews is the administrator of the right-story retirement center. Mrs. Gordon Forbes, wife of the assistant pastor of the First Baptist Church, Berkeley, is assistant administrator and director of activities. The project includes studio, one and two bedroom apartments. Most apartments have balconies overlooking one of the five garden areas surrounding the U-shaped building. According to the Rev. Mr. Bottemiller, the center will be 80 per cent occupied at the time of dedication (*Oakland Tribune*, January 15, 1967: 23).



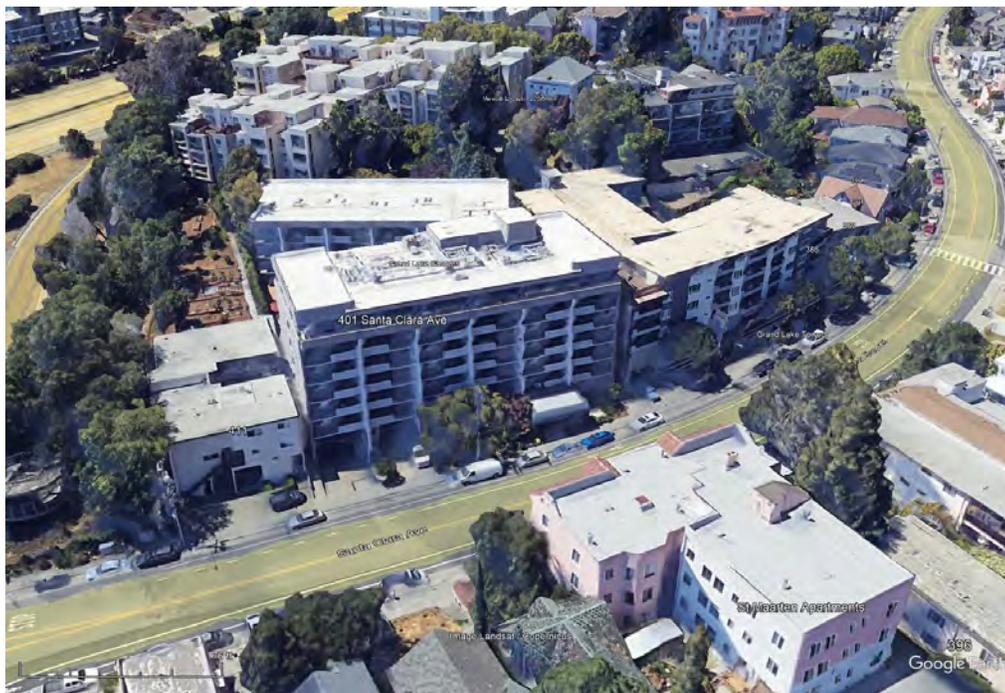
**Figure 3: Photograph of 401 Santa Clara Avenue taken shortly after its construction (*Oakland Tribune*, January 15, 1967: 23).**

# BUILDING, STRUCTURE, AND OBJECT RECORD

**\*B10. Significance: (Continued):**



**Figure 4: 3D aerial view looking north at 401 Santa Clara Avenue (Google Earth 2023).**



**Figure 5: 3D aerial view looking west at 401 Santa Clara Avenue (Google Earth 2023).**

# BUILDING, STRUCTURE, AND OBJECT RECORD

**\*B10. Significance: (Continued):**



**Figure 6: 3D aerial view looking east at 401 Santa Clara Avenue (Google Earth 2024).**



**Figure 7: View of 401 Santa Clara Avenue looking north (Google Earth 2024).**

## BUILDING, STRUCTURE, AND OBJECT RECORD

### \*B10. Significance: (Continued):

The overall design of the subject property, albeit rather austere lacking ornamentation, is clearly identifiable with other similar "Modernist" reinforced concrete low-rise apartment buildings constructed in the mid to late-1960s. The most unusual design element of 401 Santa Clara Avenue is its irregular "U-shaped" design with an internal open-air courtyard. However, as early as the 1920s in Oakland other apartments were also designed with "U-shaped" massing and open-air courtyards, so the design concept was not new, but rather more practical given the verticality of the building and the design for tenants to easily access safe and functional outdoor spaces.

American Baptist Homes of the West (ABHOW) reportedly began in 1949 with the establishment of the Pilgrim Haven Retirement Community, now known as The Terraces at Los Altos in Los Altos, California. The Grand Lake Apartments were reportedly funded through the Northern California Chapter of the American Baptist Homes and Hospital Association, part of ABHOW whose headquarters was located in Valley Forge, Pennsylvania. The Association, as previously described, was active in building non-secular retirement facilities during the late-1940s through the late-1960s. The Northern California Chapter appears to have been dissolved. In 2022, still under ownership with ABHOW, the Grand Lake Apartments suffered a damaging fire, after which the facility closed and remains vacant.

### SIGNIFICANCE ASSESSMENT

The subject property was evaluated for the National Register of Historic Places (NRHP), under Criteria A, B, and C:

- A. Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B. Property is associated with the lives of persons significant in our past.
- C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D. Applies to properties that have yielded, or may be likely to yield, information important in prehistory or history.

For a property to be significant it must also retain integrity. Integrity is defined by the National Park Service as follows:

#### Location

**Location is the place where the historic property was constructed or the place where the historic event occurred.** The relationship between the property and its location is often important to understanding why the property was created or why something happened. The actual location of a historic property, complemented by its setting, is particularly important in recapturing the sense of historic events and persons. Except in rare cases, the relationship between a property and its historic associations is destroyed if the property is moved.

#### Design

**Design is the combination of elements that create the form, plan, space, structure, and style of a property.** It results from conscious decisions made during the original conception and planning of a property (or its significant alteration) and applies to activities as diverse as community planning, engineering, architecture, and landscape architecture. Design includes such elements as organization of space, proportion, scale, technology, ornamentation, and materials. A property's design reflects historic functions and technologies as well as aesthetics. It includes such considerations as the structural system; massing; arrangement of spaces; pattern of fenestration; textures and colors of surface materials; type, amount, and style of ornamental detailing; and arrangement and type of plantings in a designed landscape. Design can also apply to districts, whether they are important primarily for historic association, architectural value, information potential, or a combination thereof. For districts, significant primarily for historic association or architectural value, design concerns more than just the individual buildings or structures located within the boundaries. It also applies to the way in which buildings, sites, or structures are related: for example, spatial relationships between major features; visual rhythms in a streetscape or landscape plantings; the layout and materials of walkways and roads; and the relationship of other features, such as statues, water fountains, and archeological sites.

## BUILDING, STRUCTURE, AND OBJECT RECORD

### \*B10. Significance: (Continued):

#### Setting

**Setting is the physical environment of a historic property.** Whereas location refers to the specific place where a property was built or an event occurred, setting refers to the *character* of the place in which the property played its historical role. It involves *how*, not just where, the property is situated and its relationship to surrounding features and open space.

Setting often reflects the basic physical conditions under which a property was built and the functions it was intended to serve. In addition, the way in which a property is positioned in its environment can reflect the designer's concept of nature and aesthetic preferences.

The physical features that constitute the setting of a historic property can be either natural or manmade, including such elements as:

- Topographic features (a gorge or the crest of a hill);
- Vegetation;
- Simple manmade features (paths or fences); and
- Relationships between buildings and other features or open space.

These features and their relationships should be examined not only within the exact boundaries of the property, but also between the property and its *surroundings*. This is particularly important for districts.

#### Materials

**Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.** The choice and combination of materials reveal the preferences of those who created the property and indicate the availability of particular types of materials and technologies. Indigenous materials are often the focus of regional building traditions and thereby help define an area's sense of time and place.

A property must retain the key exterior materials dating from the period of its historic significance. If the property has been rehabilitated, the historic materials and significant features must have been preserved. The property must also be an actual historic resource, not a recreation; a recent structure fabricated to look historic is not eligible. Likewise, a property whose historic features and materials have been lost and then reconstructed is usually not eligible (refer to Criteria Consideration E in Part VII: *How to Apply the Criteria Considerations* for the conditions under which a reconstructed property can be eligible.)

#### Workmanship

**Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.** It is the evidence of artisans' labor and skill in constructing or altering a building, structure, object, or site. Workmanship can apply to the property as a whole or to its individual components. It can be expressed in vernacular methods of construction and plain finishes or in highly sophisticated configurations and ornamental detailing. It can be based on common traditions or innovative period techniques. Workmanship is important because it can furnish evidence of the technology of a craft, illustrate the aesthetic principles of a historic or prehistoric period, and reveal individual, local, regional, or national applications of both technological practices and aesthetic principles. Examples of workmanship in historic buildings include tooling, carving, painting, graining, turning, and joinery.

#### Feeling

**Feeling is a property's expression of the aesthetic or historic sense of a particular period of time.** It results from the presence of physical features that, taken together, convey the property's historic character. For example, a rural historic district retaining original design, materials, workmanship, and setting will relate the feeling of agricultural life in the 19th century. A grouping of prehistoric petroglyphs, unmarred by graffiti and intrusions and located on its original isolated bluff, can evoke a sense of tribal spiritual life.

## BUILDING, STRUCTURE, AND OBJECT RECORD

### \*B10. Significance: (Continued):

#### Association

**Association is the direct link between an important historic event or person and a historic property.** A property retains association if it is the place where the event or activity occurred and is sufficiently intact to convey that relationship to an observer. Like feeling, association requires the presence of physical features that convey a property's historic character. For example, a Revolutionary War battlefield whose natural and manmade elements have remained intact since the 18th century will retain its quality of association with the battle. Because feeling and association depend on individual perceptions, their retention *alone* is never sufficient to support eligibility of a property for the National Register.

#### FINDING OF SIGNIFICANCE

In determining the significance of the property located at 401 Santa Clara Avenue, historic documents and photographs were examined, and the subject property was compared to other similar buildings erected in Oakland and northern California during the 1960s. Furthermore, a building must retain integrity for it to be considered a significant resource for the NRHP. Since its construction in 1967, the building retains good integrity of location, design, setting, feeling, and association. Due to all the windows being replaced, the building's integrity of workmanship, and feeling are slightly diminished, however, as a whole, the building still reads as it was originally designed.

Under NRHP Criterion A, no evidence has been found to suggest that the subject property played a significant role in the history of Oakland during the late-1960s.

Under NRHP Criterion B, no evidence has been found to suggest that the subject property is associated with a person or persons of significance in the history of Oakland. The apartment complex was among a number of similar housing units funded by the Northern California Chapter of the American Baptist Homes and Hospital Association., whose headquarters were in Valley Forge, Pennsylvania. The building's architect, Elso B. DiLuck, AIA, had his office in Fresno and was involved with numerous projects, many associated with the American Baptist Homes and Hospitals Association, including the other Association's senior housing project in Oakland known as Piedmont Garden Apartments which was built in 1968.

Under NRHP Criterion C, the subject property retains fair to good integrity, the major alteration being replacement of all the building's original doors and windows. The most interesting feature of the apartment complex is its "garden" design, which is also evidenced in much older apartments built from the 1920s forward in Oakland. Thus, this design element was not new, but certainly practical for tenants to easily access safe and functional outdoor spaces. As a whole, the subject property lacks many of the features that are notable as cutting-edge designs adapted by other Modernist architects working in the 1950s and 1960s in the International style of architecture in the East Bay Area. A review of listed or significant low and high rise commercial buildings, including apartments, in Oakland, appears to indicate that most date from the 1920s-1950s. Many represent important designs by significant local architectural firms as well as innovative architecture designs by an important architect generally recognized to be a master in his or her field, whose work is clearly distinguishable from other architects or craftsman.

Under NRHP Criterion D, there is no evidence that the subject property could yielded, or may be likely to yield, information important in prehistory or history.

In summary, the subject property does not appear to be individually eligible for the National Register of Historic Places (NRHP) under Criteria A, B, and C, nor does the subject property appear to be a potential contributing element to a historic district.

**BUILDING, STRUCTURE, AND OBJECT RECORD**

\*B10. Significance: (Continued):

**PHOTOGRAPH RECORD**



**Photograph 1: View looking northwest at the Grand Lake Apartments.**



**Photograph 2: View looking west across Santa Clara Avenue at the Grand Lake Apartments.**

**BUILDING, STRUCTURE, AND OBJECT RECORD**

**\*B10. Significance: (Continued):**



**Photograph 3: View looking at the entrance to the subject apartments from Santa Clara Avenue.**



**Photograph 4: View looking at the below-grade entrance to the garage and architectural detail on the balconies facing Santa Clara Avenue.**

**BUILDING, STRUCTURE, AND OBJECT RECORD**

**\*B10. Significance: (Continued):**



**Photograph 5: View looking at the remodeled entrance leading to the foyer of the apartments.**



**Photograph 6: View looking at the remodeled foyer or lobby for the apartments.**

**BUILDING, STRUCTURE, AND OBJECT RECORD**

**\*B10. Significance: (Continued):**



**Photograph 7: View looking east up Santa Clara Avenue at the Grand Lake Apartments on the left.**



**Photograph 8: View looking at the side entrance access and the concrete wall surfacing.**

**BUILDING, STRUCTURE, AND OBJECT RECORD**

\*B10. Significance: (Continued):



**Photograph 9: Classical Revival circa late-1920s era apartment building across the street.**

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APPENDIX I

TRIBAL MONITORING AND DISCOVERY PLAN

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**TRIBAL MONITORING AND DISCOVERY PLAN  
401 SANTA CLARA AVENUE, OAKLAND,  
ALAMEDA COUNTY, CALIFORNIA 94610**

**OCTOBER 2024**

**PREPARED FOR:**

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**PREPARED BY:**

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## **INTRODUCTION**

This Tribal Monitoring and Discovery Plan (Plan) was prepared to satisfy compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA) for the 401 Santa Clara Avenue project. The purpose of the Plan is to allow for the identification, evaluation, treatment, and protection of significant archaeological resources, including archaeological resources with traditional religious and cultural importance to the Muwekma Ohlone Indian Tribe of the San Francisco Bay Area Region (Muwekma Ohlone) that may be unearthed during ground-disturbing activities associated with the proposed project.

The proposed project will receive Project-Based Vouchers (PBV) and Moving to Work (MTW) funds provided by the U.S. Department of Housing and Urban Development (HUD). Therefore, the proposed project is subject to the HUD environmental review procedures (24 Code of Federal Regulations [CFR] Part 58), which require compliance with NEPA and Section 106 of the NHPA, as well as the regulations found at 36 CFR Part 800. Under 24 CFR 58.4, the City has assumed HUD's environmental review responsibilities for the proposed project, including tribal consultation related to historic properties. Historic properties include archaeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural places and landscapes, plant and animal communities, and buildings and structures with significant tribal association.

In August 2024, Registered Professional Archaeologist (RPA) Dana E. Supernowicz, M.A. of Historic Resource Associates completed a Phase I Cultural Resources Study of the project site to provide the State Historic Preservation Officer (SHPO) information on the historical context of the site and any potential for on-site cultural resources (Historic Resource Associates. Phase I Cultural Resources Study of 401 Santa Clara Avenue, Oakland, California, August 2024). The Phase I Cultural Resources Study included a record search (File No. 24-0052) at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS); a review of historical maps, aerial photographs, and other information; and a pedestrian field survey of the project site on July 11, 2024, which included a reconnaissance of surface conditions to assess the potential sensitivity for buried historic-period archaeological resources.

## **PROJECT DESCRIPTION**

The proposed project is located on a 0.93-acre site located at 401 Santa Clara Avenue in the City of Oakland, Alameda County, California. The project site is comprised of two parcels, which are identified by Assessor's Parcel Numbers (APNs) 010-0823-015-05 and 010-0823-039-02. The project site is currently developed with a seven-story, 77,076-square-foot (sf) multi-family residential building. The building, which was constructed in 1966, previously operated under the name of the Grand Lake Gardens and has been vacant since 2022 after suffering fire damage. Surrounding existing uses include multi-family residences immediately to the north, west, and south, as well as to the east across Santa Clara Avenue; single-family

residences to the east, across Santa Clara Avenue; and Lakeview Elementary School further to the south.

The Oakland Housing Authority (OHA) intends to purchase the project site and rehabilitate the existing building to livable conditions. The proposed project would also add five residential units for a new total of 108 units and include seismic retrofitting improvements to bring the existing building into compliance with current building standards. Thus, the proposed project would require limited ground disturbance associated with trenching for new footings to support new load-bearing exterior walls. The new footings and exterior walls would be adjacent to the existing structure and would require excavation in nine areas to the depths of the existing footings, which are approximately two to nine feet below the existing slab-on-grade. The areas of disturbance would range from 200 sf to 500 sf. Other potential renovation and repair activities to restore the property from the previously incurred fire damage and resulting concrete distress would not require modifications to the building foundations or ground excavation.

## **ARCHAEOLOGICAL SENSITIVITY AND MONITORING PROTOCOLS**

Although Muwekma Ohlone site sensitivity maps do not show any previously recorded ancestral heritage sites within the project site boundaries, previous on-site construction activities associated with the existing structure could have uncovered tribal cultural resources that were not documented when the building was initially constructed. Section 106 of the NHPA establishes tribes' rights to consult on the mitigation to prevent potential adverse impacts to recorded and unrecorded tribal cultural resources that could otherwise occur during the construction of development projects seeking federal funding assistance. Therefore, the Muwekma Ohlone tribe has been included in the consultation process with the City of Oakland (City) for the proposed project and has informed the measures contained within this Plan.

The Phase I Cultural Resources Study prepared for the proposed project concluded that the existing building is not eligible for the National Register of Historic Places (NRHP) under Criterion A through D, and did not identify precontact or historic archaeological sites, features, or artifacts within the project site, which is largely covered by the existing building's footprint. Construction of the existing building would have involved extensive excavation, likely disturbing or destroying any subsurface archaeological deposits and rendering the potential occurrence of unknown subsurface archaeological resources as extremely low. However, the potential for unrecorded subsurface archaeological resources to occur on-site cannot be completely eliminated.

Thus, the purpose of this Plan is to outline the monitoring protocols and procedures to follow in the event that unknown archaeological resources, including resources with traditional religious and cultural importance, are unearthed during ground-disturbing activities associated with the proposed project. Included herein are the monitoring and discovery protocols and procedures for addressing specific contingencies, such as the discovery of

human remains, project personnel qualifications, data collection protocols, site safety considerations, and post-field actions.

The following provides a description of the specific procedures to identify, evaluate, and treat archaeological discoveries and details the methodology and protocols employed prior to and during project construction. The procedures include the City of Oakland Standard Conditions of Approval, which have been slightly modified to incorporate recommendations from the Muwekma Ohlone.

The project applicant shall prepare a construction ALERT sheet developed by a qualified archaeologist for review and approval by the City prior to soil-disturbing activities occurring on the project site. The ALERT sheet shall contain, at a minimum, visuals that depict each type of artifact that could be encountered on the project site. Training by the qualified archaeologist shall be provided to the project's prime contractor, any project subcontractor firms (including demolition, excavation, grading, foundation, and pile driving), and utility firms involved in soil-disturbing activities within the project site.

The ALERT sheet shall state, in addition to the basic archaeological resource protection measures contained in other standard conditions of approval, all work must stop and the City's Environmental Review Officer contacted in the event of discovery of the following cultural materials: concentrations of shellfish remains; evidence of fire (ashes, charcoal, burnt earth, fire-cracked rocks); concentrations of bones; recognizable Native American artifacts (arrowheads, shell beads, stone mortars [bowls], humanly shaped rock); building foundation remains; trash pits, privies (outhouse holes); floor remains; wells; concentrations of bottles, broken dishes, shoes, buttons, cut animal bones, hardware, household items, barrels, etc.; thick layers of burned building debris (charcoal, nails, fused glass, burned plaster, burned dishes); wood structural remains (building, ship, wharf); clay roof/floor tiles; stone walls or footings; or gravestones.

The ALERT sheet shall also include that the project applicant must keep the Muwekma Ohlone and other consulting tribes, if needed, informed on the construction schedule of the proposed project and allow a Native American monitor to be present during ground-disturbing activities. In the event of the discovery of ancestral heritage cultural features and/or artifacts, the Muwekma Ohlone, and, if needed, other consulting tribes, shall also be notified.

Prior to any soil-disturbing activities, each contractor shall be responsible for ensuring that the ALERT sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, and supervisory personnel. The ALERT sheet shall also be posted in a visible location at the project site

## **PALEONTOLOGICAL RESOURCES – DISCOVERY DURING CONSTRUCTION**

Pursuant to California Environmental Quality Act Guidelines (CEQA) Guidelines Section 15064.5(f), in the event that any historic or precontact subsurface cultural resources are discovered during ground-disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find. In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented.

In the event of excavation of paleontological resources, the project applicant shall submit an excavation plan prepared by a qualified paleontologist to the City for review and approval. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by a qualified paleontologist, as appropriate, according to current professional standards and at the expense of the project applicant.

## **ARCHAEOLOGICAL RESOURCES – DISCOVERY DURING CONSTRUCTION**

If any find is determined by the Native American monitor to be of cultural importance, appropriate avoidance measures recommended by the monitor and approved by the City shall be followed, unless avoidance is determined infeasible by the City. Should Native American cultural resources be identified during ground disturbance, the project applicant shall consider installation of a plaque or an educational display honoring the history and heritage of the tribe for the future residents living at the proposed project.

## **DATA RECOVERY OF ARCHAEOLOGICAL RESOURCES**

In the event of data recovery of archaeological resources, the project applicant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified archaeologist for review and approval by the City. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if

nondestructive methods are practicable. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant. The project applicant shall implement the ARDTP at his/her expense.

### **HUMAN REMAINS – DISCOVERY DURING CONSTRUCTION**

Pursuant to CEQA Guidelines Section 15064.5(e)(1), in the event that human skeletal remains are uncovered at the project site during construction activities, all work shall immediately halt and the project applicant shall notify the City and the Alameda County Coroner. If the County Coroner determines that an investigation of the cause of death is required or that the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made. In the event that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of Section 7050.5 of the California Health and Safety Code. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance, and avoidance measures (if applicable) shall be completed expeditiously and at the expense of the project applicant.

Should any Native American human remains be discovered during the course of project construction, the project applicant shall allow the tribe to coordinate with the qualified archaeologist on the exposure, removal, documentation, analysis, writing of a final report, and reburial of the tribe's ancestral remains, which shall occur as close to the location of discovery as practical.

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APPENDIX J  
NOISE ASSESSMENT

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# HUD Noise Assessment

## 401 Santa Clara Ave Residential

City of Oakland, California

September 13, 2024

Project #240501

Prepared for:



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## INTRODUCTION

The 401 Santa Clara Ave Residential project is located in the City of Oakland, California. The project includes the rehabilitation of an existing apartment building. Surrounding land uses include multifamily residential.

**Figure 1** shows the proposed project site plan. **Figure 2** shows an aerial view of the project site and noise measurement locations.

## ACOUSTIC FUNDAMENTALS AND TERMINOLOGY

### BACKGROUND INFORMATION ON NOISE

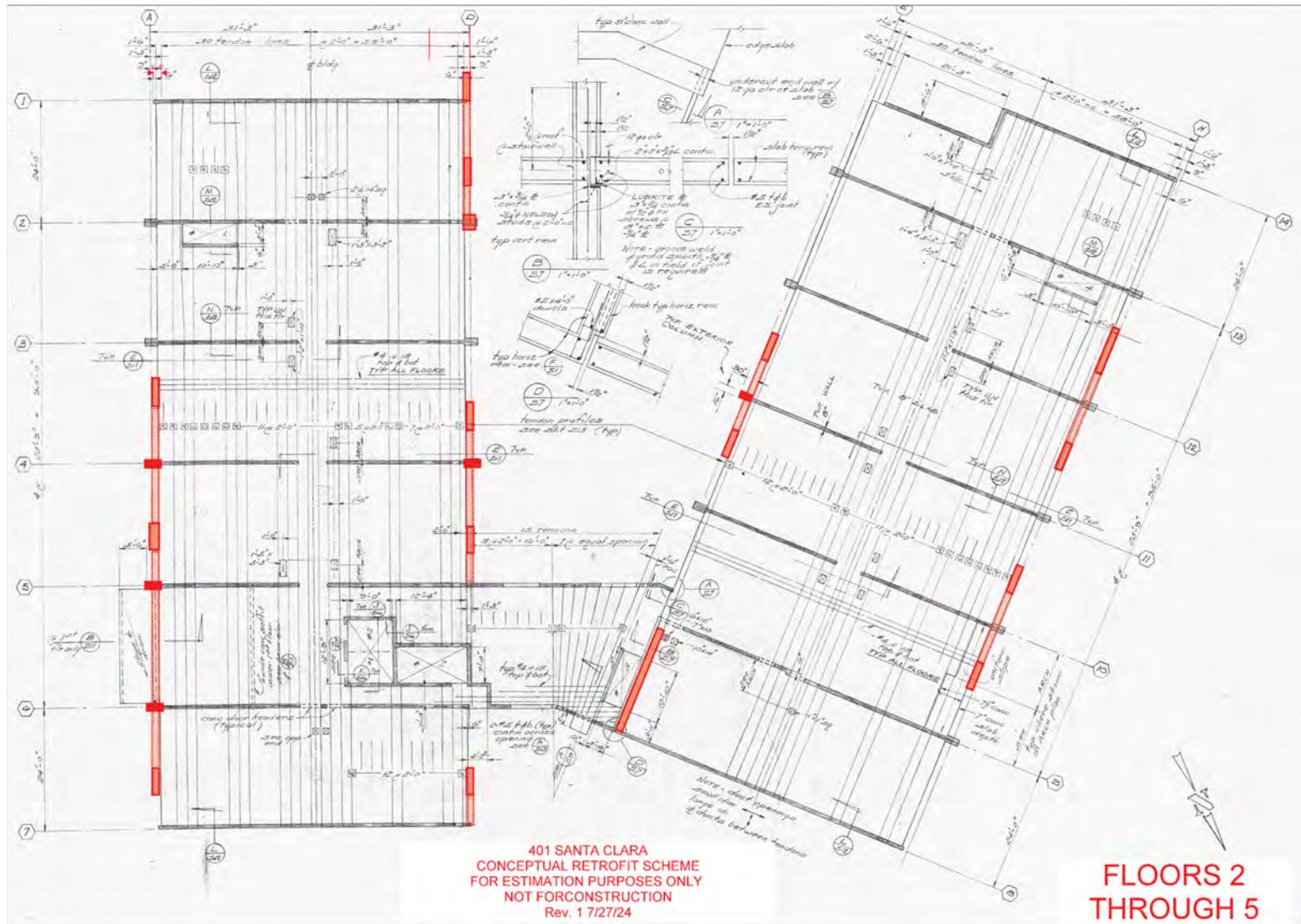
#### *Fundamentals of Acoustics*

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. C-weighted (dBC) noise levels are also commonly used for monitoring noise from music as the C-weighting is more sensitive to low-frequency noise (a.k.a. bass).



## 401 Santa Clara Avenue Residential

City of Oakland, California

Figure 1

Project Site Plan





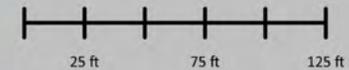
# 401 Santa Clara Avenue Residential

City of Oakland, California

Figure 2  
Noise Measurement Sites

### Legend

-  Project Site
-  Noise Measurement Site - Long Term



Projection: UTM Zone 10 / WGS84 / meters  
Rev. Date: 06/07/2024



The decibel scale is logarithmic, not linear. In other words, two sound levels 10-dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10-dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound, and twice as loud as a 60 dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool is the average, or equivalent, sound level ( $L_{eq}$ ), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The  $L_{eq}$  is the foundation of the composite noise descriptor,  $L_{dn}$ , and shows very good correlation with community response to noise.

The day/night average level (DNL or  $L_{dn}$ ) is based upon the average noise level over a 24-hour day, with a +10-decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because  $L_{dn}$  represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

**Table 1** lists several examples of the noise levels associated with common situations. **Appendix A** provides a summary of acoustical terms used in this report.

**TABLE 1: TYPICAL NOISE LEVELS**

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft.)	--100--	
Gas Lawn Mower at 1 m (3 ft.)	--90--	
Diesel Truck at 15 m (50 ft.), at 80 km/hr. (50 mph)	--80--	Food Blender at 1 m (3 ft.) Garbage Disposal at 1 m (3 ft.)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft.)	--70--	Vacuum Cleaner at 3 m (10 ft.)
Commercial Area Heavy Traffic at 90 m (300 ft.)	--60--	Normal Speech at 1 m (3 ft.)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

Source: Caltrans, *Technical Noise Supplement, Traffic Noise Analysis Protocol*. September, 2013.

### ***Effects of Noise on People***

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction
- Interference with activities such as speech, sleep, and learning
- Physiological effects such as hearing loss or sudden startling

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it.

With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1-dBA cannot be perceived;
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;
- A change in level of at least 5-dBA is required before any noticeable change in human response would be expected; and
- A 10-dBA change is subjectively heard as approximately a doubling in loudness and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6-dB per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

**EXISTING AMBIENT NOISE LEVELS**

The existing noise environment in the project area is primarily defined by traffic on I-580. Secondary noise sources include Santa Clara Avenue. To quantify the existing ambient noise environment in the project vicinity, Saxelby Acoustics conducted a continuous (24-hr.) noise level measurement at one location on the project site. Noise measurement locations are shown on **Figure 2**. A summary of the noise level measurement survey results is provided in **Table 2**. **Appendix B** contains the complete results of the noise monitoring.

The sound level meter was programmed to record the maximum, median, and average noise levels at each site during the survey. The maximum value, denoted  $L_{max}$ , represents the highest noise level measured. The average value, denoted  $L_{eq}$ , represents the energy average of all of the noise received by the sound level meter microphone during the monitoring period. The median value, denoted  $L_{50}$ , represents the sound level exceeded 50 percent of the time during the monitoring period.

A Larson Davis Laboratories (LDL) model 820 integrating sound level meter was used for the ambient noise level measurement survey. The meter was calibrated before and after use with a CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

**TABLE 2: SUMMARY OF EXISTING BACKGROUND NOISE MEASUREMENT DATA**

Location	Date	$L_{dn}$	Daytime $L_{eq}$	Daytime $L_{50}$	Daytime $L_{max}$	Nighttime $L_{eq}$	Nighttime $L_{50}$	Nighttime $L_{max}$
LT-1: Southern Project Boundary	6/6/24	73	69	67	87	65	59	86

- All values shown in dBA
- Daytime hours: 7:00 a.m. to 10:00 p.m.
- Nighttime Hours: 10:00 p.m. to 7:00 a.m.
- Source: Saxelby Acoustics, 2024.

## REGULATORY CONTEXT

### HUD CRITERIA

The U.S. Department of Housing and Urban Development (HUD) establishes an acceptable exterior noise environment of 65 dBA  $L_{dn}$  (also expressed as “DNL” or Day/Night Level) at exterior areas of residential uses. Noise levels in the 65-75 dBA DNL range are considered Normally Unacceptable. However, 65-75 dBA DNL may be allowed, but require special approvals and additional sound attenuation measures. Such measures include a 5 dBA improvement to the building façade noise level reduction (NLR) for exterior noise levels in the 65-70 dBA range, and an improvement of 10 dBA for exterior noise levels in the 70-75 dBA range. The improvement is required in addition to “attenuation provided by buildings as commonly constructed in the area and requiring open windows for ventilation.”

Noise levels exceeding 75 dBA DNL are considered unacceptable and may only be allowed under special circumstances. In addition, HUD established an interior noise level goal of 45 dBA DNL, while assuming a typical exterior-to-interior NLR of 20 dBA.

## EVALUATION OF TRANSPORTATION NOISE SOURCES ON THE PROJECT SITE

### ON-SITE TRANSPORTATION NOISE PREDICTION METHODOLOGY

Saxelby Acoustics measured an exterior transportation noise level of 73 dBA  $L_{dn}$  at noise measurement site LT-1. This level was used to calibrate the SoundPLAN noise prediction model. Inputs to the model included sound power levels for the adjacent roadways, existing and proposed buildings, terrain type, and locations of sensitive receptors. Future transportation noise levels were calculated by assuming a 1% per year increase in traffic volumes on I-580 and Santa Clara Avenue. The results of this analysis are shown on **Figure 3**.

As shown in **Figure 3**, transportation noise levels up to 73 dBA  $L_{dn}$  are predicted at the façades of the project building facing I-580. This is greater than the HUD 65 dBA  $L_{dn}$  noise level standard and additional noise level reduction measures are required. For the normally unacceptable range of 70-75 dBA  $L_{dn}$ , an additional 10 dBA interior noise level reduction is required. The total noise level reduction required is 30 dBA.

# 401 Santa Clara Avenue Residential

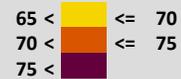
City of Oakland, California

Figure 3

Transportation Noise  
Ldn dBA



Noise Level, dBA



Legend



Scale 1:80



## ANALYSIS OF INTERIOR NOISE CONTROL MEASURES

In order to calculate interior noise levels for the actual project construction, it is necessary to determine the noise reduction provided by the residential building façades. This may be calculated by using a measured A-weighted noise frequency spectrum for traffic. The composite transmission loss and resulting noise level in the receiving room is first determined. After correcting for room absorption, the overall noise level in the room is calculated.

Based upon the exterior transportation noise levels at the project building façades of 73 dBA  $L_{dn}$ , an exterior-to-interior noise level reduction of 30 dBA would be required to meet HUD standards. **Figure 4** shows the required interior noise control measures. **Appendix C** shows the complete exterior-to-interior noise calculations.



# 401 Santa Clara Avenue Residential

City of Oakland, California

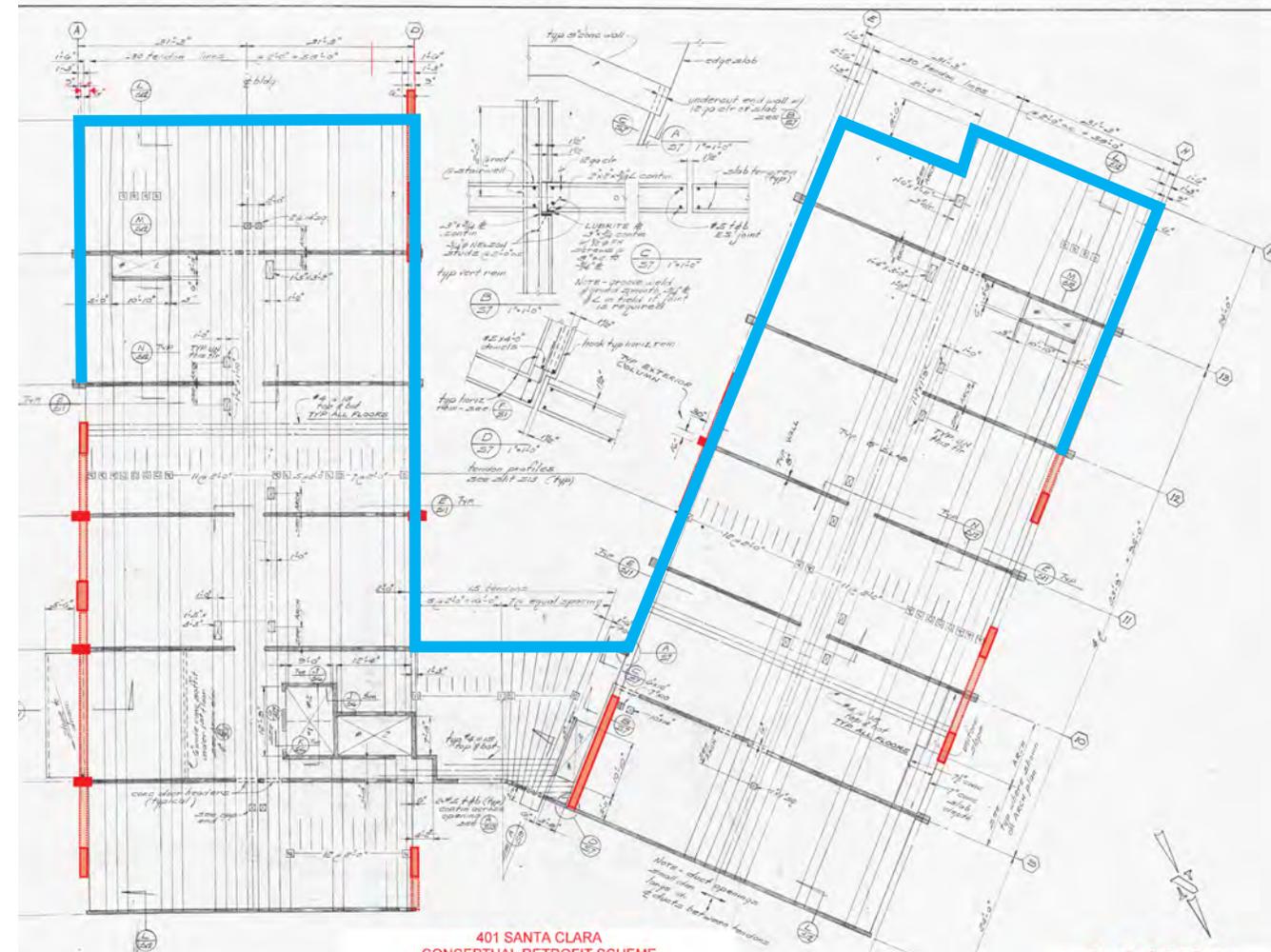
Figure 4

Interior Noise Control Measures

## Legend

 Indicated Lot Facades Needing Acoustic Upgrades

Note: Standard construction is sufficient for project units that do not need acoustical upgrades. Standard construction assumes a minimum STC rating of 29 for exterior window assemblies.



401 SANTA CLARA  
CONCEPTUAL RETROFIT SCHEME

### Interior Noise Control Measures (Required for the Indicated Lots Facades Directly Adjacent to Freeway/Roadways)

- Glazing shall have a sound transmission class (STC) rating of 36 minimum;
- Exterior finish shall be stucco with sheathing or system with equivalent weight;
- Interior gypsum at exterior walls shall be 5/8";
- Ceiling gypsum shall be 5/8";
- Mechanical ventilation shall be installed in all residential uses to allow residents to keep doors and windows closed, as desired for acoustical isolation;
- No PTAC's shall be used.



## CONCLUSIONS

The proposed project is predicted to meet HUD exterior and interior noise level standards assuming the following requirements are incorporated into design for the new residential building portions of the project:

- The affected building façades of the project shall include the following noise control measures, as outlined on **Figure 4**:
  - Glazing shall have a minimum sound transmission class (STC) rating of 36;
  - Building façades shall include use of stucco with sheathing or cement fiber board with sheathing;
  - Interior gypsum wallboards at exterior walls shall be 5/8”;
  - Ceiling gypsum shall be 5/8”;
  - Flooring shall be vinyl plank or carpeting;
  - Saxelby Acoustics recommends that mechanical ventilation penetrations for exhaust fans not face toward I-580. Where feasible, these vents should be routed towards the opposite side of the building to minimize sound intrusion to sensitive areas of the buildings.  
Where vents must face toward I-580, it is recommended that the duct work be increased in length and make as many “S” turns as feasible prior to exiting the dwelling. This separates the openings between the noise source and the living space with a long circuitous route. Each time the sound turns a corner, it is reduced slightly. Flexible duct work is preferred ducting for this noise mitigation. Where the vent exits the building, a spring-loaded flap with a gasket should be installed to reduce sound entering the duct work when the vent is not in use.
  - Mechanical ventilation shall be provided to allow occupants to keep doors and windows closed for acoustic isolation;
  - No PTACs shall be used;
  - In lieu of these measures, an interior noise control report may be prepared by a qualified acoustic engineer demonstrating that the proposed building construction would achieve the HUD interior noise reduction requirement of 30 dBA.

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## Appendix A: Acoustical Terminology

<b>Acoustics</b>	The science of sound.
<b>Ambient Noise</b>	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
<b>ASTC</b>	Apparent Sound Transmission Class. Similar to STC but includes sound from flanking paths and correct for room reverberation. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
<b>Attenuation</b>	The reduction of an acoustic signal.
<b>A-Weighting</b>	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
<b>Decibel or dB</b>	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
<b>CNEL</b>	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by +5 dBA and nighttime hours weighted by +10 dBA.
<b>DNL</b>	See definition of Ldn.
<b>IIC</b>	Impact Insulation Class. An integer-number rating of how well a building floor attenuates impact sounds, such as footsteps. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
<b>Frequency</b>	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz (Hz).
<b>Ldn</b>	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
<b>Leq</b>	Equivalent or energy-averaged sound level.
<b>Lmax</b>	The highest root-mean-square (RMS) sound level measured over a given period of time.
<b>L(n)</b>	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L50 is the sound level exceeded 50% of the time during the one-hour period.
<b>Loudness</b>	A subjective term for the sensation of the magnitude of sound.
<b>NIC</b>	Noise Isolation Class. A rating of the noise reduction between two spaces. Similar to STC but includes sound from flanking paths and no correction for room reverberation.
<b>NNIC</b>	Normalized Noise Isolation Class. Similar to NIC but includes a correction for room reverberation.
<b>Noise</b>	Unwanted sound.
<b>NRC</b>	Noise Reduction Coefficient. NRC is a single-number rating of the sound-absorption of a material equal to the arithmetic mean of the sound-absorption coefficients in the 250, 500, 1000, and 2,000 Hz octave frequency bands rounded to the nearest multiple of 0.05. It is a representation of the amount of sound energy absorbed upon striking a particular surface. An NRC of 0 indicates perfect reflection; an NRC of 1 indicates perfect absorption.
<b>RT60</b>	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
<b>Sabin</b>	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 Sabin.
<b>SEL</b>	Sound Exposure Level. SEL is a rating, in decibels, of a discrete event, such as an aircraft flyover or train pass by, that compresses the total sound energy into a one-second event.
<b>SPC</b>	Speech Privacy Class. SPC is a method of rating speech privacy in buildings. It is designed to measure the degree of speech privacy provided by a closed room, indicating the degree to which conversations occurring within are kept private from listeners outside the room.
<b>STC</b>	Sound Transmission Class. STC is an integer rating of how well a building partition attenuates airborne sound. It is widely used to rate interior partitions, ceilings/floors, doors, windows and exterior wall configurations. The STC rating is typically used to rate the sound transmission of a specific building element when tested in laboratory conditions where flanking paths around the assembly don't exist. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
<b>Threshold of Hearing</b>	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
<b>Threshold of Pain</b>	Approximately 120 dB above the threshold of hearing.
<b>Impulsive</b>	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
<b>Simple Tone</b>	Any sound which can be judged as audible as a single pitch or set of single pitches.

## Appendix B: Continuous Ambient Noise Measurement Results



**Appendix B1: Continuous Noise Monitoring Results**

Site: LT-1

Project: 401 Santa Clara Avenue Residential

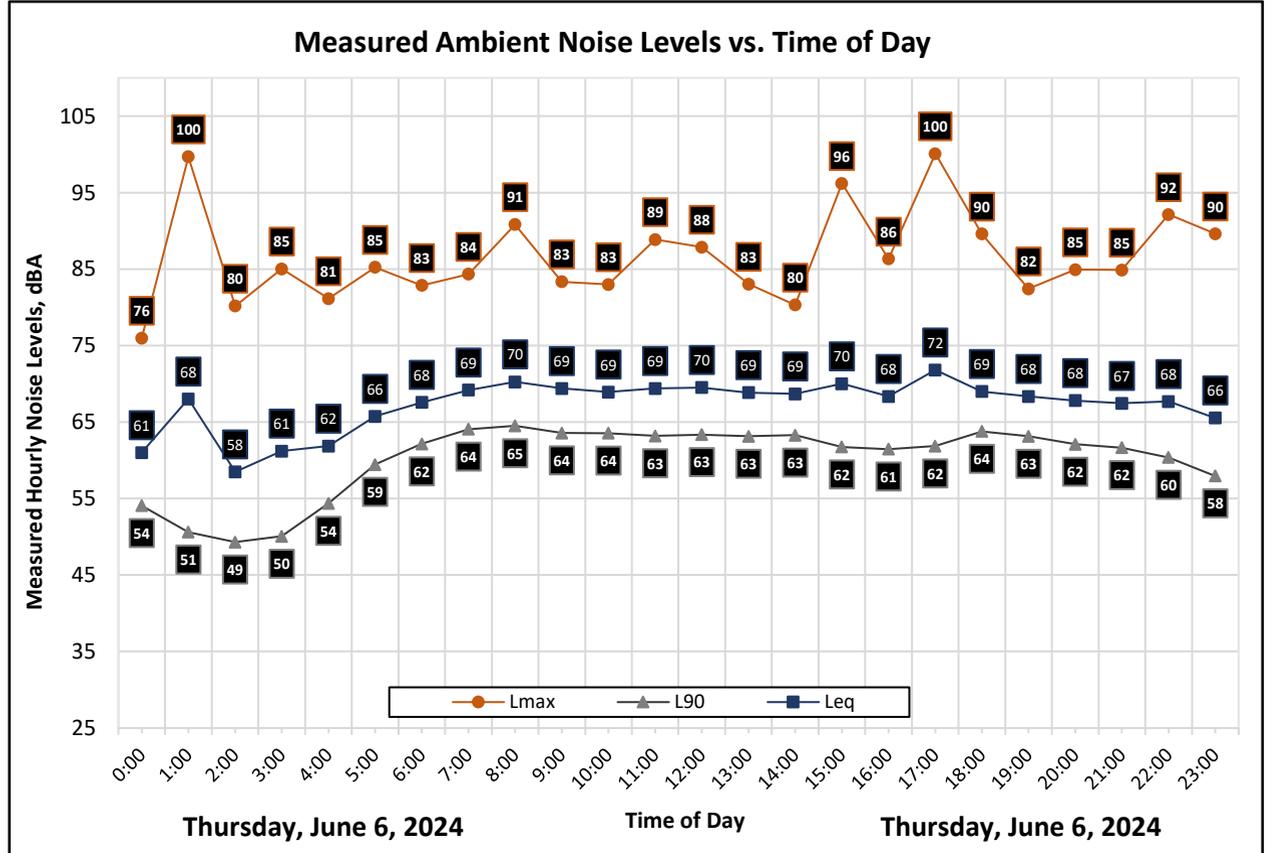
Meter: LDL 820-5

Location: Southern Project Boundary

Calibrator: CAL200

Coordinates: (37.8124634, -122.2490484)

Date	Time	Measured Level, dBA			
		L <sub>eq</sub>	L <sub>max</sub>	L <sub>50</sub>	L <sub>90</sub>
Thursday, June 6, 2024	0:00	61	76	58	54
Thursday, June 6, 2024	1:00	68	100	55	51
Thursday, June 6, 2024	2:00	58	80	54	49
Thursday, June 6, 2024	3:00	61	85	55	50
Thursday, June 6, 2024	4:00	62	81	59	54
Thursday, June 6, 2024	5:00	66	85	63	59
Thursday, June 6, 2024	6:00	68	83	65	62
Thursday, June 6, 2024	7:00	69	84	67	64
Thursday, June 6, 2024	8:00	70	91	69	65
Thursday, June 6, 2024	9:00	69	83	68	64
Thursday, June 6, 2024	10:00	69	83	68	64
Thursday, June 6, 2024	11:00	69	89	68	63
Thursday, June 6, 2024	12:00	70	88	68	63
Thursday, June 6, 2024	13:00	69	83	67	63
Thursday, June 6, 2024	14:00	69	80	67	63
Thursday, June 6, 2024	15:00	70	96	66	62
Thursday, June 6, 2024	16:00	68	86	67	61
Thursday, June 6, 2024	17:00	72	100	67	62
Thursday, June 6, 2024	18:00	69	90	68	64
Thursday, June 6, 2024	19:00	68	82	67	63
Thursday, June 6, 2024	20:00	68	85	65	62
Thursday, June 6, 2024	21:00	67	85	65	62
Thursday, June 6, 2024	22:00	68	92	64	60
Thursday, June 6, 2024	23:00	66	90	61	58



Statistics	Leq	Lmax	L50	L90
Day Average	69	87	67	63
Night Average	65	86	59	55
Day Low	67	80	65	61
Day High	72	100	69	65
Night Low	58	76	54	49
Night High	68	100	65	62
Ldn	73	Day %		81
CNEL	73	Night %		19

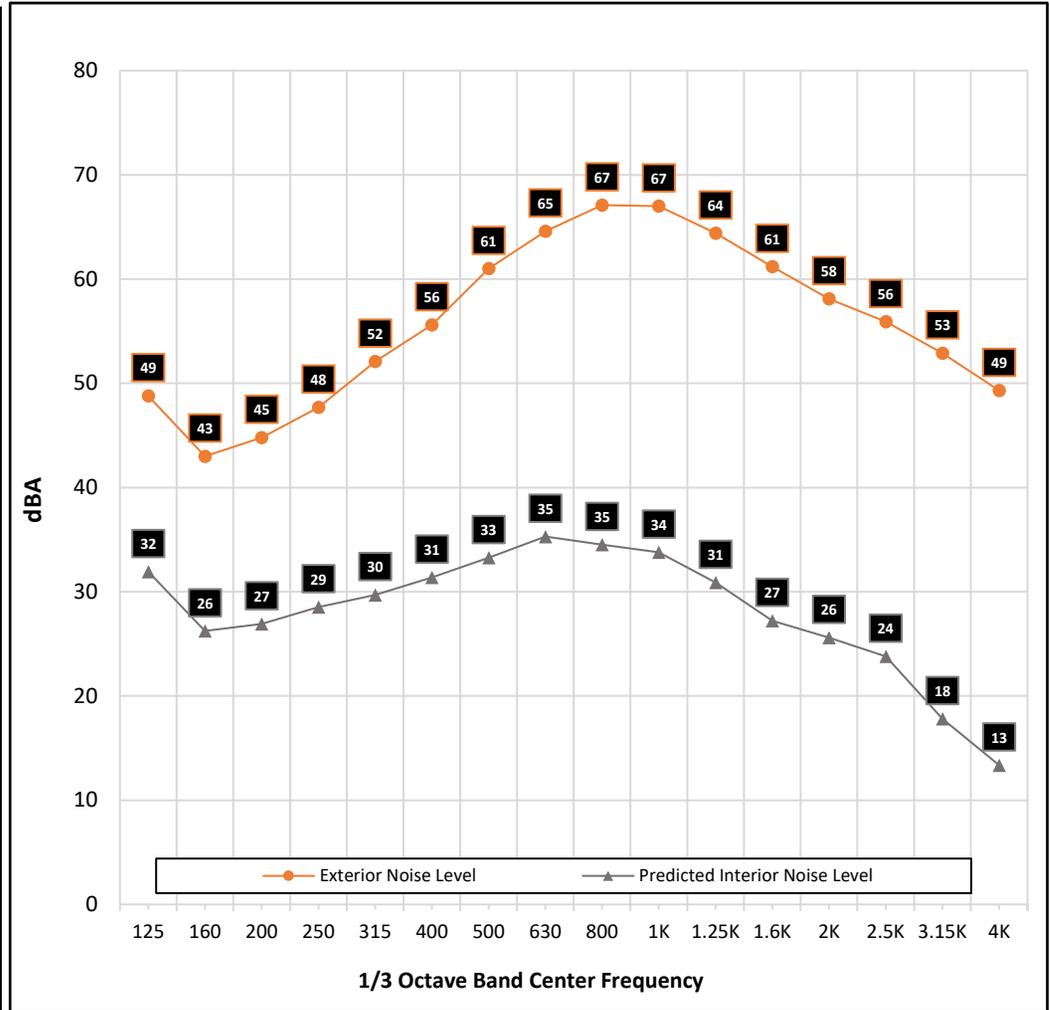


## **Appendix C: Exterior to Interior Noise Reduction Calculations**

# Appendix C1: Interior Noise Calculation Sheet

**Project: 401 Santa Clara Ave HUD**  
**Room Description: Residential Unit**

Inputs	
Parallel Exterior level, dBA:	73.0 Ldn
Correction Factor, dBA:	5.0
Noise Source:	Freeway Traffic
Room Length, ft:	24.0
Room Width, ft:	24.0
Room Height, ft:	8.0
Transmitting Panel Length, ft:	48.0
Glazing Area, ft:	117.3
Ceiling Finish:	Gyp Board
Ceiling, sf:	576
Wall Finish 1:	Gyp Board
Wall Finish 1, sf:	650.7
Wall Finish 2:	Glass
Wall Finish 2, sf:	117.3
Floor:	Vinyl Plank
Floor, sf:	576
Misc. Finish:	Soft Furnishings
Misc. Finish, sf:	50
Transmitting Element 1:	Wall - 3-coat Stucco Wall (Egen)
Element 1, sf:	267
Transmitting Element 2:	Glazing - STC 36
Element 2, sf:	117.3
Transmitting Element 3:	
Element 3, sf:	
Transmitting Element 4:	
Element 4, sf:	
<b>Predicted Interior Noise Level, dBA: 43</b>	
<b>Noise Reduction, dBA: -30</b>	



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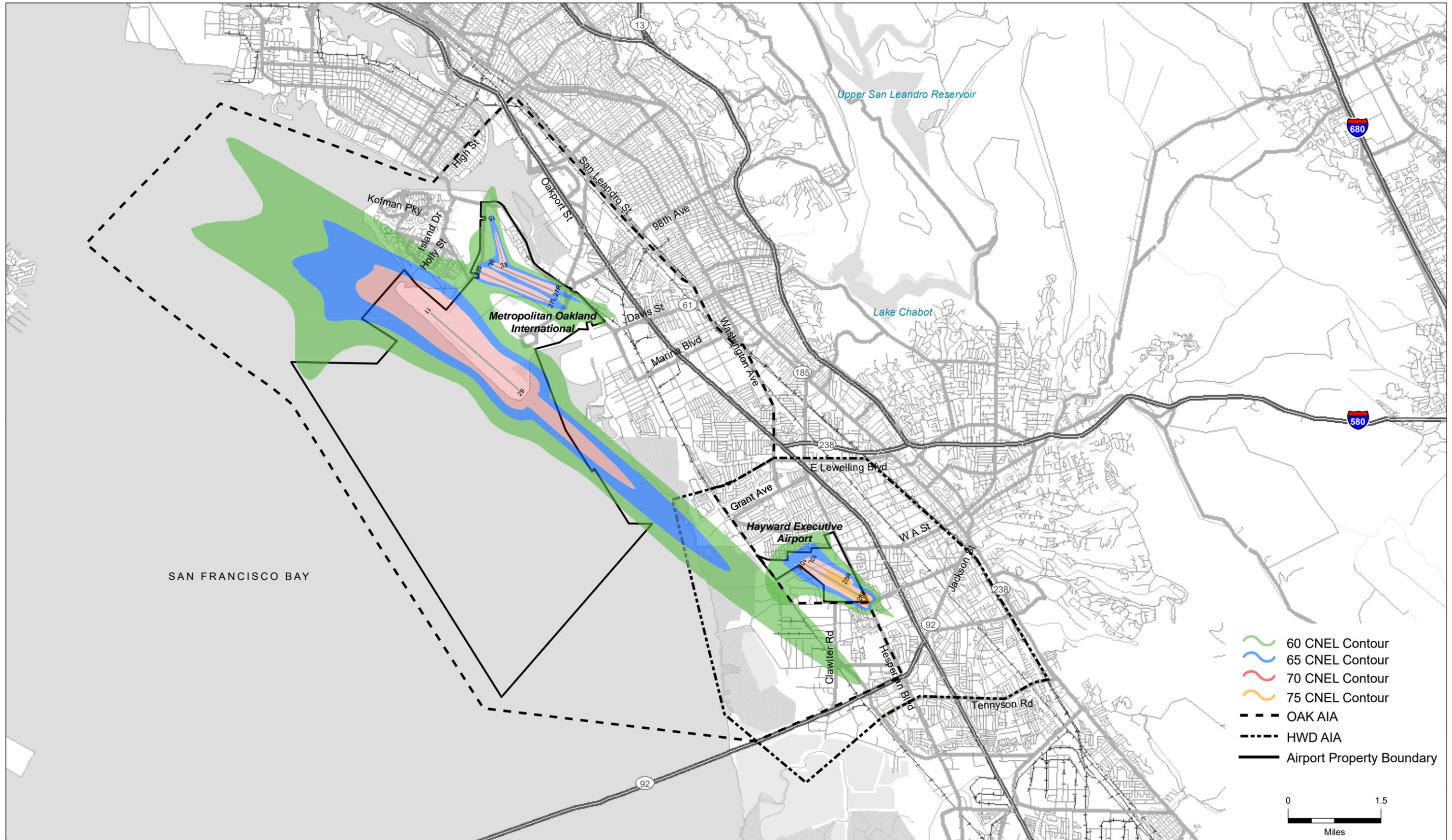
APPENDIX K  
ADDITIONAL SOURCES

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1. Alameda County. *Oakland International Airport Airport Land Use Compatibility Plan*. Adopted December 2010. (Appendix K)
2. California Air Resources Board. *Mobile Source Emissions Inventory*. Available at <https://arb.ca.gov/emfac/emissions-inventory>. Accessed August 2024. (Appendix K)
3. California Department of Fish and Wildlife. *BIOS6*. Available at: <https://apps.wildlife.ca.gov/bios6/>. Accessed September 2024. (Appendix K)
4. California Department of Transportation. *Traffic Volumes: Annual Average Daily Traffic (AADT) 2022*. Available at: <https://dot.ca.gov/programs/traffic-operations/census>. Accessed December 2024. (Appendix K)
5. Federal Emergency Management Agency. *FEMA's National Flood Hazard Layer (NFHL) Viewer*. Available at: <https://www.fema.gov/flood-maps/national-flood-hazard-layer>. Accessed August 2024. (Appendix K)
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7. Swickard, Luke, Project Manager, Ninyo & Moore. Personal communication [email] with Rod Stinson, Vice President, Raney Planning and Management, Inc. October 31, 2024. (Appendix K)
8. U.S. Department of Agriculture, Natural Resources Conservation Service. *Web Soil Survey*. Available at: <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. Accessed September 2024. (Appendix K)
9. U.S. Department of Housing and Urban Development. *Acceptable Separation Distance (ASD) Electronic Assessment Tool*. Available at: <https://www.hudexchange.info/programs/environmental-review/asd-calculator/>. Accessed September 2024. (Appendix K)
10. U.S. Department of Housing and Urban Development. *Acceptable Separation Distance (ASD) Electronic Assessment Tool*. Output forms. (Appendix K)
11. U.S. Department of Housing and Urban Development. *DNL Calculator*. Available at: <https://www.hudexchange.info/environmental-review/dnl-calculator/>. Accessed September 2024. (Appendix K)
12. U.S. Environmental Protection Agency. *EJScreen*. Available at: <https://www.epa.gov/ejscreen>. Accessed September 2024. (Appendix K)
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15. U.S. Fish and Wildlife Service. *Coastal Barrier Resources Act*. Available at: <https://www.fws.gov/program/coastal-barrier-resources-act>. Accessed September 2024. (Appendix K)
16. U.S. Fish and Wildlife Service. *IPaC: Information for Planning and Consultation*. Available at: <https://ecos.fws.gov/ipac/>. Accessed September 2024. (Appendix K)
17. U.S. Fish and Wildlife Service. *National Wetlands Inventory*. Available at: <https://www.fws.gov/wetlands/data/Mapper.html>. Accessed September 2024. (Appendix K)



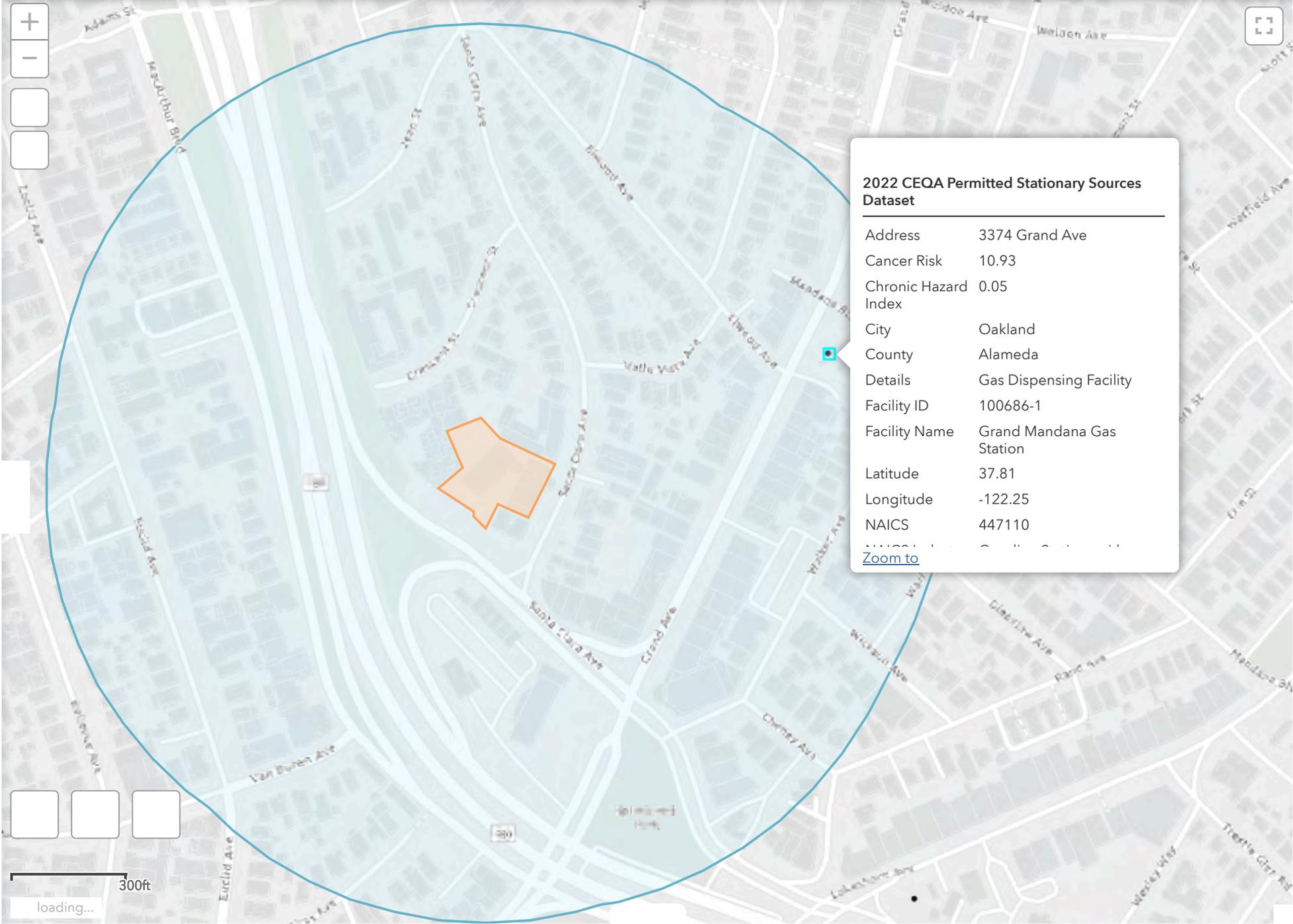


# Stationary Source Screening Map



Map navigation controls:

- Zoom in (+)
- Zoom out (-)
- Map style selection (3 buttons)



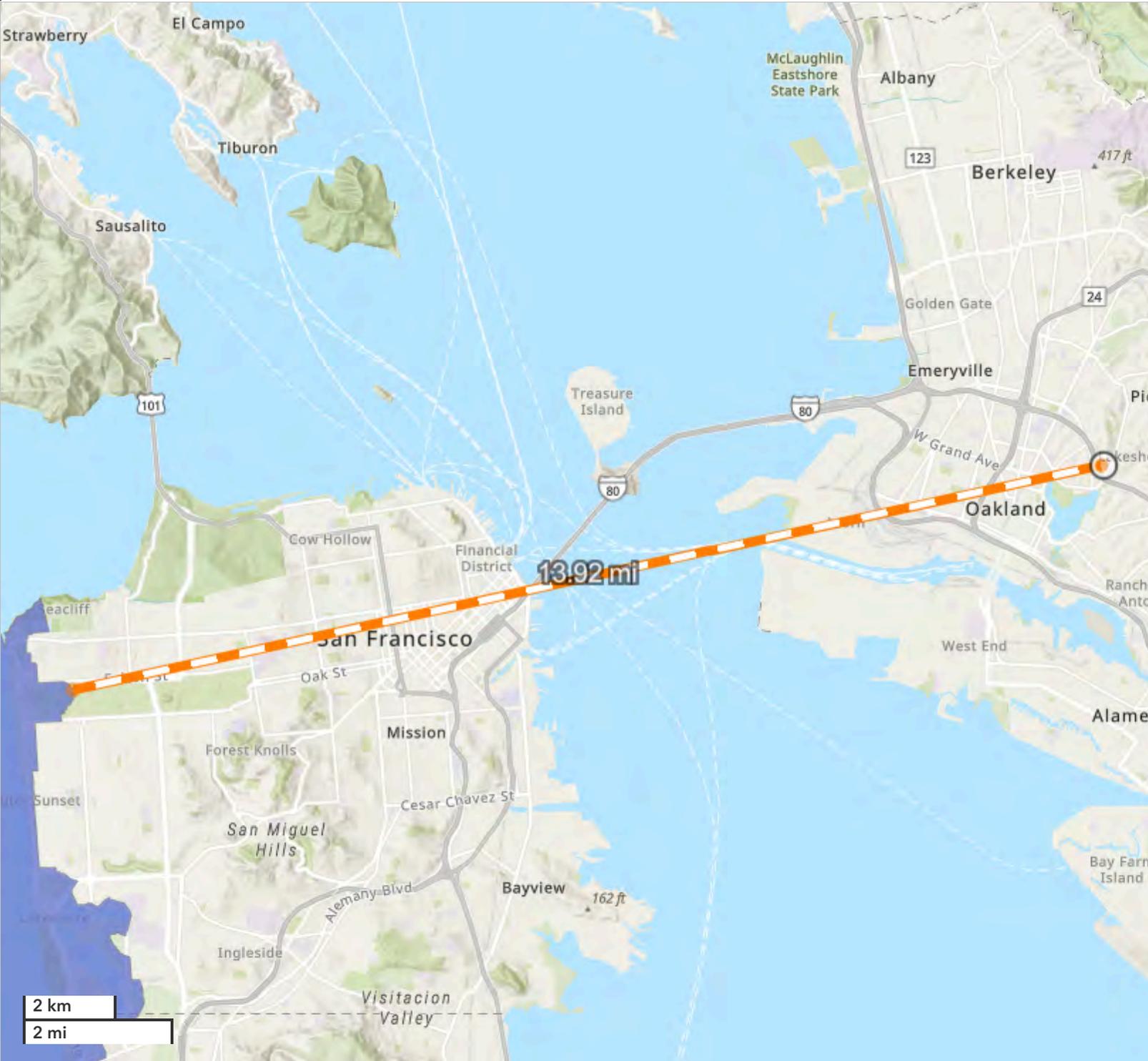
**2022 CEQA Permitted Stationary Sources Dataset**

Address	3374 Grand Ave
Cancer Risk	10.93
Chronic Hazard Index	0.05
City	Oakland
County	Alameda
Details	Gas Dispensing Facility
Facility ID	100686-1
Facility Name	Grand Mandana Gas Station
Latitude	37.81
Longitude	-122.25
NAICS	447110
NAICS Code	447110
<a href="#">Zoom to</a>	



300ft

loading...



Measurement Tool



Unit

Imperial

Distance

13.92 mi

New measurement



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# Traffic Census Program

**Traffic Counts** or Traffic Volumes are for the State Highway System only (in various formats).

Highways are signed as **Interstate**, **California State Route**, or **United States Route**. See examples below:



Traffic count information for city and county streets may be found at the city Traffic Engineering or Public Works Department, or the Community Development Office in the area where the street is located.

[Explanation of Traffic Counts \(Back & Ahead Leg Diagrams\) \(PDF\)](#)

## Traffic Counts are summarized annually into four categories:

Traffic Volumes: Annual Average Daily Traffic (AADT) For ALL vehicles on California State Highways All files are .XLSX				
<a href="#">2021 AADT</a>	<a href="#">2022 AADT</a>	N/A	N/A	N/A
<a href="#">2016 AADT</a>	<a href="#">2017 AADT</a>	<a href="#">2018 AADT</a>	<a href="#">2019 AADT</a>	<a href="#">2020 AADT</a>
N/A	N/A	<a href="#">2013 AADT</a>	<a href="#">2014 AADT</a>	<a href="#">2015 AADT</a>

by Webpage: [2017](#)

Truck Traffic: Annual Average Daily Truck Traffic For truck traffic on California State Highways All files are .XLSX				
<a href="#">2021 AADT Truck</a>	<a href="#">2022 AADT Truck</a>	N/A	N/A	N/A
<a href="#">2016 AADT Truck</a>	<a href="#">2017 AADT Truck</a>	<a href="#">2018 AADT Truck</a>	<a href="#">2019 AADT Truck</a>	<a href="#">2020 AADT Truck</a>
N/A	N/A	<a href="#">2013 AADT Truck</a>	<a href="#">2014 AADT Truck</a>	<a href="#">2015 AADT Truck</a>

Ramp Volumes For ramp volumes on California State Freeways, by Caltrans District 2020-2017 files are .XLSX and 2016 files are .PDF					
<b>District 1</b>	<b>District 2</b>	<b>District 3</b>	<b>District 4</b>	<b>District 5</b>	<b>District 6</b>
<a href="#">2022 D1</a>	<a href="#">2022 D2</a>	<a href="#">2022 D3</a>	<a href="#">2022 D4</a>	<a href="#">2022 D5</a>	<a href="#">2022 D6</a>
<a href="#">2021 D1</a>	<a href="#">2021 D2</a>	<a href="#">2021 D3</a>	<a href="#">2021 D4</a>	<a href="#">2021 D5</a>	<a href="#">2021 D6</a>
<a href="#">2020 D1</a>	<a href="#">2020 D2</a>	<a href="#">2020 D3</a>	<a href="#">2020 D4</a>	<a href="#">2020 D5</a>	<a href="#">2020 D6</a>
<a href="#">2019 D1</a>	<a href="#">2019 D2</a>	<a href="#">2019 D3</a>	<a href="#">2019 D4</a>	<a href="#">2019 D5</a>	<a href="#">2019 D6</a>

<a href="#">2018 D1</a>	<a href="#">2018 D2</a>	<a href="#">2018 D3</a>	<a href="#">2018 D4</a>	<a href="#">2018 D5</a>	<a href="#">2018</a>
<a href="#">2017 D1</a>	<a href="#">2017 D2</a>	<a href="#">2017 D3</a>	<a href="#">2017 D4</a>	<a href="#">2017 D5</a>	<a href="#">2017</a>
<a href="#">2016 D1</a>	<a href="#">2016 D2</a>	<a href="#">2016 D3</a>	<a href="#">2016 D4</a>	<a href="#">2016 D5</a>	<a href="#">2016</a>
<b>District 7</b>					
<a href="#">2022 D7</a>	<a href="#">2022 D8</a>	<a href="#">2022 D9</a>	<a href="#">2022 D10</a>	<a href="#">2022 D11</a>	<a href="#">2022</a>
<a href="#">2021 D7</a>	<a href="#">2021 D8</a>	<a href="#">2021 D9</a>	<a href="#">2021 D10</a>	<a href="#">2021 D11</a>	<a href="#">2021</a>
<a href="#">2020 D7</a>	<a href="#">2020 D8</a>	<a href="#">2020 D9</a>	<a href="#">2020 D10</a>	<a href="#">2020 D11</a>	<a href="#">2020</a>
<a href="#">2019 D7</a>	<a href="#">2019 D8</a>	<a href="#">2019 D9</a>	<a href="#">2019 D10</a>	<a href="#">2019 D11</a>	<a href="#">2019</a>
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<a href="#">2016 D7</a>	<a href="#">2016 D8</a>	<a href="#">2016 D9</a>	<a href="#">2016 D10</a>	<a href="#">2016 D11</a>	<a href="#">2016</a>

<b>Peak Hour Volume Data</b>				
Hourly volume relationships and traffic monitoring sites on the State Highway System. Morning (AM) and evening (PM) peak periods are expressed as a percentage of AADT. All files are .XLSX				
<a href="#">2021</a>	<a href="#">2022</a>	N/A	N/A	N/A
<a href="#">2016</a>	<a href="#">2017</a>	<a href="#">2018</a>	<a href="#">2019</a>	<a href="#">2020</a>
N/A	N/A	N/A	<a href="#">2014</a>	<a href="#">2015</a>



- [Peak Hour Definitions K and D Factors \(PDF\)](#)



For questions regarding AADT reports, Ramp Volumes, or the Peak Hour Volume Data Reports above, please contact [Hasib Mohabbat](#) .

For AADT GIS data, visit the [Caltrans GIS Data webpage](#) .

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### Traffic Census Program

- [Traffic Census Homepage](#)
- [Monthly Vehicle Miles of Travel \(MVMT\)](#)
- [Traffic Counts \(Volumes\)](#)
- [Explanation of Traffic Counts \(PDF\)](#)
- [Traffic Volume Trends \(TVT\) FAQ](#)
- [Traffic Data FAQ \(PDF\)](#)

#### Related Resources

- [Planning Economic Forecasting](#)
- [Highway Performance Monitoring System \(HPMS\)](#)
- [GIS Data Library](#)
- [Mobility Performance Reporting and Analysis Program](#)
- [Performance Measurement System \(PeMS\)](#)
- [Weigh-In-Motion \(WIM\) Data](#)
- [Freight Mobility & Planning](#)

- [Quick Map](#)
- [FHWA Office of Travel Monitoring](#)

## Statewide Campaigns

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- ▶ [Adopt-A-Highway](#)
- ▶ [Amber Alert](#)
- ▶ [Be Work Zone Alert](#)
- ▶ [CAL FIRE](#)
- ▶ [Cal OES: Power Outage and Fire Recovery Resources](#)
- ▶ [California Climate Investments](#)
- ▶ [California Connected](#)
- ▶ [California Transportation Plan 2050](#)
- ▶ [Clean California](#)
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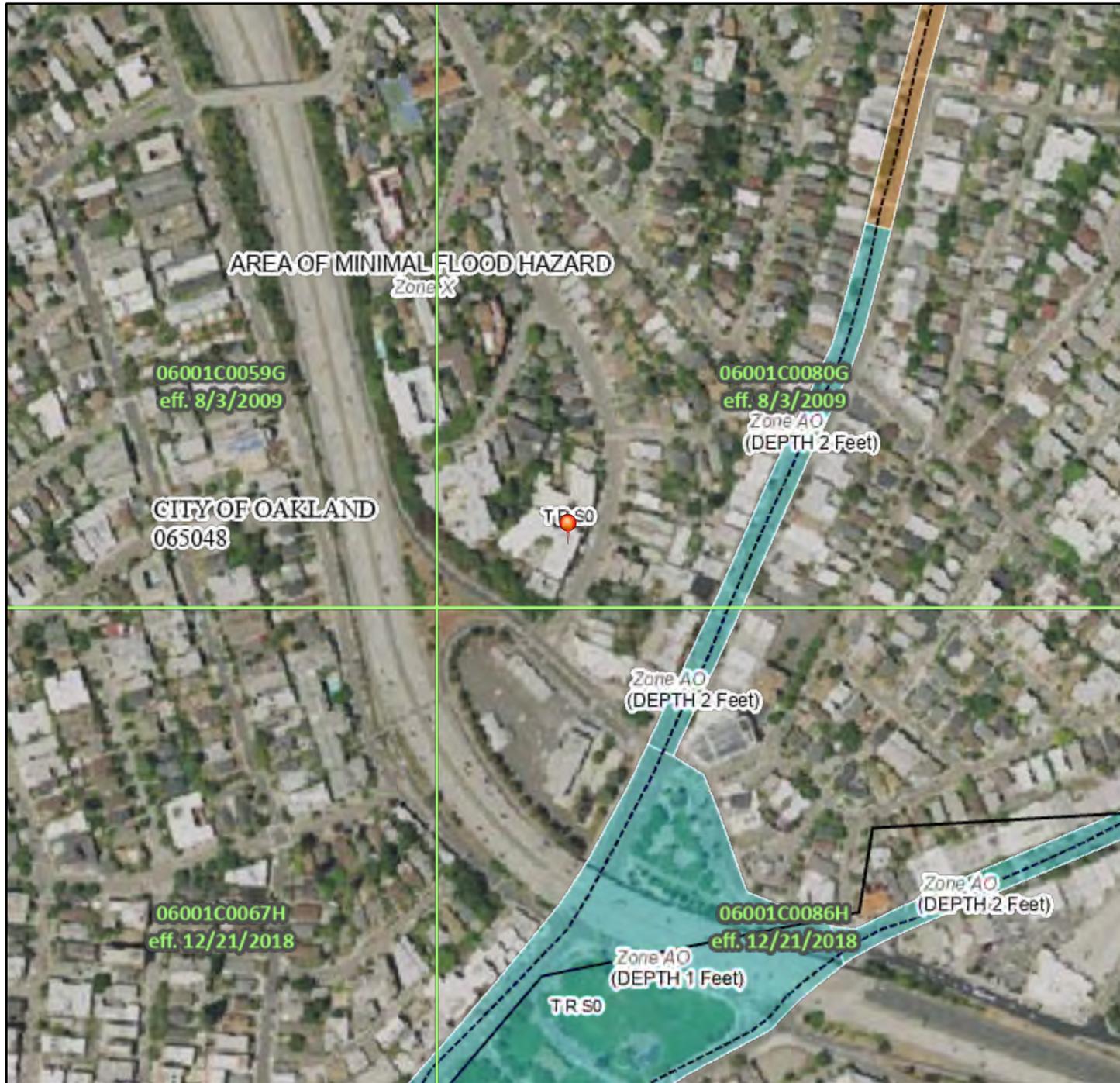
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# National Flood Hazard Layer FIRMMette



122°15'14"W 37°49'1"N



1:6,000 122°14'37"W 37°48'32"N

Basemap Imagery Source: USGS National Map 2023

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- |                                    |  |   |
|------------------------------------|--|---|
| <b>SPECIAL FLOOD HAZARD AREAS</b>  |  | Without Base Flood Elevation (BFE)<br>Zone A, V, A99  |
|                                    |  | With BFE or Depth Zone AE, AO, AH, VE, AR   |
|                                    |  | Regulatory Floodway   |
| <b>OTHER AREAS OF FLOOD HAZARD</b> |  | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X |
|                                    |  | Future Conditions 1% Annual Chance Flood Hazard Zone X  |
|                                    |  | Area with Reduced Flood Risk due to Levee. See Notes. Zone X  |
|                                    |  | Area with Flood Risk due to Levee Zone D  |
| <b>OTHER AREAS</b>                 |  | NO SCREEN Area of Minimal Flood Hazard Zone X   |
|                                    |  | Effective LOMRs   |
|                                    |  | Area of Undetermined Flood Hazard Zone D  |
| <b>GENERAL STRUCTURES</b>          |  | Channel, Culvert, or Storm Sewer  |
|                                    |  | Levee, Dike, or Floodwall   |
| <b>OTHER FEATURES</b>              |  | 20.2 Cross Sections with 1% Annual Chance   |
|                                    |  | 17.5 Water Surface Elevation  |
|                                    |  | Coastal Transect  |
|                                    |  | Base Flood Elevation Line (BFE)   |
|                                    |  | Limit of Study  |
|                                    |  | Jurisdiction Boundary   |
|                                    |  | Coastal Transect Baseline   |
|                                    |  | Profile Baseline  |
|                                    |  | Hydrographic Feature  |
| <b>MAP PANELS</b>                  |  | Digital Data Available  |
|                                    |  | No Digital Data Available   |
|                                    |  | Unmapped  |



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/8/2024 at 2:19 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

# Air Toxics Hot Spots Program

Risk Assessment Guidelines

Guidance Manual for  
Preparation of Health Risk  
Assessments

February 2015



Air, Community, and Environmental Research Branch  
Office of Environmental Health Hazard Assessment  
California Environmental Protection Agency

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*February 2015*

**Air Toxics Hot Spots Program  
Risk Assessment Guidelines**

**The Air Toxics Hot Spots Program Guidance Manual  
for Preparation of Health Risk Assessments**

Office of Environmental Health Hazard Assessment  
California Environmental Protection Agency  
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<sup>b</sup> *California Air Resources Board*

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## Preface

The draft of the *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (Guidance Manual) is a description of the algorithms, recommended exposure variates, cancer and noncancer health values, and the air modeling protocols needed to perform a health risk assessment (HRA) under the Air Toxics Hot Spots Information and Assessment Act of 1987 (Health and Safety Code Section 44300 et seq., see Appendix B). The Children's Environmental Health Protection Act of 1999 (Health and Safety Code Section 39606, also contained in Appendix B), which requires explicit consideration of infants and children in assessing risks from air toxics, necessitated revisions of the methods for both noncancer and cancer risk assessment, and of the exposure variates. This draft version of the Guidance Manual updates the previous version (OEHHA, 2003), and reflects advances in the field of risk assessment along with explicit consideration of infants and children.

The information presented in the draft manual is compiled from three technical support documents (TSDs) released by the Office of Environmental Health Hazard Assessment (OEHHA) for the Hot Spots Program. The three TSDs (which are also revised versions, replacing the original four Hot Spots TSDs adopted between 1999 and 2003) underwent public comment and peer review and were adopted for use in the Air Toxics Hot Spots program by the Director of OEHHA. The Technical Support Document for the Derivation of Noncancer Reference Exposure Levels (June, 2008) addressed the methodology for deriving acute, chronic and eight hour Reference Exposure Levels. The Technical Support Document for Cancer Potency Factors (May 2009) addresses the methodology for deriving cancer potency factors and adjusting cancer potency to account for the increased sensitivity of early-in-life exposure to carcinogens. The Technical Support Document for Exposure Assessment and Stochastic Analysis (June 2012) presents the exposure model for the Hot Spots program and reviews the available literature on exposure and relevant fate and transport variates. All three TSDs are available on OEHHA's web site at: [http://www.oehha.ca.gov/air/hot\\_spots/index.html](http://www.oehha.ca.gov/air/hot_spots/index.html). Excerpts of these three TSDs are presented in this document. There is relatively little new information in the Guidance Manual since the adoption of the TSDs.

The draft Guidance Manual was released for public review. Public comments were received and changes were made in response to some comments. Responses were developed to all public comments. Both the Guidance Manual and OEHHA's response to comments were then reviewed by the State's Scientific Review Panel on Toxic Air Contaminants (SRP), who previously reviewed the three TSDs upon which this guidance is based. Following review by the SRP, OEHHA finalized this Guidance Manual. This Guidance Manual supersedes the risk assessment methods presented in the *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA, 2003), which in turn replaced earlier guidance provided by the California Air Pollution Control Officer's Association (CAPCOA, 1993). This manual updates health effects values, exposure pathway variates (e.g., breathing rates), and

continues to use a tiered approach for performing HRAs based on current science and policy assessment. The Technical Support Document for Cancer Potency Factors (OEHHA, 2009) recommends a tenfold early-in-life potency factor adjustment for the third trimester and ages zero to less than two, and a threefold adjustment factor for ages two to less than sixteen. In addition, we recommend evaluating residency periods of nine, thirty and seventy years. This means that exposure variates are needed for the third trimester, ages zero to less than two, ages two to less than nine, ages two to less than 16, ages 16 to less than 30, and ages 16 to 70.

The tiered approach presented in this draft manual provides a risk assessor with flexibility and allows consideration of site-specific differences. Furthermore, risk assessors can tailor the level of effort and refinement of an HRA by using the point-estimate exposure variates or the stochastic treatment of distributions of exposure variates. The four-tiered approach to risk assessment primarily applies to residential cancer risk assessment. Compared to the OEHHA 2003 document, the exposure pathways in the Guidance Manual remain the same. The exposure and risk algorithms are similar, but they have been revised to accept new data or variables that are used in the tiered risk assessment approach.

The draft manual also contains example calculations and an outline for a modeling protocol and an HRA report. A software program, the Hot Spots Analysis and Reporting Program (HARP), has been developed by the Air Resources Board in consultation with OEHHA and Air Pollution Control/Air Quality Management District representatives. The HARP software, which is being updated with the new exposure variates and health values, is the recommended model for calculating and presenting HRA results for the Hot Spots Program. Information on obtaining the HARP software can be found on the ARB's web site at [www.arb.ca.gov](http://www.arb.ca.gov) under the Hot Spots Program.

The intent of the Guidance Manual and the HARP software is to incorporate children's health concerns, update risk assessment practices, and to provide consistent risk assessment procedures. The use of consistent risk assessment methods and report presentation has many benefits, such as expediting the preparation and review of HRAs, minimizing revision and resubmission of HRAs, allowing a format for facility comparisons, and cost-effective implementation of HRAs and the Hot Spots Program. Risk assessments prepared with this Guidance Manual may be used for permitting new or modified stationary sources, or public notification, and risk reduction requirements of the Hot Spots Program. The use of uniform procedures allows comparison of risks from different facilities and enables identification of facilities that are problematic from a public health perspective. OEHHA reviews the HRAs to insure they are adequate for decision making, but does not play a role in permitting decisions that may result from the HRAs. OEHHA will provide advice to the Districts when requested on any of the risk assessment methods or health values they have used.

**References**

CAPCOA, 1993. CAPCOA Air Toxics Hot Spots Program Revised 1992 Risk Assessment Guidelines. California Air Pollution Control Officers Association, October 1993.

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# 1 - Introduction

## 1.1 Development of Guidelines

The Air Toxics Hot Spots Information and Assessment Act is designed to provide information to state and local agencies and to the general public on the extent of airborne emissions from stationary sources and the potential public health impacts of those emissions. The Hot Spots Act requires that the Office of Environmental Health Hazard Assessment (OEHHA) develop risk assessment guidelines for the Hot Spots program (Health and Safety Code (HSC) Section 44360(b)(2)) (see Appendix B for the text of the HSC). In addition, the Hot Spots Act specifically requires OEHHA to develop a “likelihood of risks” approach to health risk assessment. In response, OEHHA developed a tiered approach to risk assessment where a point estimate approach is first employed. If a more detailed analysis is needed, OEHHA has developed a stochastic, or probabilistic, approach using exposure factor distributions that can be applied in a stochastic estimate of the exposure. A detailed presentation of the tiered approach, risk assessment algorithms, selected exposure variates (e.g., breathing rate), and distributions with a literature review is presented in the *Air Toxics Hot Spots Program Risk Assessment Guidelines; Technical Support Document for Exposure Assessment and Stochastic Analysis* (OEHHA, 2012). A summary of this information can be found in Chapter 5 of this document.

The Technical Support Document for the Derivation of Noncancer Reference Exposure Levels (OEHHA, 2008) addresses dose response relationships for noncancer health effects and the methodology for deriving acute, chronic and 8-hour Reference Exposure Levels (RELs). Currently there are 53 acute RELs, 82 chronic RELs, and 10 eight-hour RELs. Review and revision of RELs to take into account new information and sensitive subpopulations including infants and children is an ongoing process. All draft RELs for individual chemicals revised under the current noncancer methodology will undergo public comment and peer review, as mandated by the Hot Spots Act. The Technical Support Document for Cancer Potency Factors (OEHHA, 2009) addresses the methodology for deriving cancer potency factors and adjusting cancer potency to account for the increased sensitivity to early-in-life exposure to carcinogens. This document contains inhalation cancer potency factors and oral cancer potency factors for 142 toxicants and toxicant compound classes developed by OEHHA or developed by other authoritative bodies and endorsed by OEHHA. The OEHHA website ([www.oehha.ca.gov](http://www.oehha.ca.gov)) should be consulted for the most current adopted chronic, acute and 8-hour RELs and cancer potency factors. In addition, for a small subset of these substances that are subject to airborne deposition and hence human oral and dermal exposure, oral chronic RELs and oral cancer potency factors have been developed by OEHHA. A summary of cancer and noncancer health effects values can be found in Appendix L and Chapters 6 and 7 of the Guidance Manual. All three Technical Support Documents have undergone public and peer review and have been approved by the state’s Scientific Review Panel on Toxic Air Contaminants and adopted by OEHHA. The Guidance Manual is undergoing the same public and peer review process.

The Guidance Manual contains a description of the algorithms, recommended exposure variates, and cancer and noncancer health values, and modeling protocols needed to perform a Hot Spots risk assessment under the Hot Spots Act (see Appendix B). The information for the Guidance Manual is taken from the three TSDs. The Guidance Manual supersedes the risk assessment methods presented in the Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (OEHHA, 2003).

The Guidance Manual is intended to address health risks from airborne contaminants released by stationary sources. Some of the methodology used is common to other regulatory risk assessment applications, particularly for California programs. However, if the reader needs to prepare a Health Risk Assessment (HRA) under another program, the HRA may need additional analyses. Therefore, appropriate California and federal agencies should be contacted. For example, if a facility must comply with HRA requirements under the Resource Conservation and Recovery Act (RCRA) or the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the California Department of Toxic Substances Control (DTSC) must be contacted to determine if an HRA written to comply with AB 2588 will also satisfy RCRA/CERCLA requirements.

## 1.2 Use of the Guidance Manual

The intent in developing this Guidance Manual is to provide HRA procedures for use in the Air Toxics Hot Spots Program or for the permitting of existing, new, or modified stationary sources. The Air Resources Board (ARB) website ([www.arb.ca.gov](http://www.arb.ca.gov)) provides more information on the Hot Spots Program and risk management guidelines, including recommendations for permitting existing, new, or modified stationary sources. The use of consistent risk assessment procedures and report presentation allows comparison of one facility to another, expedites the review of HRAs by reviewing agencies, and minimizes revision and resubmission of HRAs.

OEHHA recognizes that no one risk assessment procedure or set of exposure variates could perfectly address the many types of stationary facilities in diverse locations in California. Therefore a tiered risk assessment approach was developed to provide flexibility and allow consideration of site-specific differences. The tiered approach to risk assessment is discussed in detail in Chapter 8 of this Guidance.

These guidelines should be used in conjunction with the emission data collected and reported pursuant to requirements of the ARB's *Emission Inventory Criteria and Guidelines Regulations (Title 17, California Code of Regulations, Sections 93300-93300.5)*, and the *Emission Inventory Criteria and Guidelines Report for the Air Toxics "Hot Spots" Program* (EICG Report), which is incorporated by reference therein (see ARB's web site: <http://www.arb.ca.gov/ab2588/2588guid.htm> for the most current version, which was approved on August 27, 2007). This regulation outlines requirements for the collection of emission data, based on an inventory plan, which must be approved by the Air Pollution Control or Air Quality Management District (District). The emissions reported under this program are routine or predictable and include continuous

and intermittent releases and predictable process upsets or leaks. Emissions for unpredictable releases (e.g., accidental catastrophic releases) are not reported under this program.

For landfill sites, these guidelines should be applied to the results of the landfill testing required under Health and Safety Code Section 41805.5 as well as to any emissions reported under the emission inventory requirements of the Air Toxics Hot Spots Act (e.g., from flares or other on-site equipment). Districts should be consulted to determine the specific landfill testing data to be used.

### **1.3 Who is Required to Conduct a Risk Assessment**

The Hot Spots Act requires that each local Air Pollution Control District or Air Quality Management District (hereinafter referred to as District) determine which facilities will prepare an HRA. As defined under the Hot Spots Act, an HRA includes a comprehensive analysis of the dispersion of hazardous substances in the environment, their potential for human exposure, and a quantitative assessment of both individual and population-wide health risks associated with those levels of exposure.

Districts are to determine which facilities will prepare an HRA based on a prioritization process outlined in the law. The process by which Districts identify priority facilities for risk assessment involves consideration of potency, toxicity, quantity of emissions, and proximity to sensitive receptors such as hospitals, daycare centers, schools, work-sites, and residences. The District may also consider other factors that may contribute to an increased potential for significant risk to human receptors. As part of this process Districts categorize facilities as high, intermediate, or low priority. The District prioritization process is described in the *CAPCOA Air Toxics Hot Spots Program Facility Prioritization Guidelines, July 1990* (CAPCOA, 1990), although some Districts may have adopted their own method for prioritizing facilities for the purposes of AB2588, permitting, etc. Consult the District for updates to the Prioritization Guidelines. See the Hot Spots Program on ARB's web site at [www.arb.ca.gov](http://www.arb.ca.gov) for more information on facility prioritization procedures.

Facilities designated by a District as "high priority" are required to submit an HRA to the District within 150 days of designation. Districts may grant a 30-day extension. However, a District may require any facility to prepare and submit an HRA according to the District priorities established for purposes of the Hot Spots Act.

## 1.4 The Hot Spots Analysis and Reporting Program (HARP) Software

The ARB and the Districts have identified a critical need for software to assist with the programmatic aspects of the Hot Spots Program. HARP is computer software used by the ARB, OEHHA, Districts, and facility operators to promote statewide consistency, efficiency, and cost-effective implementation of HRAs and the Hot Spots Program. The HARP software package includes: 1) an Emissions Inventory Database Module, 2) an Air Dispersion Modeling Module, and 3) a Risk Analysis Module. The user-friendly Windows-based package provides for:

1. Electronic implementation of the risk assessment methods presented in the OEHHA guidelines (Guidance Manual);
2. Electronic data transfer from facilities and Districts;
3. The production of reports;
4. Facility prioritization;
5. Air dispersion modeling (AERMOD) of multiple emission releases or facilities for cumulative impact evaluations;
6. A summary report of acute, 8-hour, and chronic health hazard quotients or indices, and cancer risk at the point of maximum impact (PMI), maximally exposed individual resident (MEIR), maximally exposed individual worker (MEIW) and other receptors to be evaluated as needed;
7. Mapping displays of facility property boundaries, risk isopleths, and elevation contours;
8. The ability to display combined risk contours from multiple emission sources;
9. Output of data for use in other “off-the-shelf” Geographic Information Systems (GIS) programs for additional types of analysis; and
10. Census data for determining population-related health impacts showing the number of people exposed at various cancer risk levels and cancer burden.

## 1.5 Risk Assessment Review Process

The Hot Spots Act risk assessments are reviewed by the local District and by OEHHA. The Districts focus their review on the emissions data and the air dispersion modeling. OEHHA provides comments on the HRA’s general concordance with the Guidelines Manual and the completeness of the reported health risks. The District, taking into account the comments of OEHHA, approves the HRA or returns it to the facility for revision and resubmission. If the HRA is not revised and resubmitted by the facility within 60 days, the District may modify the HRA and approve it as modified. Based on the approved HRA, the District determines if there is a significant health risk associated with emissions from the facility. If the District determines that facility emissions pose a significant health risk, the facility operator provides notice to all exposed individuals regarding the results of the HRA and may be required to take steps to reduce emissions by implementing a risk reduction audit and plan. Notification is to be made according to

procedures specified by the District. Each District determines its own levels of significance for cancer and noncancer health effects for notification and risk reduction. See the Hot Spots Program on ARB's web site at [www.arb.ca.gov](http://www.arb.ca.gov) for more information on significance levels selected by each District.

## 1.6 Uncertainty in Risk Assessment

OEHHA has striven to use the best science available in developing these risk assessment guidelines. However, there is a great deal of uncertainty associated with the process of risk assessment. The uncertainty arises from lack of data in many areas necessitating the use of assumptions. The assumptions used in these guidelines are designed to err on the side of health protection in order to avoid underestimation of risk to the public. Sources of uncertainty, which may overestimate or underestimate risk, include: 1) extrapolation of toxicity data in animals to humans, 2) uncertainty in the estimation of emissions, 3) uncertainty in the air dispersion models, and 4) uncertainty in the exposure estimates. In addition to uncertainty, there is a natural range or variability in measured parameters defining the exposure scenario. Scientific studies with representative sampling and large enough sample sizes can characterize this variability. In the specific context of a Hot Spots risk assessment, the source of variability with the greatest quantitative impact is variation among the human population in such properties as height, weight, food consumption, breathing rates, and susceptibility to chemical toxicants. OEHHA captures at least some of the variability in exposure by developing data driven distributions of intake rates, where feasible, in the TSD for Exposure Assessment (OEHHA, 2012).

Interactive effects of exposure to more than one carcinogen or toxicant are addressed in the risk assessment with default assumptions of additivity. Cancer risks from all carcinogens addressed in the HRA are added. Similarly, non-cancer hazard quotients for substances impacting the same target organ/system are added to determine the hazard index (HI). Although such effects of multiple chemicals are assumed to be additive by default, several examples of synergism (interactive effects greater than additive) are known. For substances that act synergistically, the HRA could underestimate the risks. Some substances may have antagonistic effects (lessen the toxic effects produced by another substance). For substances that act antagonistically, the HRA could overestimate the risks.

Other sources of uncertainty, which may underestimate or overestimate risk, can be found in exposure estimates where little or no data are available (e.g., soil half-life and dermal penetration of some substances from a soil matrix).

The differences among species and within human populations usually cannot be easily quantified and incorporated into risk assessments. Factors including metabolism, target site sensitivity, diet, immunological responses, and genetics may influence the response to toxicants. The human population is much more diverse both genetically and culturally (e.g., lifestyle, diet) than inbred experimental animals. The intraspecies variability among humans is expected to be much greater than in laboratory animals.

In most cases, cancer potency values have been estimated only for the single most affected tumor site. This represents a source of uncertainty in the cancer risk assessment. Adjustment for tumors at multiple sites induced by some carcinogens may result in a higher potency. Some recent assessments of carcinogens include such adjustments. Other uncertainties arise 1) in the assumptions underlying the dose-response model used, and 2) in extrapolating from large experimental doses, where other toxic effects may compromise the assessment of carcinogenic potential, to usually much smaller environmental doses.

When occupational epidemiological data are used to generate a carcinogenic potency or a health protective level for a non-carcinogen, less uncertainty is involved in the extrapolation from workplace exposures to environmental exposures. When using human data, no interspecies extrapolation is necessary eliminating a significant source of uncertainty. However, children are a subpopulation with hematological, nervous, endocrine, and immune systems that are still developing and may be more sensitive to the effects of toxicants. The worker population and risk estimates based on occupational epidemiological data are more uncertain for children than adults. Current risk assessment guidelines include procedures designed to address the possibly greater sensitivity of infants and children, but there are only a few compounds for which these effects have actually been measured experimentally. In most cases, the adjustment relies on default assumptions which may either underestimate or overestimate the true risks faced by infants and children exposed to toxic substances or carcinogens.

Risk estimates generated by an HRA should not be interpreted as the expected rates of disease in the exposed population but rather as estimates of potential for disease, based on current knowledge and a number of assumptions.

In the Hot Spots program, cancer risk is often expressed as the maximum number of new cases of cancer projected to occur in a population of one million people due to exposure to the cancer-causing substance over a 30-year residential period. However, there is uncertainty associated with the cancer risk estimate. An individual's risk of contracting cancer from exposure to facility emissions may be less or more than the risk calculated in the risk assessment. An individual's risk not only depends on the individual's exposure to a specific chemical but also on his or her genetic background, health, diet, lifestyle choices and other environmental and workplace exposures. OEHHA uses health-protective exposure assumptions to avoid underestimating risk. For example, the risk estimate for airborne exposure to chemical emissions uses the health-protective assumption that the individual has a high breathing rate and exposure began early in life when cancer risk is highest.

A Reference Exposure Level (REL) is the concentration level at or below which no adverse non-cancer health effects are anticipated for the specified exposure duration. RELs are based on the most sensitive, relevant, adverse health effect reported in the medical and toxicological literature. RELs are designed to protect the most sensitive individuals in the population by the inclusion of factors that account for uncertainties as well as individual differences in human susceptibility to chemical exposures. The factors used in the calculation of RELs are meant to err on the side of public health

protection in order to avoid underestimation of non-cancer hazards. Exceeding the REL does not automatically indicate an adverse health impact. However, increasing concentrations above the REL value increases the likelihood that the health effect will occur.

Risk assessments under the Hot Spots program are often used to compare one source with another and to prioritize concerns. Consistent approaches to risk assessment are necessary to fulfill this function.

### 1.7 Tiered Approach to Risk Assessment

OEHHA developed a tiered approach to accommodate consideration of site-specific data that may be more appropriate for a given facility than the default variate. The first tier is the simplest point estimate approach to estimating exposure to facility emissions. Tier 1 is the first step in conducting a comprehensive risk assessment using algorithms and point estimates of input values described in the *Technical Support Document for Exposure Assessment and Stochastic Analysis*. (OEHHA, 2012) Each facility conducts a Tier 1 risk assessment to promote consistency across the state in facility risk assessments and facilitate comparisons across facilities. To be health-protective, high-end estimates for the key intake exposure variates are used for the dominant exposure pathways.

Tier 2 allows use of site-specific point estimates of exposure variates as long as these estimates can be justified. For example, if there are data indicating that consumption of fish from an impacted body of water is lower than the OEHHA-recommended fish consumption rate, then the facility can use that data to generate a point estimate for sport-fish consumption from that body of water. The risk assessor must supply the data and methods used for the site-specific estimates, and the site-specific estimates must be reproducible and approved by both the District and OEHHA.

Tier 3 risk assessment involves stochastic analysis of exposure using data-based distributions for the key exposure variates compiled in the OEHHA (2012) *Technical Support Document*. Since a stochastic approach to risk assessment provides more information about the range of risk estimates based on the range of exposures, Tier 3 can serve as a useful supplement to the Tier 1 and 2 approaches. Variance propagation methods (e.g., Monte Carlo analysis) are used to derive a range of cancer risk estimates reflecting the known variability in the inputs. Finally, a Tier 4 approach would use distributions of exposure variates that may be more appropriate for a site, such as the distribution of fish consumption rates for a specific body of water impacted by a facility. As in a Tier 2 approach, the risk assessment must supply the data and methods used for the site-specific distributions for exposure variates, and the site-specific estimates must be justified to and reproducible by the Districts and OEHHA.

### 1.8 References

CAPCOA, 1990. *CAPCOA Air Toxics Hot Spots Program Facility Prioritization Guidelines*. California Air Pollution Control Officers Association, July 1990.

OEHHA, 2003. Air Toxics Hot Spots Risk Assessment Guidelines: The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.

OEHHA, 2008. Air Toxics Hot Spots Risk Assessment Guidelines Technical Support Document for the Derivation of Noncancer Reference Exposure Levels. Available online at: <http://www.oehha.ca.gov>

OEHHA, 2009. Technical Support Document for Cancer Potency Factors: Methodologies for derivation, listing of available values, and adjustments to allow for early life stage exposures. May 2009. Available online at: <http://www.oehha.ca.gov>

OEHHA, 2012. Air Toxics Hot Spots Program Risk Assessment Guidelines; Technical Support Document for Exposure Assessment and Stochastic Analysis. Available online at <http://www.oehha.ca.gov>

## 2 - Overview of Health Risk Assessment

### 2.1 The Model for Risk Assessment

The standard approach currently used for health risk assessment (HRA) was originally proposed by the National Academy of Sciences in the 1983 book: *Risk Assessment in the Federal Government: Managing the Process* (NAS, 1983) and was updated in the Academy's 1994 book: *Science and Judgment in Risk Assessment* (NAS, 1994). In 2009 the National Academy published *Science and Decisions: Advancing Risk Assessment* (NAS, 2009), in which a number of recommendations are made on improving the risk assessment process and expanding it to include community concerns and cumulative risks. The four steps involved in the risk assessment process are 1) hazard identification, 2) exposure assessment, 3) dose-response assessment, and 4) risk characterization. These four steps are briefly discussed below.

### 2.2 Hazard Identification

For air toxics sources, hazard identification involves the pollutant(s) of concern emitted by a facility, and the types of adverse health effects associated with exposure to the chemical(s), including whether a pollutant is a potential human carcinogen or is associated with other types of adverse health effects. For the Air Toxics Hot Spots Program (Hot Spots), the emitted substances that are addressed in a risk assessment are found in the list of substances designated in the ARB's *Emission Inventory Criteria and Guidelines Regulations (Title 17, California Code of Regulations, Sections 93300-93300.5)*, and the *Emission Inventory Criteria and Guidelines Report* (EICG Report), which is incorporated by reference therein (ARB, 2007). This list of substances is contained in Appendix A of this document and the EICG Report. The list of substances also identifies those substances that are considered human carcinogens or potential human carcinogens.

### 2.3 Exposure Assessment

The purpose of the exposure assessment is to estimate the extent of public exposure to emitted substances. For the Hot spots program, in practice this means estimating exposures for those emitted substances for which potential cancer risk or noncancer health hazards for acute, repeated 8-hour, and chronic exposures will be evaluated. This involves emission quantification, modeling of environmental transport, evaluation of environmental fate, identification of exposure routes, identification of exposed populations, and estimation of short-term (e.g., 1-hour maximum), 8-hour average, and long-term (annual) exposure levels. These activities are described in Chapters 4 and 5. Chapter 5 also discusses the tiered approach to risk assessment.

The ARB's Emission Inventory Criteria and Guidelines (EICG) Report provides assistance in determining those substances that must be evaluated in an HRA and the reporting requirements of facilities, while the Hot Spots Analysis and Reporting Program (HARP) software can be used to model ground level concentrations at specific off-site

locations resulting from facility emissions. The United States Environmental Protection Agency (U.S. EPA) has adopted the AERMOD air dispersion model into its list of regulatory approved models, in place of the previously used ISCST3 model. AERMOD is a steady-state plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain (U.S. EPA, 2009). The Air Resources Board recommends AERMOD for Hot Spots risk assessments. The AERMOD air modeling software will be incorporated into the HARP software, which allows the user to input all dispersion parameters directly into the program to generate air dispersion data. Alternatively, the air dispersion data may be generated separately from HARP using other air dispersion models, and then imported into HARP to generate risk estimates. Data imported into HARP must already be in the format required by HARP. HARP has the flexibility to generate a summary of the risk data necessary for an HRA by either of the above approaches.

Most of the toxicants assessed under the Hot Spots program are volatile organic compounds that remain as gases when emitted into the air. These chemicals are not subject to appreciable deposition to soil, surface waters, or plants. Therefore, human exposure via ingestion or dermal exposure, at least at concentrations typically encountered in the ambient air, is not considered for volatile organic compounds in the Hot Spots risk assessments. While some models indicate potential for dermal exposure to certain volatile organic compounds, at this time, the Hot spots program does not consider this pathway. Significant exposure to volatile organic toxicants emitted into the air occurs through the inhalation pathway, and this pathway is the primary consideration in the Hot Spots risk assessments. A small subset of Hot Spots substances consists of semi-volatile organic and metal toxicants emitted partially or totally as particles subject to deposition. Ingestion and dermal pathways as well as the inhalation pathway must be evaluated for these chemicals. A few of these semi-volatile organic and metal toxicants must also include the breast milk ingestion pathway. Additional ingestion pathways may also need to be evaluated depending on the pathways of exposure for the specific receptor of interest. Table 5.1 in Chapter 5, Table 6.4 in Chapter 6, and Table 7.1 in Chapter 7 list the substances that must be evaluated for multipathway impacts. HARP is designed to assess potential health impacts posed by substances that must be analyzed by a multipathway approach.

## 2.4 Dose-Response Assessment

Dose-response assessment is the process of characterizing the relationship between exposure to an agent and incidence of an adverse health effect in exposed populations. In quantitative carcinogenic risk assessment, the dose-response relationship is expressed in terms of a potency slope that is used to calculate the probability or risk of cancer associated with an estimated exposure. Cancer potency factors are expressed as the 95<sup>th</sup> percent upper confidence limit of the slope of the dose response curve estimated assuming continuous lifetime exposure to a substance. Typically, potency factors are expressed as units of inverse dose (e.g., (mg/kg BW/day)<sup>-1</sup>) or inverse concentration (e.g., (µg/m<sup>3</sup>)<sup>-1</sup>). It is assumed in cancer risk assessments that risk is directly proportional to dose and that there is no threshold for carcinogenesis.

The Office of Environmental Health Hazard Assessment (OEHHA) has compiled cancer potency factors, which should be used in risk assessments for the Hot Spots program, in Table 7.1. Cancer potency factors listed in Table 7.1 were derived either by the U.S. EPA or by OEHHA, underwent public and peer-review, and were adopted for use in the program. Chapter 8 describes procedures for use of potency values in estimating excess cancer risk. For a detailed description of cancer potency factors, refer to the *Technical Support Document for Cancer Potency Factors* (OEHHA, 2009).

For noncarcinogenic effects, dose-response data developed from animal or human studies are used to develop acute, 8-hour, and chronic noncancer Reference Exposure Levels (RELs). The acute, 8-hour and chronic RELs are defined as the concentration at which no adverse noncancer health effects are anticipated even in sensitive members of the general population, with infrequent one hour exposures, repeated 8-hour exposures over a significant fraction of a lifetime, or continuous exposure over a significant fraction of a lifetime, respectively. The most sensitive health effect is chosen to develop the REL if the chemical affects multiple organ systems. Unlike cancer health effects, noncancer health effects are generally assumed to have thresholds for adverse effects. In other words, injury from a pollutant will not occur until exposure to that pollutant has reached or exceeded a certain concentration (i.e., threshold) and/or dose. The acute, 8-hour, and chronic RELs are air concentrations intended to be below the threshold for health effects for the general population.

The actual threshold for health effects in the general population is generally not known with any precision. Uncertainty factors are applied to the Lowest Observed Adverse Effects Level (LOAEL) or No Observed Adverse Effects Level (NOAEL) or Benchmark Concentration values from animal or human studies to help ensure that the chronic, 8-hour and acute REL values are below the threshold for human health for nearly all individuals. This guidance manual provides the acute, 8-hour, and chronic Reference Exposure Levels in Tables 6.1 through 6.3. Some substances that pose a chronic or repeated 8-hour inhalation hazard may also present a chronic hazard via non-inhalation routes of exposure (e.g., ingestion of contaminated water, foods, or soils, and dermal absorption). The oral RELs for these substances are presented in Table 6.4. The methodology and derivations for acute, 8-hour, and chronic, RELs are described in the *Technical Support Document for the Derivation of Noncancer Reference Exposure Levels* (OEHHA, 2008).

## 2.5 Risk Characterization

This is the final step of risk assessment. In this step, modeled concentrations and exposure information, which are determined through exposure assessment, are combined with potency factors and RELs that are developed through dose-response assessment. The use of cancer potency factors to assess total cancer risk and the use of the hazard index approach for evaluating the potential for noncarcinogenic health effects are described in Chapter 8. Example calculations for determining (inhalation) cancer risk and noncancer acute, 8-hour, and chronic hazard quotients and hazard indices are presented in Appendix I. Chapter 9 provides an outline that specifies the content and recommended format of HRA results.

Under the Hot Spots Act, health risk assessments are to quantify both individual and population-wide health impacts (Health and Safety Code, Section 44306) (Appendix B). The health risk assessments are facility specific and the calculated risk should be combined for all pollutants emitted by a single facility. For example, cancer risk from multiple carcinogens is considered additive. For exposures to multiple non-carcinogen pollutants, a hazard index approach is applied for air contaminants affecting the same organ system. All substances emitted by the facility that are on the Hot Spots Act list of substances must be identified in the HRA, including those on the list that do not have a potency value or REL.

For assessing risk, OEHHA has developed two methods for determining dose via inhalation, dermal absorption, and ingestion pathways. These two methods, the point estimate approach and the stochastic exposure assessment approach, are described below and in Chapters 5 and 8. Detailed presentations of these methods can be found in: *Technical Support Document for Exposure Assessment and Stochastic Analysis* (OEHHA, 2012).

### **2.5.1 Point Estimate Approach**

OEHHA provides information in this document on average and high-end values for key exposure pathways (e.g., breathing rate for the inhalation exposure pathway). The average and high-end of point estimates in this document are defined in terms of the probability distribution of values for that variate. The mean represents the average values for point estimates and the 95<sup>th</sup> percentiles represent the high-end point estimates from the distributions identified in OEHHA (2012). Thus, within the limitations of the data, average and high-end point estimates are supported by the distribution.

Tier 1 of the tiered approach to risk assessment, which is briefly discussed in Section 2.5.3 and presented in more detail in Chapter 8, utilizes a combination of the average and high-end point estimates to more realistically estimate exposure in multipathway risk assessments. This method uses high-end exposure estimates for the pathways that are the main drivers of exposure and the average point estimate for the other non-driving exposure pathways. This approach will lessen the issue of compounding high-end exposure estimates, while retaining a health-protective approach for the more important exposure pathways. It is unlikely that an individual receptor would be on the high-end of exposure for all exposure pathways. See Chapter 8 for detailed discussions of how this multipathway methodology is applied to cancer and noncancer calculations. The HARP software can perform this analysis (referred to as the derived approach in the HARP software).

In addition to using an estimate of average and high-end consumption rates, cancer risk evaluations at individual receptors are presented for 9, 30, and 70-year exposure durations. The 9 and 30-year durations correspond to the average and high-end of residency time recommended by U.S. EPA (1997). The California data presented in Appendix L of the Exposure TSD (OEHHA, 2012) are generally supportive of the nationwide data. The 9 and 70-year exposure durations present potential impacts over the range of residency periods, while the 30-year exposure duration is recommended

for use as the basis for estimating cancer risk at the MEIR in all HRAs. Population-wide impacts should use the 70-year exposure duration.

The parameters used for all exposure durations assume exposure begins in the last trimester of pregnancy and progresses through the exposure duration of interest (e.g., 9, 30, or 70 years). These assumptions are thus protective of children. Children have higher intake rates on a per kilogram body weight basis (e.g., they breathe, drink and eat more per kg body weight than adults) and thus receive a higher dose from contaminated media. See Chapter 5 for the point estimates that can be used to estimate impacts for children. Chapters 5 and 8 discuss how to calculate cancer risk based on various exposure durations and point estimates. Appendix I contains an example calculation and Chapter 9 clarifies how to present the findings in an HRA.

### **2.5.2 Stochastic Exposure Assessment**

OEHHA was directed under the Air Toxics “Hot Spots” program (SB 1731, Calderon, stat. 1992; Health and Safety Code Section 44360(b)(2)) to develop a “likelihood of risk” approach to risk assessment. To satisfy this requirement, OEHHA developed a stochastic approach to risk assessment that utilizes distributions for exposure variates such as breathing rate and water consumption rate rather than a single point estimate. The variability in exposure can be propagated through the risk assessment model using the distributions as input and a Monte Carlo or similar method. The result of such an analysis is a range of risks that at least partially characterizes variability in exposure.

Distributions of key exposure variates that are presented in the *Technical Support Document for Exposure Assessment and Stochastic Analysis* (OEHHA, 2012) were taken from the literature, if adequate, or developed from raw data of original studies. Intake variates such as vegetable consumption are relatively data rich; for these variates reasonable probability distributions can be constructed. However, the data necessary to characterize the variability in risk assessment variates are not always available. For example, for the fate and transport variates (e.g., fish bioaccumulation factors), there are only a few measurements for a given chemical available which precludes the adequate characterization of a probability distribution. We only developed distributions for those key exposure variates that were adequately characterized by data. Development of distributions is described in detail in the *Technical Support Document for Exposure Assessment and Stochastic Analysis* (OEHHA, 2012).

### 2.5.3 Tiered Approach to Risk Assessment

OEHHA recommends using a tiered approach to risk assessment. Tier 1 is a standard point estimate approach using the recommended point estimates presented in this document. If site-specific information is available to modify some point estimates developed in the *Technical Support Document for Exposure Assessment and Stochastic Analysis* (OEHHA, 2012) and is more appropriate to use than the recommended point estimates in this document, then Tier 2 allows use of that site-specific information. Site-specific information should be presented to the District before being used. The District may contact OEHHA for additional advice. Note that all non-default variates need to be adequately justified to OEHHA and the Districts to be used. In Tier 3, a stochastic approach to exposure assessment is used with the data distributions developed in the TSD (OEHHA, 2012) and presented in this document. Tier 4 is also a stochastic approach but allows for utilization of site-specific distributions, if they are justifiable (to OEHHA and the Districts) and more appropriate for the site under evaluation than those recommended in this document. Persons preparing an HRA that has a Tier 2 through Tier 4 evaluation must also include the results of a Tier 1 evaluation. Tier 1 evaluations are required for all HRAs prepared for the Hot Spots Program to promote consistency across the state for all facility risk assessments and allow comparisons across facilities. Chapter 8 provides a summary of the tiered approach and the TSD (OEHHA, 2012) discusses it in detail. Chapter 9 provides an outline that specifies the content and recommended format of HRA results.

## 2.6 References

ARB, 2007. *Emission Inventory Criteria and Guidelines Regulations (Title 17, California Code of Regulations, Sections 93300-93300.5), and the Emission Inventory Criteria and Guidelines Report* (EICG Report).

NAS, 1983. National Academy of Sciences. *Risk Assessment in the Federal Government: Managing the Process*. National Research Council. National Academy Press, Washington D.C.

NAS, 1994. National Academy of Sciences. *Science and Judgment in Risk Assessment*. National Research Council. National Academy Press, Washington D.C.

NAS, 2009. National Academy of Sciences. *Science and Decisions: Advancing Risk Assessment*. National Academy Press, Washington DC.

OEHHA, 2008. Air Toxics Hot Spots Risk Assessment Guidelines Technical Support Document for the Derivation of Noncancer Reference Exposure Levels. Available online at: <http://www.oehha.ca.gov>

OEHHA, 2009. Technical Support Document for Cancer Potency Factors: Methodologies for derivation, listing of available values, and adjustments to allow for early life stage exposures. May 2009. Available online at: <http://www.oehha.ca.gov>

OEHHA, 2012. *Air Toxics Hot Spots Program Risk Assessment Guidelines; Technical Support Document for Exposure Assessment and Stochastic Analysis*. Available online at <http://www.oehha.ca.gov>

U.S. EPA (2009). AERMOD Implementation Guide. Last Revised: March 19, 2009.

U.S. EPA, 1997. *Exposure Factors Handbook, Volume I, General Factors*. EPA/600/P-95/002Fa.

AERMOD Implementation Workgroup, U. S. Environmental Protection Agency. Online at: [http://www.epa.gov/ttn/scram/7thconf/aermod/aermod\\_implmtn\\_guide\\_19March2009.pdf](http://www.epa.gov/ttn/scram/7thconf/aermod/aermod_implmtn_guide_19March2009.pdf)

## 3 - Hazard Identification - Air Toxics Hot Spots Emissions

### 3.1 The Air Toxics Hot Spots List of Substances and Emissions Inventory

For air toxics sources, hazard identification involves identifying pollutants of concern and whether these pollutants are potential human carcinogens or associated with other types of adverse health effects. For the Air Toxics Hot Spots (Hot Spots) Program, the emitted substances that are addressed in a health risk assessment (HRA) are found in the list of hazardous substances designated in the Air Resources Board's (ARB's) *Emission Inventory Criteria and Guidelines Regulations (Title 17, California Code of Regulations, Sections 93300-93300.5)*, and the *Emission Inventory Criteria and Guidelines Report (EICG Report)*, which is incorporated by reference therein (ARB, 2007). This list of substances is contained in both Appendix A of this document and the EICG Report. The list of substances also identifies those substances that are considered human carcinogens or potential human carcinogens.

The substances included on the Hot Spots Program list of substances are defined in the statute as those substances found on lists developed by the following sources:

- International Agency for Research on Cancer (IARC);
- U.S. Environmental Protection Agency (U.S. EPA);
- U.S. National Toxicology Program (NTP);
- ARB Toxic Air Contaminant Identification Program List;
- Hazard Evaluation System and Information Service (HESIS) (State of California);
- Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986) list of carcinogens and reproductive toxicants (State of California);
- Any additional substance recognized by the State Board as presenting a chronic or acute threat to public health when present in the ambient air.

All substances emitted by the facility that are on the Hot Spots Act list of substances must be identified in the HRA.

The ARB EICG Report (ARB, 2007) specifies that each facility subject to the Hot Spots Act must submit an Emission Inventory Report to the local air pollution control or air quality management district. This Emission Inventory Report must identify and account for all listed substances used, manufactured, formulated, or released by the facility. All routine, predictable releases must be reported. These inventory reports include the emission data necessary to estimate off-site levels of facility-released Hot Spots substances. These inventory reports will be discussed in further detail in Chapter 4. See Chapter 9 for an outline that specifies the content and recommended format for presenting the air dispersion modeling and HRA results. As presented in Appendix A, the EICG Report divides the list into three groups for reporting purposes. Potency or severity of toxic effects and potential for facility emission were considered in placing compounds into the three groups.

For the first group (listed in these guidelines in Appendix A-I), all emissions of these substances must be quantified in the HRA. For substances in the second group (listed in these guidelines in Appendix A-II), emissions are not quantified; however, facilities must report whether the substance is used, produced, or otherwise present on-site (i.e., these substances are simply listed in a table in the HRA). Lastly, substances in the third group (Appendix A-III) also only need to be reported in a table in the HRA if they are manufactured by the reporting facility.

Facilities that must comply with the Resource Conservation and Recovery Act and Comprehensive Environmental Response, Compensation and Liability Act (RCRA/CERCLA) requirements for risk assessment need to consult the California Department of Toxic Substances Control (DTSC) Remedial Project Manager to determine which substances must be evaluated in their risk assessment. Some RCRA/CERCLA facilities may emit substances which are not currently listed under the Hot Spots Program but which may require evaluation in a RCRA/CERCLA risk assessment.

### **3.2 References**

ARB, 2007. *Emission Inventory Criteria and Guidelines Regulations (Title 17, California Code of Regulations, Sections 93300-93300.5), and the Emission Inventory Criteria and Guidelines Report (EICG Report).*

## 4 - Air Dispersion Modeling

The information contained in this section is primarily an abbreviated version of the material found in Chapter 2 of the Air Toxics Hot Spots Risk Assessment Guidelines; Exposure Assessment and Stochastic Analysis Technical Support Document (OEHHA, 2012). Several references have been included in this section to indicate those areas that are covered in more detail in Chapter 2 of the Technical Support Document. However, some air dispersion concepts and procedures have been added to assist the reader in the health risk assessment (HRA) process. In particular, a brief summary of the Hot Spots Analysis and Reporting Program (HARP) software applicability to air dispersion analysis has been included. The HARP software has been developed by the Air Resources Board (ARB), in consultation with OEHHA and Air Pollution Control or Air Quality Management District (District) representatives. The HARP software is the recommended model for calculating and presenting HRA results for the Air Toxics Hot Spots Program (Hot Spots). Information on obtaining the HARP software can be found under the Hot Spots Program on the ARB's web site at [www.arb.ca.gov](http://www.arb.ca.gov). See Chapter 9 for an outline that specifies the content and recommended format for presenting the air dispersion modeling and HRA results.

The U.S. EPA has adopted the AERMOD air dispersion model into their list of regulatory approved models, in place of the previously used ISCST3 model. AERMOD is a steady-state plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain (U.S. EPA, 2009). The Air Resources Board recommends AERMOD for Hot Spots risk assessments.

### 4.1 Air Dispersion Modeling in Exposure Assessment: Overview

Estimates of air concentrations of emitted toxicants in the surrounding community from a facility's air emissions are needed in order to determine cancer and noncancer risks. One approach to determining the concentration of air pollutants emitted from the facility is to do air monitoring in the surrounding community. However, there are a number of disadvantages to this approach. Ambient air monitoring is costly because good estimates of an annual average concentration typically require monitoring at least one day in six over a year. Because it is costly, monitoring is usually limited to a select number of pollutants, and a limited number of sites. There can be significant risks from some chemicals at or even below the monitoring detection limit, which can add considerable uncertainty to risk estimates if many of the measurements are below or near the detection limit. Monitoring measures not only facility emissions but also general ambient background as well. It can be difficult and expensive to distinguish between the two using monitoring, particularly if general ambient background levels are high relative to the contribution of facility emissions. These limitations often make it impractical to use monitoring in a program such as the Air Toxics Hot Spots program with hundreds of facilities.

Air dispersion models have several advantages over monitoring. Modeling can provide greater spatial detail and the costs are relatively cheap by comparison. For example, dispersion models can estimate the pollutant concentration in air at many receptor locations (hundreds to thousands) and for a multitude of averaging periods. Air dispersion models have been validated using air monitoring.

There are, however, uncertainties associated with the typical usage of air dispersion modeling. The use of meteorological data from the nearest airport may not ideally be the best representation of localized conditions. Gaussian plume air dispersion models ignore calm hours. This can bias model predictions towards underestimation. Some dispersion models offer limited chemical reactions within the algorithms; however, we generally assume the pollutant is inert for the near-field atmospheric travel time. This may bias estimated concentrations towards over-prediction for those pollutants that are highly reactive in the atmosphere. Air dispersion model results are only as good as the emissions estimates and emissions estimates can be uncertain. However, on the whole, the advantages of air dispersion modeling for a program like the Air Toxics Hot Spots far outweigh the disadvantages.

Professional judgment is required throughout the dispersion modeling process. The local air quality district has final authority on modeling protocols. The following guidance is intended to assist in the understanding of dispersion modeling for risk assessments.

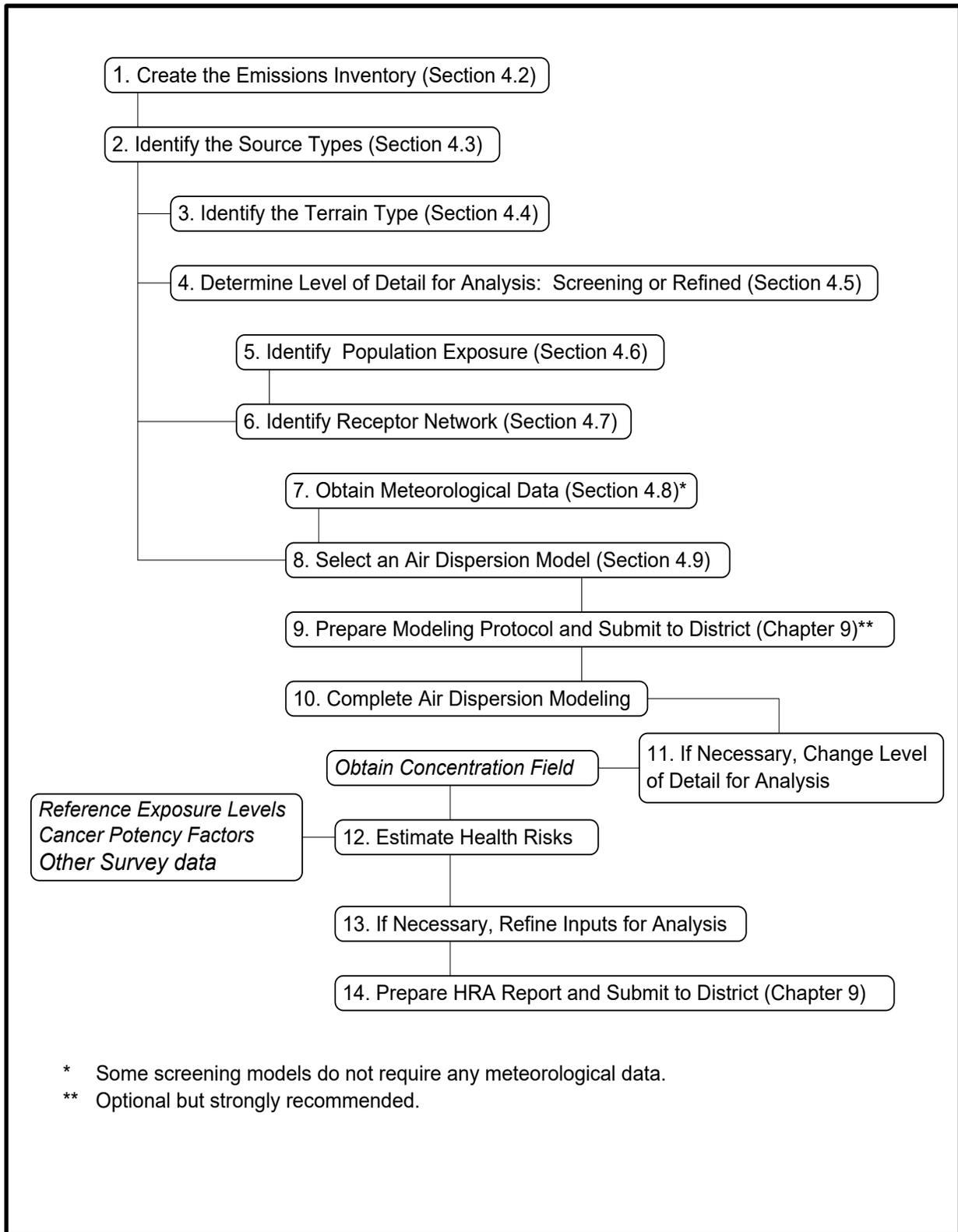
Air dispersion modeling includes the following steps (see Figure 1):

1. Create an emission inventory of the toxic releases (Section 4.2)
2. Identify the source types (Section 4.3)
3. Identify the terrain type and land use (Section 4.4)
4. Determine the detail needed for the analysis: screening or refined (Section 4.5)
5. Identify the population exposure (Section 4.6)
6. Identify the receptor network (Section 4.7)
7. Obtain meteorological data (for refined air dispersion modeling only) (Section 4.8)
8. Select an air dispersion model (Section 4.9)
9. Prepare a modeling protocol and submit to the local Air District (hereafter referred to as "the District") (Section 4.14)
10. Complete the air dispersion analysis
11. If necessary, redefine the receptor network and return to Step 10

12. Complete the risk assessment
13. If necessary, refine the inputs and/or the model selection and return to Step 8
14. Present the HRA results (Chapter 9 provides an outline that specifies the content and recommended format of HRA results).

The output of the air dispersion modeling analysis includes a receptor field of ground level concentrations of the pollutant in ambient air. These concentrations can be used to estimate an inhaled or ingested dose for the estimation of multipathway cancer risk, or used to determine a hazard index for acute (inhalation), and chronic noncancer multipathway risks. It should be noted that in the Air Toxics “Hot Spots” program, facilities simulate the dispersion of the chemical emitted as an inert compound, and do not model any atmospheric transformations or dispersion of products from such reactions. The U.S. EPA Guideline on Air Quality Models (U.S. EPA, 2005) should be consulted when evaluating reactive pollutants for other regulatory purposes.

**Figure 1 Overview of the Air Dispersion Modeling Process.**



## 4.2 Emission Inventories

The Emission Inventory Reports (Inventory Reports) developed under the Hot Spots Program provide data to be used in the HRA and in the air dispersion modeling process. The Inventory Reports contain information regarding emission sources, emitted substances, emission rates, emission factors, process rates, and release parameters (area and volume sources may require additional release data beyond that generally available in Emissions Inventory reports). This information is developed according to the ARB's *Emission Inventory Criteria and Guidelines Regulations (Title 17, California Code of Regulations, Sections 93300-93300.5)*, and the *Emission Inventory Criteria and Guidelines Report (EICG Report)*, which is incorporated by reference therein (ARB, 2007).

Updated emission data for process changes, emission factor changes, material/fuel changes, or shutdown must be approved by the District prior to the submittal of the health risk assessment (HRA). Ideally, the District review of updated emissions could be completed within the modeling protocol. In addition, it must be stated clearly in the risk assessment if the emission estimates are based on updated or revised emissions (e.g., emission reductions). This section summarizes the requirements that apply to the emission data which are used for Air Toxics "Hot Spots" Act risk assessments.

### 4.2.1 Air Toxics Hot Spots Emissions

As noted in Chapter 3, Hazard Identification, the HRA should identify all substances emitted by the facility, which are on the Hot Spots Act list of substances (see Appendix A of the Guidance Manual or the EICG Report). The EICG Report specifies that Inventory Reports must identify and account for all listed substances used, manufactured, formulated, or released by the facility. All routine, predictable releases must be reported. Under the regulations, the list is divided into three groups for reporting purposes. The first group (listed in Appendix A-I of the Inventory Guidelines Report) has all pollutants whose emissions must be quantified. The second group (listed in Appendix A-II of the Inventory Guidelines Report) includes substances where emissions do not need to be quantified; however, facilities must report whether the substance is used, produced, or otherwise present on-site. The third group (listed in Appendix A-III of the Emissions Inventory Guidelines Report) includes substances whose emissions need not be reported unless the substance is manufactured by the facility. Chemicals or substances in the second and third groups should be listed in a table in the risk assessment.

Facilities that must comply with the Resource Conservation and Recovery Act and Comprehensive Environmental Response, Compensation and Liability Act (RCRA/CERCLA) requirements for risk assessment need to consult the Department of Toxic Substances Control (DTSC) Remedial Project Manager to determine which substances must be evaluated in their risk assessment in addition to the list of "Hot Spots" chemicals. Some RCRA/CERCLA facilities may emit chemicals that are not currently listed under the "Hot Spots" Program. Chapter 9 provides an outline that specifies the content and recommended format of HRA results.

#### 4.2.1.1 Emission Estimates Used in the Risk Assessment

The HRA must include emission estimates for all substances that are required to be quantified in the facility's emission inventory report. Specifically, HRAs should include both annual average emissions and maximum 1-hour emissions for each pollutant. Maximum 1-hour emissions are used for acute noncancer health impacts while annual emissions are used for chronic exposures (i.e., chronic and 8-hour noncancer health impacts or cancer risk assessment).

Emissions for each substance must be reported for individual emitting processes associated with unique devices within a facility. Total facility emissions for an individual air contaminant will be the sum of emissions, reported by process, for that facility. Information on daily and annual hours of operation, and relative monthly activity, must be reported for each emitting process. Devices and emitting processes must be clearly identified and described and must be consistent with those reported in the emissions inventory report.

The HRA should include tables that present the emission information (i.e., emission rates for each substance released from each process) in a clear and concise manner. The District may allow the facility operator to base the HRA on more current emission estimates than those presented in the previously submitted emission inventory report (i.e., actual enforceable emission reductions realized by the time the HRA is submitted to the District). If the District allows the use of more current emission estimates, the District must review and approve the new emissions estimates prior to use in the HRA. The HRA report must clearly state what emissions are being used and when any reductions became effective. Specifically, a table presenting emission estimates included in the previously submitted emission inventory report as well as those used for the HRA should be presented. The District should be consulted concerning the specific format for presenting the emission information. Chapter 9 provides an outline that specifies the content and recommended format of HRA results. A revised emission inventory report must be submitted to the District prior to submitting the HRA and forwarded by the District to the ARB, if revised emission data are used.

##### 4.2.1.1.1 *Molecular Weight Adjustments for the Emissions of Metal Compounds*

For most of the Hot Spots toxic metals, the OEHHA cancer potency factors, acute and chronic RELs apply to the weight of the toxic metal atom contained in the overall compound. Some of the Hot Spots compounds contain various elements along with the toxic metal atom (e.g., "Nickel hydroxide", CAS number 12054-48-7, has a formula of  $\text{H}_2\text{NiO}_2$ ). Therefore, an adjustment to the reported pounds of the overall compound is needed before applying the OEHHA cancer potency factor for "Nickel and compounds" to such a compound. This ensures that the cancer potency factor, acute or chronic REL is applied only to the fraction of the overall weight of the emissions that are associated with health effects of the metal. In other cases, the Hot Spots metals are already reported as the metal atom equivalent (e.g., CAS 7440-02-0, "Nickel"), and these cases do not use any further molecular weight adjustment. (Refer to Note [7] in Appendix A,

List of Substances in the EICG Report for further information on how the emissions of various Hot Spots metal compounds are reported.)

The appropriate molecular weight adjustment factors (MWF) to be used along with the OEHHA cancer potency factors, acute and chronic RELs for Hot Spots metals can be found in the MWF column<sup>1</sup> of the table containing OEHHA/ARB Approved Health Values for use in Hot Spots Facility Risk Assessments that is in Appendix L of this document.

As an example, the compound “Nickel hydroxide” has a molecular formula of  $H_2NiO_2$ . The atomic weight of each of the elements in this compound, and the fraction they represent of the total weight, are therefore as follows:

<u>Element</u>	<u>Number of atoms</u>	<u>Atomic Weight</u>	<u>Fraction of Total Weight = MWF</u>
1 x Nickel (Ni)	1 x	58.70	$58.70 / 92.714 = \mathbf{0.6332}$ (MWF for Nickel)
2 x Oxygen (O)	2 x	15.999	
2 x Hydrogen (H)	2 x	1.008	
Total Molecular Weight of $H_2NiO_2$ :		92.714	

So, for example, assume that 100 pounds of “Nickel hydroxide” emissions are reported under CAS number 12054-48-7. To get the Nickel atom equivalent of these emissions, multiply by the listed MWF (0.6332) for Nickel hydroxide:

- 100 pounds x 0.6332 = 63.32 pounds of Nickel atom equivalent.

This step should be completed prior to applying the OEHHA cancer potency factor for “Nickel and compounds” in a calculation for a prioritization score or risk assessment calculation. (Note - The HARP software automatically applies the appropriate MWF for each Hot Spots chemical (by CAS number), so the emissions should not be manually adjusted when using HARP. Therefore, if using HARP, you would use 100 pounds for Nickel hydroxide and HARP will make the MWF adjustment for you. If not using HARP, you would use 63.32 pounds.)

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<sup>1</sup> The value listed in the MWF column for Asbestos is not a molecular weight adjustment. This is a conversion factor for adjusting mass and fibers or structures. See Appendix C for more information on Asbestos reporting and risk assessment information or see the EICG report for reporting guidance.

#### 4.2.1.2 Release Parameters

Emission release parameters (e.g., stack height and inside diameter, stack gas exit velocity, release temperature and emission source location in UTM coordinates) are needed as inputs to the air dispersion model. The Inventory Guidelines specify the release parameters that must be reported for each stack, vent, ducted building, exhaust site, or other site of exhaust release. Additional information may be required to characterize releases from non-stack (volume and area) sources; see U.S. EPA dispersion modeling guidelines or specific user's manuals. This information should also be included in the air dispersion section of the risk assessment. This information must be presented in tables included in the risk assessment. Note that some dimensional units needed for the dispersion model may require conversion from the units reported in the Inventory Report (e.g., Kelvin (K) vs. degrees Fahrenheit (°F)). Chapter 9 provides an outline that specifies the content and recommended format of HRA results.

#### 4.2.1.3 Operation Schedule

The HRA should include a discussion of the facility operation schedule and daily emission patterns. For AB2588 purposes, emissions should be reported based on routine and predictable operations. Weekly or seasonal emission patterns may vary and should be discussed. This is especially important in a refined HRA. Diurnal emission patterns should be simulated in the air dispersion model because of diurnal nature of meteorological observations. Diurnal evaluations are important to include since diurnal weather patterns and emission releases may cause significant differences in the concentration at a receptor of interest.

A table should be included listing the emission schedule on an hourly and yearly basis. In addition, the emission schedule and exposure schedule should corroborate any exposure adjustment factors used for approximating an inhaled dose. For more information about exposure adjustment factors, see Section 4.8.1. Alternatively, exposure adjustments can be made through refining the air dispersion analysis. See Section 4.11.1.2(h) for special case modeling or Appendix M. An alternative to including modeling that addresses diurnal influences would be to include a sensitivity study showing, and/or text explaining, the reason(s) why there are no significant differences due to diurnal influences on the emissions from the facility or at the receptor(s) of interest. For more guidance, you can contact the district or reviewing authority. Chapter 9 provides an outline that specifies the content and recommended format of HRA results.

#### 4.2.1.4 Emission Controls

The HRA should include a description of control equipment, the emitting processes it serves, and its efficiency in reducing emissions of substances on the Air Toxics "Hot Spots" list. The EICG Report requires that this information be included in the Inventory Reports, along with the emission data for each emitting process. If the control equipment did not operate full-time throughout the year, then the reported overall control efficiency must be adjusted to account for any predictable downtime of the

control equipment. Any entrainment of toxic substances to the atmosphere from control equipment should be accounted for; this includes fugitive releases during maintenance and cleaning of control devices (e.g., baghouses and cyclones). Contact the District for guidance with control equipment adjustments. Recommended default deposition rates that are used when calculating potential noninhalation health impacts are listed in Section 5.3.2. Chapter 9 provides an outline that specifies the content and recommended format of HRA results.

#### **4.2.2 Landfill Emissions**

Emission estimates for landfill sites should be based on testing required under Health and Safety Code, Section (HSC) 41805.5 (AB 3374, Calderon) and any supplemental AB 2588 source tests or emission estimates used to characterize air toxics emissions from landfill surfaces or through off-site migration. The District should be consulted to determine the specific Calderon data to be used in the HRA. The “Hot Spots” Program HRA for landfills should also include emissions of listed substances for all applicable power generation and maintenance equipment at the landfill site. Processes that need to be addressed include stationary internal combustion engines, flares, evaporation ponds, composting operations, boilers, and gasoline dispensing systems.

### **4.3 Source Characterization**

Pollutants are released into the atmosphere in many different ways. The release conditions need to be properly identified and characterized to appropriately use the air dispersion models.

#### **4.3.1 Source Type**

Source types can be identified as point, line, area, or volume sources for input to the air dispersion model. Several air dispersion models have the capability to simulate more than one source type.

##### **4.3.1.1 Point Sources**

Point sources are probably the most common type of source and most air dispersion models have the capability to simulate them. Typical examples of point sources include exhaust stacks. Isolated vents from buildings are special examples of point sources.

##### **4.3.1.2 Line Sources**

The version 12345 or newer of the AERMOD can accommodate line sources. Line sources can be also treated as a special case of either an area or a volume source. Examples of line sources include: conveyor belts and rail lines, freeways, and busy roadways. Not all mobile sources may be subject to the Hot Spots program; however, non-motor vehicles that operate within a facility (e.g., ships, trains, and cranes, etc.) are subject to the Hot Spots program. For more information, see the ARB’s Emission Inventory and Criteria Guidelines document or ARB’s interpretation and guidance

memorandum to CAPCOA regarding mobile sources which are subject to the “Hot Spots” program. This memo can be found at <http://www.arb.ca.gov/ab2588/motorv.pdf>.

Mobile sources and rail lines are required to be evaluated under SB 352. SB 352 requires a risk assessment performed under the Hot Spots risk assessment guidance for proposed school sites within 500 feet of a busy roadway. Dedicated air dispersion models are available for motor vehicle emissions from roadways which are a special type of line source. These models (i.e., CALINE3, CAL3QHCR, and CALINE4) are designed to simulate the mechanical turbulence and thermal plume rise due to the motor vehicle activity on the roadway. However, these dedicated models use the Pasquill-Gifford dispersion stability classes for dispersion; the AERMOD dispersion model uses a more advanced continuous stability estimation method based on observations. The limitation with AERMOD is that the user needs to estimate initial mixing (Szo and Syo) for mechanical turbulence and thermal plume rise. Consult with the District prior to conducting roadway modeling to determine model use.

For practical information on how to simulate roadway emission dispersion using these models, see the California Air Pollution Control Officer’s Association (CAPCOA) website at <http://www.capcoa.org> or the Sacramento Metropolitan AQMD (SMAQMD) website at <http://www.airquality.org/ceqa/RoadwayProtocol.shtml>. The SMAQMD has a document titled, “Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways”(January, 2010). The ARB recommends this document for SB-352 risk assessments.

#### 4.3.1.3 Area Sources

Emissions that are to be modeled as area sources are typical of fugitive sources characterized by non-buoyant emissions containing negligible vertical extent (e.g., no plume rise or emissions distributed over a large horizontal area).

Fugitive particulate (PM<sub>2.5</sub>, PM<sub>10</sub>, TSP) emission sources include areas of disturbed ground (e.g., open pits, parking lots) which may be present during operational phases of a facility’s life. Also included are areas of exposed material (e.g., storage piles and slag dumps) and segments of material transport where potential fugitive emissions may occur (uncovered haul trucks or rail cars, emissions from unpaved roads). Fugitive emissions may also occur during stages of material handling where particulate material is exposed to the atmosphere (uncovered conveyors, hoppers, and crushers).

Other fugitive emissions emanating from many points of release may be modeled as area sources. Examples include fugitive emissions from valves, flanges, venting, and other connections that occur at ground level or at an elevated level or deck if on a building or structure. Modern dispersion models include an option for an initial vertical extent (Szo) where needed.

Modeling portable equipment as an area source is a case-by-case situation that should be discussed with the District or reviewing authority. Situations may exist where this type of operation is best represented as another type of release.

#### 4.3.1.4 Volume Sources

Non-point sources with emissions containing an initial vertical extent should be modeled as volume sources. The initial vertical extent may be due to plume rise or a vertical distribution of numerous smaller sources over a given area. Examples of volume sources include buildings with natural fugitive or passive ventilation, and line sources such as conveyor belts and rail lines.

#### 4.3.2 **Quantity of Sources**

The number of sources at a facility may influence the selection of the air dispersion model. Some dispersion models are capable of simulating only one source at a time, and are therefore referred to as single-source models (e.g., AERSCREEN).

In some cases, for screening purposes, single-source models may be used in situations involving more than one source using one of the following approaches:

- Combining all sources into one single “representative” source

In order to be able to combine all sources into one single source, the individual sources must have similar release parameters. For example, when modeling more than one stack as a single “representative” stack, the stack gas exit velocities and temperatures must be similar. In order to obtain a conservative estimate, the values leading to the higher concentration estimates should typically be used (e.g., the lowest stack gas exit velocity and temperature, the height of the shortest stack, and a receptor distance and spacing that will provide maximum concentrations, etc.).

- Running the model for each individual source and superimposing results

Superimposition of results of single sources of emissions is the actual approach followed by all the Gaussian models capable of simulating more than one source. Simulating sources in this manner may lead to conservative estimates if worst-case meteorological data are used or if the approach is used with a model that automatically selects worst-case meteorological conditions, especially wind direction. The approach will typically be more conservative the farther apart the sources are because each run would use a different worst-case wind direction.

Additional guidance regarding source merging is provided by the U.S. EPA (1995a). It should be noted that depending upon the population distribution, the total burden can actually increase when pollutants are more widely dispersed. If the total burden from the facility or zone of impact (see Section 4.6.1) could increase for the simplifying modeling assumptions described above, the District should be consulted.

#### 4.4 **Terrain Type**

Two types of terrain characterizations are required to select the appropriate model. One classification is made according to land type and another one according to terrain topography.

#### 4.4.1 *Terrain Type – Land Use*

Some air dispersion models (e.g., CALINE) use different dispersion coefficients (sigmas) depending on the land use over which the pollutants are being transported. The land use type is also used by some models to select appropriate wind profile exponents. Traditionally, the land type has been categorized into two broad divisions for the purposes of dispersion modeling: urban and rural. Accepted procedures for determining the appropriate category are those suggested by Irwin (1978): one based on land use classification and the other based on population.

The land use procedure is generally considered more definitive. Population density should be used with caution and should not be applied to highly industrialized areas where the population density may be low. For example, in low population density areas a rural classification would be indicated, but if the area is sufficiently industrialized the classification should already be “urban” and urban dispersion parameters should be used.

If the facility is located in an area where land use or terrain changes abruptly, for example, on the coast, the District should be consulted concerning the classification. If need be, the model should be run in both urban and rural modes and the District may require a classification that biases estimated concentrations towards over prediction. As an alternative, the District may require that receptors be grouped according to the terrain between source and receptor.

AERMOD is the U.S. EPA’s preferred dispersion model for a wide range of applications in rural or urban conditions. The users should refer to section 5.0 of the AERMOD Implementation Guide to determine urban or rural conditions.

The Land Use and the Population Density Procedures discussed above are described as follows.

##### 4.4.1.1 Land Use Procedure

- (1) Classify the land use within the total area  $A$ , circumscribed by a 3 km radius circle centered at the source using the meteorological land use typing scheme proposed by Auer (1978) and shown in Table 4.1.
- (2) If land use types I1, I2, C1, R2 and R3 account for 50 percent or more of the total area  $A$  described in (1), use urban dispersion coefficients. Otherwise, use appropriate rural dispersion coefficients.

##### 4.4.1.2 Population Density Procedure

- (1) Compute the average population density ( $p$ ) per square kilometer with  $A$  as defined in the Land Use procedure described above. (Population estimates are also required to determine the exposed population; for more information see Section 4.6.3.)

(2) If  $p$  is greater than 750 people/km<sup>2</sup> use urban dispersion coefficients, otherwise, use appropriate rural dispersion coefficients.

**Table 4.1 Identification and classification of land use types (Auer, 1978)**

Used to define rural and urban dispersion coefficients in certain models.

Type	Use and Structures	Vegetation
I1	<i>Heavy Industrial</i> Major chemical, steel and fabrication industries; generally 3-5 story buildings, flat roofs	Grass and tree growth extremely rare; <5% vegetation
I2	<i>Light-moderate industrial</i> Rail yards, truck depots, warehouses, industrial parks, minor fabrications; generally 1-3 story buildings, flat roofs	Very limited grass, trees almost totally absent; <5% vegetation
C1	<i>Commercial</i> Office and apartment buildings, hotels; >10 story heights, flat roofs	Limited grass and trees; <15% vegetation
R1	<i>Common residential</i> Single family dwelling with normal easements; generally one story, pitched roof structures; frequent driveways	Abundant grass lawns and light-moderately wooded; >70% vegetation
R2	<i>Compact residential</i> Single, some multiple, family dwelling with close spacing; generally <2 story, pitched roof structures; garages (via alley), no driveways	Limited lawn sizes and shade trees; <30% vegetation
R3	<i>Compact residential</i> Old multi-family dwellings with close (<2 m) lateral separation; generally 2 story, flat roof structures; garages (via alley) and ash pits, no driveways	Limited lawn sizes, old established shade trees; <35% vegetation
R4	<i>Estate residential</i> Expansive family dwelling on multi-acre tracts	Abundant grass lawns and lightly wooded; >80% vegetation
A1	<i>Metropolitan natural</i> Major municipal, state, or federal parks, golf courses, cemeteries, campuses; occasional single story structures	Nearly total grass and lightly wooded; >95% vegetation
A2	Agricultural rural	Local crops (e.g., corn, soybean); >95% vegetation
A3	<i>Undeveloped</i> Uncultivated; wasteland	Mostly wild grasses and weeds, lightly wooded; >90% vegetation
A4	Undeveloped rural	Heavily wooded; >95% vegetation
A5	<i>Water surfaces</i> Rivers, lakes	

#### 4.4.2 *Terrain Type - Topography*

Surface conditions and topographic features generate turbulence, modify vertical and horizontal winds, and change the temperature and humidity distributions in the boundary layer of the atmosphere. These in turn affect pollutant dispersion and models differ in their need to take these factors into account.

The classification according to terrain topography should ultimately be based on the topography at the receptor location with careful consideration of the topographical features between the receptor and the source. Differentiation of simple versus complex terrain is unnecessary with AERMOD. In complex terrain, AERMOD employs the well-known dividing-streamline concept in a simplified simulation of the effects of plume-terrain interactions. For other plume models, topography can be classified as follows:

##### 4.4.2.1 Simple Terrain (also referred to as “Rolling Terrain”)

Simple terrain is all terrain located below stack height including gradually rising terrain (i.e., rolling terrain). Note that *Flat Terrain* also falls in the category of simple terrain.

##### 4.4.2.2 Intermediate Terrain

Intermediate terrain is terrain located above stack height and below plume height. The recommended procedure to estimate concentrations for receptors in intermediate terrain is to perform an hour-by-hour comparison of concentrations predicted by simple and complex terrain models. The higher of the two concentrations should be reported and used in the risk assessment.

##### 4.4.2.3 Complex Terrain

Complex terrain is terrain located above plume height. Complex terrain models are necessarily more complicated than simple terrain models. There may be situations in which a facility is “overall” located in complex terrain but in which the nearby surroundings of the facility can be considered simple terrain. In such cases, receptors close to the facility in this area of simple terrain will “dominate” the risk analysis and there may be no need to use a complex terrain model. It is unnecessary to determine which terrain dominates the risk analysis for users of AERMOD.

#### 4.5 **Level of Detail: Screening vs. Refined Analysis**

Air dispersion models can be classified according to the level of detail which is used in the assessment of the concentration estimates as “screening” or “refined”. Refined air dispersion models use more robust algorithms capable of using representative meteorological data to predict more representative and usually less conservative estimates. Refined air dispersion models are, however, more resource intensive than their screening counterparts. It is advisable to first use a screening model to obtain conservative concentration estimates and calculate health risks. If the health risks are estimated to be above the threshold of concern, then use of a refined model to calculate

more representative concentration and health risk estimates would be warranted. There are situations when screening models represent the only viable alternative (e.g., when representative meteorological data are not available). The district or reviewing authority should be consulted to determine the appropriate method for determining the level of detail in the modeling analysis. The HARP software will incorporate the capability of using either representative meteorological data from AERMOD or the default meteorological conditions from the AERSCREEN model.

It is acceptable to use a refined air dispersion model in a “screening” mode for this program’s health risk assessments. In this case, a refined air dispersion model is used:

- with worst-case meteorology instead of representative meteorology;
- with a conservative averaging period conversion factor to calculate longer term concentration estimates (see Section 4.10 for more discussion on screening air dispersion models and adjustments factors).

Note that use of worst case meteorology in a refined model is not the normal practice in New Source Review or Ambient Air Quality Standard evaluation modeling.

## 4.6 Population Exposure

The level of detail required for the analysis (e.g., screening or refined), and the procedures to be used in determining geographic resolution and exposed population require case-by-case analysis and professional judgment. The District should be consulted before beginning the population exposure estimates, and as results are generated, further consultation may be necessary. Some suggested approaches and methods for handling the breakdown of population and performance of a screening or detailed risk analysis are provided in this section.

In addition to estimating individual cancer risk at specific points such as the MEI (maximally exposed individual), OEHHA recommends determining the number of people who reside within the  $1 \times 10^{-6}$ ,  $1 \times 10^{-5}$ ,  $1 \times 10^{-4}$ , and higher cancer risk isopleths. For noncancer population evaluations, the number of people who reside within the 0.5, one, five, or higher hazard index isopleths should be reported. The HARP software can provide population exposure estimates as cancer burden or as the number of persons exposed to a selected (user identified) health risk/impact level. Information on obtaining the HARP software can be found under the Hot Spots Program on the ARB’s web site at [www.arb.ca.gov](http://www.arb.ca.gov). Chapter 9 provides an outline that specifies the content and recommended format of HRA results.

### 4.6.1 Zone(s) of Impact

As part of the estimation of the population exposure for the cancer risk analysis, it is necessary to determine the geographic area affected by the facility’s emissions. An initial approach to define a “zone of impact” surrounding the source is to generate an isopleth where the total excess lifetime cancer risk from inhalation exposure to all emitted carcinogens is greater than  $10^{-6}$  (one in 1,000,000).

For noncarcinogens, a second, third, and fourth isopleth (to represent the chronic, 8-hour, and acute impacts) should be created to define the zone of impact for the hazard index from both inhalation and noninhalation pathways greater than or equal to 1.0. For clarity these isopleths may need to be presented on separate maps in the HRA.

Contact the District or reviewing authority to discuss inclusion of isopleth maps if all potential health risks fall within the facility boundary and no receptors have, or will ever, be present within the boundary (also see Section 4.7.1 for a discussion of on-site receptors).

The initial “zone of impact” can be determined as follows:

- Use a screening dispersion model (e.g., AERSCREEN) to obtain concentration estimates for each emitted pollutant at varying receptor distances from the source. Several screening models feature the generation of an automatic array of receptors which is particularly useful for determining the zone of impact. In order for the model to generate the array of receptors the user needs to provide some information normally consisting of starting distance, increment and number of intervals.
- Calculate total cancer risk and hazard index (HI) for each receptor location by using the methods provided in the risk characterization sections in Chapter 8 of the Air Toxics Hot Spots Risk Assessment Guidance Manual.
- Find the distance where the total inhalation cancer risk is equal to  $10^{-6}$ ; this may require redefining the receptor array in order to have two receptor locations that bound a total cancer risk of  $10^{-6}$ . Next, find the distance where the chronic, 8-hour, and acute health hazard indices are declared significant by the District (e.g., acute, 8-hour, or chronic HI = 1.0).

Some Districts may prefer to use a cancer risk of  $10^{-7}$  or an HI of 0.5 as the zone of impact. Therefore, the District should be consulted before modeling efforts are initiated. If the zone of impact is greater than 25 km from the facility at any point, then the District should be consulted. The District may specify limits on the area of the zone of impact. Ideally, these preferences would be presented in the modeling protocol (see Section 4.14).

Note that when depicting the risk assessment results, risk isopleths must present the total cancer and noncancer risk from both inhalation and noninhalation pathways. The zone of impact should be clearly shown on a map with geographic markers of adequate resolution (see Section 4.6.3.1). The text below discusses methodology for defining the zone of impact and has format recommendations. Chapter 9 provides an outline that specifies the content and recommended format of all HRA results.

The zone of impact can be defined once the exposure assessment (air dispersion modeling) process has determined the pollutant concentrations at each designated off-site receptor and a risk analysis (see Chapter 8) has been performed. For clarity, the cancer and noncancer zone(s) of impact should be presented on separate maps. A

map illustrating the carcinogenic zone of impact is required. The District may at its discretion ask for the map illustrating the potential carcinogenic zone of impact to identify the zone of impact for the minimum exposure pathways (inhalation, soil, dermal, and mother's milk) and the zone of impact for all applicable pathways of exposure (minimum pathways plus site/route dependent pathways). Two maps may be needed to accomplish this. The legend of these maps should state the level(s) used for the zone of impact and identify the exposure pathways that were included in the assessment.

The noncancer maps should also clearly identify the noncancer zones of impact. These include the acute (inhalation) zone of impact, 8-hour (inhalation) zone of impact and the chronic (including both inhalation, multipathway) zone of impact. The District may at its discretion require separate chronic inhalation and chronic multipathway zones of impact maps. For clarity, presentation of the two chronic zones of impact may also require two or more maps. The legend of these maps should state the level(s) used for the zone of impact and identify the exposure pathways (and target organs) that were included in the assessment. Further information regarding the methods for determination of hazard indices and cancer risk are discussed in Chapter 8 and Appendix I.

#### **4.6.2 Screening Population Estimates for Risk Assessments**

A screening risk assessment should include an estimate of the maximum exposed population. For screening risk assessments, a detailed description of the exposed population is not required. The impact area to be considered should be selected to be health protective (i.e., will not underestimate the number of exposed individuals). A health-protective assumption is to assume that all individuals within a large radius of the facility are exposed to the maximum concentration. If a facility must also comply with the RCRA/CERCLA risk assessment requirements, health effects to on-site workers may also need to be addressed. The DTSC's Remedial Project Manager should be consulted on this issue. The District should be consulted to determine the population estimate that should be used for screening purposes. Guidance for one screening method is presented here.

1. Use a screening dispersion model (e.g., AERSCREEN) to obtain concentration estimates for each emitted pollutant at varying receptor distances from the source. Several screening models feature the generation of an automatic array of receptors that is particularly useful for determining the zone of impact. In order for the model to generate the array of receptors, the user needs to provide some information normally consisting of starting distance, increment, and number of intervals.
2. Calculate the potential cancer risk and hazard index for each receptor location by using the methods provided in the risk characterization sections of this document (Chapter 8).
3. Find the distance where the potential cancer risk is equal to District specified levels (e.g.,  $10^{-6}$ ); this may require redefining the receptor array in order to have

two receptor locations that bound a total cancer risk of  $10^{-6}$ . This exercise should be repeated for the noncancer health impacts.

4. Calculate cancer burden by estimating the number of people in the grid and stipulate that all are exposed at the highest level.

#### **4.6.3 Refined Population Estimates for Risk Assessments**

The refined HRA requires a detailed analysis of the population exposed to emissions from the facility. Where possible, a detailed population exposure analysis provides estimates of the number of individuals in residences and offsite workplaces, as well as at sensitive receptor sites such as schools, daycare centers and hospitals. The District may require that locations with high densities of sensitive individuals be identified (e.g., schools, daycare centers, hospitals). These population analyses can include exposure estimates for workers and residents through the use of land use maps or other tools. The overall exposed residential and worker populations should be apportioned into smaller geographic subareas. The information needed for each subarea is:

1. The number of exposed persons, and
2. The receptor location at which the calculated ambient air concentration is assumed to be representative of the exposure to the entire population in the subarea.

A multi-tiered approach is suggested for the population analysis. Census tracts, which the facility could significantly impact, should be identified (see Section 4.6.3.1). A census tract should be divided into smaller subareas if it is close to the facility where ambient concentrations vary widely. The District may determine that census tracts provide sufficient resolution near the facility to adequately characterize population exposure or they may prefer the census information to be evaluated using smaller blocks. Further downwind where ambient concentrations are less variable, the census tract level may be acceptable to the District. The District may determine that the aggregation of census tracts (e.g., when the census tracts making up a city are combined) is appropriate for receptors that are considerable distances from the facility.

If a facility must also comply with the RCRA/CERCLA HRA requirements, health effects to on-site workers may also need to be addressed. The DTSC's Remedial Project Manager should be consulted on this issue. In some cases it may be appropriate to evaluate risks to on-site receptors. The district should be consulted about special cases for which evaluation of on-site receptors is appropriate, such as facilities frequented by the public or where people may reside (e.g., military facilities).

##### **4.6.3.1 Census Tracts**

For a refined risk assessment, the boundaries of census tracts can be used to define the geographic area to be included in the population exposure analysis. Digital maps showing the census tract boundaries in California can be obtained from "The Thomas

Guide”® on the World Wide Web. Statistics for each census tract can be obtained from the U.S. Census Bureau. The website address for the U.S. Census Bureau is <http://www.census.gov>. Numerous additional publicly accessible or commercially available sources of census data can be found on the World Wide Web. A specific example of a census tract is given in Appendix K. The HARP software includes U.S. census data and is a recommended tool for performing population exposure estimates.

The two basic steps in defining the area under analysis are:

(1) Identify the “zone of impact” (as defined previously in Section 4.6.1) on a map detailed enough to provide for resolution of the population to the subcensus tract level. (The U.S. Geological Survey (USGS) 7.5-minute series maps and the maps within the HARP software provide sufficient detail.) This is necessary to clearly identify the zone of impact, location of the facility, and sensitive receptors within the zone of impact. If significant development has occurred since the USGS survey, this should be indicated. A specific example of a 7.5-minute series map is given in Appendix K.

(2) Identify all census tracts within the zone of impact using a U.S. Bureau of Census or equivalent map (e.g., Thomas Brothers, HARP Software). If only a portion of the census tract lies within the zone of impact, then only the population that falls within the isopleth should be used in the population estimate or burden calculation. To determine this level of detail, local planning and zoning information may need to be collected. When this more detailed information is not available, then a less refined approach is to include the census data if the centroid of the census block falls within the isopleths of interest. The census tract boundaries should be transferred to a map, such as a USGS map (referred to hereafter as the “base map”).

An alternative approach for estimating population exposure in heavily populated urban areas is to apportion census tracts to a Cartesian grid cell coordinate system. This method allows a Cartesian coordinate receptor concentration field to be merged with the population grid cells. This process can be computerized and minimizes manual mapping of centroids and census tracts. The HARP software includes this function and will provide population estimates that are consistent with the methodology discussed here.

The District may determine that aggregation of census tracts (e.g., which census tracts making up a city can be combined) is appropriate for receptors that are located at considerable distances from the facility. If the District permits such an approach, it is suggested that the census tract used to represent the aggregate be selected in a manner to ensure that the approach is health protective. For example, the census tract included in the aggregate that is nearest (downwind) to the facility should be used to represent the aggregate.

#### *4.6.3.1.1 Subcensus Tract*

Within each census tract are smaller population units. These units [urban block groups (BG) and rural enumeration districts (ED)] contain about 1,100 persons. BGs are

further broken down into statistical units called blocks. Blocks are generally bounded by four streets and contain an average of 70 to 100 persons. However, this range in population is an average and population units may vary significantly. In some cases, the EDs are very large and identical to a census tract.

The area requiring detailed (subcensus tract) resolution of the exposed residential and worker population will need to be determined on a case-by-case basis through consultation with the District. The District may determine that census tracts provide sufficient resolution near the facility to adequately characterize population exposure.

Employment population data can be obtained at the census tract level from the U.S. Census Bureau or from local planning agencies. This degree of resolution will generally not be sufficient for most risk assessments. For the area requiring detailed analysis, zoning maps, general plans, and other planning documents should be consulted to identify subareas with worker populations.

The boundaries of each residential and employment population area should be transferred to the base map.

#### **4.6.4 Sensitive Receptor Locations**

Individuals who may be more sensitive to toxic exposures than the general population are distributed throughout the total population. Sensitive populations may include young children and chronically ill individuals. The District may require that locations with high densities of sensitive individuals be identified (e.g., schools, nursing homes, residential care facilities, daycare centers, and hospitals). The HRA should state what the District requirements are regarding identification of sensitive receptor locations.

Although protection of sensitive individuals is incorporated into OEHHA's risk assessment methodology in both cancer risk and noncancer risk assessment, the assessment of risk at the specific location of such sensitive individuals (e.g., schools, hospitals, or nursing homes) may be useful to assure the public that such individuals are being considered in the analysis. For some chemicals (e.g., mercury and manganese) children have been specifically identified as the sensitive subpopulation for noncancer health impacts, so it can be particularly appropriate to assess school sites.

### **4.7 Receptor Siting**

#### **4.7.1 Receptor Points**

The modeling analysis should contain a network of receptor points with sufficient detail (in number and density) to permit the estimation of the maximum concentrations. Locations that must be identified include:

- The maximum estimated off-site impact or point of maximum impact (PMI),
- The maximum exposed individual at an existing residential receptor (MEIR),
- The maximum exposed individual at an existing occupational worker receptor (MEIW).

Note that some situations may also require that on-site receptor (worker or residential) locations be evaluated. The risk assessor can contact the District or reviewing authority for guidance if on-site exposure situations are present at the emitting facility. However, these on-site locations should be included in the HRA. Some examples where the health impacts of on-site receptors may be appropriate could be military base housing, prisons, universities, day care facilities, or locations where the public may have regular access for the appropriate exposure period (e.g., a lunch time café or museum for acute exposures). When a receptor lives and works on the facility, site, or property, then these receptors should be evaluated and reported under both residential and worker scenarios and the one that is most health protective should be used for risk management decisions. The cancer risk estimates for the onsite residents may use a 30-year exposure duration while the 25-year exposure duration is used for a worker. Under a Tier 2 analysis, alternate exposure durations may be evaluated and presented with all assumptions supported.

All of these locations (i.e., PMI, MEIR, and MEIW) must be identified for potential multipathway carcinogenic and noncarcinogenic effects. It is possible that the estimated PMI, MEIR, and MEIW risk for cancer, chronic noncancer, 8-hour, and acute noncarcinogenic risks occur at different locations or that some of these evaluations may not be necessary (e.g., the receptor does not exist). For example, some facilities will not have off-site workers in the vicinity of the facility and will not need to evaluate worker exposure, or the exposure situation may only require the evaluation of short-term carcinogenic or acute noncancer impacts (see Section 8.2.10 for a discussion of short-term projects). The approval to revise the exposure assessment for a receptor, or to omit the MEIW receptor, should be verified in writing with the District or reviewing authority and included in the HRA.

Other sensitive receptor locations may also be of interest and required to be included in the HRA. The District or reviewing authority should be consulted to determine which sensitive receptor locations must be included.

The results from a screening model (if available) can be used to identify the area(s) where the maximum concentrations are likely to occur. Receptor points should also be located at the population centroids (see Section 4.7.2) and sensitive receptor locations (see Section 4.6.4). The exact configuration of the receptor array used in an analysis will depend on the topography, population distribution patterns, and other site-specific factors. All receptor locations should be identified in the HRA using UTM (Universal Transverse Mercator) coordinates and receptor number. The receptor numbers in the summary tables should match receptor numbers in the computer output (e.g., HARP output files). In addition to actual UTM coordinates, the block/street locations (i.e., north side of 3,000 block of Smith Street) should be provided in the HRA for the PMI, MEIR, and MEIW for carcinogenic and noncarcinogenic health effects. Chapter 9 provides an outline that specifies the content and recommended format of HRA results.

#### 4.7.1.1 Receptor Height

To evaluate localized impacts, receptor height should be taken into account at the point of maximum impact on a case-by-case basis. For example, receptor heights may have to be included to account for receptors significantly above ground level. Flagpole receptors at the height of the breathing zone of a person may need to be considered when the source receptor distance is less than a few hundred meters. Consideration must also be given to the noninhalation pathway analysis which requires modeling of chemical deposition onto soil or water at ground level. For the inhalation pathway, a health protective approach is to select a receptor height from 0 meters to 1.8 meters that will result in the highest predicted downwind concentration. Final approval of this part of the modeling protocol should be with the District or reviewing authority.

#### 4.7.2 ***Centroid Locations***

For each subarea analyzed, a centroid location (the location at which a calculated ambient concentration is assumed to represent the entire subarea) should be determined. When population is uniformly distributed within a population unit, a geographic centroid based on the shape of the population unit can be used. If only a portion of the census tract lies within the isopleth or area of interest, then only the population that falls within the isopleth should be used in the calculation for population exposure. To determine this level of detail, local planning and zoning information may need to be collected. Where populations are not uniformly distributed, a population-weighted centroid may be used. Another alternative uses the concentration at the point of maximum impact within that census tract as the concentration to which the entire population of that census tract is exposed. While this less refined approach is commonly accepted, Districts should be contacted to approve this method prior to its use in a risk assessment.

The centroids represent locations that should be included as receptor points in the dispersion modeling analysis. Annual average concentrations should be calculated at each centroid using the modeling procedures presented in this chapter.

For census tracts and BG/EDs, judgments can be made using census tracts maps and street maps to determine the centroid location. At the block level, a geographic centroid is sufficient.

#### 4.7.3 ***Spatial Averaging***

Since the inception of the “Hot Spots” and California’s Air Toxics Programs, HRA results for an individual receptor have typically been based on air dispersion modeling results at a single point or location. With a few exceptions, this method has been traditionally used for all types of receptors (e.g., PMI, MEIR, MEIW, pathway receptors, etc.). The assumptions used in risk assessment are designed to prevent underestimation of health impacts to the public resulting in a health protective approach. However, basing risk estimates on a single highest point (PMI, MEIR, or MEIW) does not take into account that a person does not remain at one location on their property, or in one location at the

workplace over an extended period of time. Therefore, the average air concentration over a small area is likely to be more representative than using the air concentration at a single point, particularly in those situations where concentrations fall off rapidly around that single point. The concept of averaging air concentrations over a small area is known as spatial averaging.

In order to understand how spatial averaging can impact air dispersion modeling results with various types of facilities, the ARB, in conjunction with the OEHHA, performed sensitivity analyses to evaluate the impacts of spatially averaging air dispersion modeling results (see Appendix C of the Air Toxics Hot Spots Program Risk Assessment Guidelines: Technical Support Document for Exposure Assessment and Stochastic Analysis (EASA)). Based on these sensitivity analyses, it is reasonable and appropriate to include spatial averaging techniques in air toxic risk assessments as supplemental information to Tier 1 information (i.e., modeling results that are based on the air concentration from a single point or location). While all risk assessments must include results based on Tier 1 methodology, the spatially averaged concentrations around the point of interest (e.g., PMI, MEIR, MEIW, multipathway exposure evaluations, etc.) could also be included as an option in risk assessments and acceptable for risk management decisions subject to approval by the District or reviewing agency. Spatial averaging is an option for the purpose of additional refinement to the risk assessment.

A few reasons that support the inclusion of spatially averaged modeled concentrations in risk assessment include the following:

- Averaging results over a small domain will give a more representative picture of individual exposure and risk than an estimate based on one single location within their property.
- Spatial averaging will allow air dispersion modeling and risk assessment results to be characterized as the estimated concentration and risk in a discrete area of interest, rather than an exact value for a single location.
- From a risk communication standpoint, the ARB and OEHHA feel it is more appropriate to present the modeling output and the calculated health impacts as the potential impacts within a small or discrete area, rather than an exact value at a specific point on a grid or map.
- Spatial averaging is the recommended procedure in ARB's Lead Risk Management Guidelines (2001) and has been used in several complex source HRAs [e.g., Roseville Railyard (2004), Ports of LA/LB (2006), Port of Oakland (2008)].
- Spatially averaging the deposition concentrations over pasture land, a garden, or a water body for multipathway exposure scenarios is a planned upgrade for the HARP Software. This will provide an option that will refine multipathway exposure assessments. Average deposition on these types of areas (e.g., a water body) is not necessarily well represented by the single highest point of deposition, or deposition at the geographic center of the water body. Likewise, since produce is grown over the entire surface of the garden and cows graze the

entire pasture, deposition is better estimated by evaluating the entire area rather than using a single point.

#### 4.7.3.1 Spatial Averaging Methodology

The spatial averaging sensitivity study in Appendix C of the EASA is based on simulating emissions from point, volume, area, and line sources. Most source types (e.g., point) are simulated as a small, medium or large source. Line sources are only simulated as small and large. In addition, meteorological data collected at five different locations in California were used. Nested spatial average grids of various domains were used to study the differences on the spatial average concentration. In the case of the 20 meter by 20 meter spatial average nested grid, the spatial average concentration showed little change over the PMI for medium and large sources. In the case for small sources, the spatial average concentration is approximately 45% to 80% of the PMI concentration. Individual source type and meteorological conditions will cause variations in these results.

The results of the spatial averaging sensitivity study in Appendix C of the EASA shows that sources with low plume rise that result in a PMI, MEIW, or MEIR located at or near the property fence line are most sensitive to spatial averaging. Source types with high plume rise (e.g., tall stacks) show a PMI far downwind where the concentration gradient is more gradual and therefore spatial averaging has a lesser effect. While spatial averaging can be used regardless of source size or the location of the PMI, the following conditions generally apply when a source is a good candidate for spatial averaging:

- The MEIR, MEIW, or PMI is located at the fence line or close to the emission source.
- The concentration gradient is high near the PMI. This is more associated with low level plumes such as fugitive, volume, area, or short stacks.
- A long term average is being calculated to represent a multi-year risk analysis based on one to five years of meteorological data. Note that spatial averaging should **not** be used for short term (acute) calculations.

In general, the method for calculating the spatial average in air toxic risk assessments includes the following steps:

1. Locate the point(s) of interest and receptor(s) (i.e., PMI, MEIW, MEIR, and any additional receptor locations of interest or concern) with a grid resolution spacing of no greater than five meters. To achieve this, two or more modeling runs with successively finer nested grid resolutions may be needed to find the final location where the nested grid that will be used for spatial averaging will be placed.

2. Center the spatial average nested grid on the each receptor's location of interest determined in step 1. Limit the nested grid to no larger than 20 meters by 20 meters or 400 square meters. Note that if a portion of the centered and nested grid falls within the facility boundary and the receptor location of interest is outside of the boundary, then adjustments to the nested grid to obtain the spatially-averaged concentration for the offsite receptor are reasonable. This may be done by either repositioning the nested grid to cover 400 square meters of off-boundary area surrounding the receptor or center the nested grid and delete any on-site grid points so that only the offsite grid points surrounding the receptor are used in the spatially averaged concentration. The grid resolution spacing should be no greater than five meters. With a five meter grid resolution, the 20 meter by 20 meter domain will result in 25 receptors. The size, shape, and placement of the domain and the resolution of points are subject to approval by the District, ARB, or other reviewing authority. See the Sections 4.7.3.1.2 and 4.7.3.1.3 below for additional discussion on domain sizing and grid spacing at worksites, pastures, gardens, and water bodies.
3. Some configurations of source activity and meteorological conditions result in a predominant downwind plume center line that is significantly askew from one of the four ordinate directions. In this case, a tilted nested grid is necessary to coincide with the dominant plume centerline. Polar receptors are easier to implement than a tilted rectangular grid. The domain of the polar receptor field should be limited to a 15 meter radius. See Appendix C of the EASA for detailed instructions on tilted polar receptors.
4. Calculate the arithmetic mean of the long term period average concentration (e.g., annual average) of the nested grid of receptors to represent the spatial average. This average is used in the risk calculations.
5. Document and include all methods, assumptions, data, maps, and files used in the spatial averaging analysis and clearly present this information in the risk assessment following the requirements of the District or reviewing authority. Note that in the update to the HARP software, functionality will be included that will assist with spatial averaging and the methodology discussed.

The following sections discuss the use of spatial averaging for various receptor types and exposure pathways.

#### *4.7.3.1.1 Residential Receptors*

Follow the steps in Section 4.7.3 outlining the spatial averaging methodology. To remain health protective when evaluating a residential receptor, spatial averaging should not take place using large nested domains. The domain used for spatial averaging should be no larger than 20 meters by 20 meters with a maximum grid spacing resolution of equal to or less than five meters. This domain represents an area

that is approximately the size of a small urban lot. The size of the domain and resolution of points shall be subject to approval by the District, ARB, or other reviewing authority.

#### 4.7.3.1.2 *Worker Receptors*

Offsite worker locations (e.g. MEIW) may also be a candidate for spatial averaging. However, workers can be at the same location during almost their entire daily work shift (e.g., desk/office workers). When this is the situation, then the traditional method of using a single location and corresponding modeled concentration is appropriate. If spatial averaging is used, care should be taken to determine the proper domain size and grid resolution. Follow the steps in Section 4.7.3 outlining the spatial averaging methodology. To be consistent with the residential receptor assumptions and remain health protective, a modeling domain size no larger than 20 meters by 20 meters is recommended with a grid spacing resolution of equal to or less than five meters. However, if workers routinely and continuously move throughout the worksite over a space greater than 20 meters by 20 meters, then a larger domain may be considered.

The HRA or modeling protocol shall support all assumptions used, including, but not limited to, documentation for all workers showing the area where each worker routinely performs their duties and the percentage of time spent in those areas. The final domain size should not be greater than the smallest area of worker movement. Other considerations for determining domain size and grid spacing resolution may include an evaluation of the concentration gradients across the worker area. The grid spacing used within the domain to find the concentration that will be used to calculate health impacts should be sufficient in number and detail to obtain a representative concentration across the area of interest. The size of the domain and resolution of points shall be subject to approval by the District, ARB, or other reviewing authority.

#### 4.7.3.1.3 *Pastures, Gardens, or Water Bodies*

The simplified approach of using the concentration (deposition rate) at the centroid, a specific point of interest, or the PMI location for an area being evaluated for noninhalation exposures (e.g., a body of water used for fishing, a pasture used for grazing, area of a garden, etc.) is acceptable for use in HRA. However, evaluating deposition concentrations over pasture land, a garden, or a water body for multipathway exposure scenarios using spatial averaging could give more representative estimates of the overall deposition rate. Use of spatial averaging in this application is subject to approval by the District, ARB, or other reviewing authority.

If spatial averaging will be done, follow the steps in Section 4.7.3.1 outlining the spatial averaging methodology. When using spatial averaging over the deposition area, care should be taken to determine the proper domain size to make sure it includes all reasonable areas of potential deposition. The size and shape of the area of interest (e.g., pasture or water body) should be identified and used for the modeling domain. The grid spacing or resolution used within the domain should be sufficient in detail to obtain a representative deposition concentration across the area of interest. One way

to determine the grid resolution is to include an evaluation of the concentration gradients across the deposition area. The HRA or modeling protocol shall support all assumptions used, including, but not limited to, documentation of the deposition area (e.g., size and shape of the pasture, garden, or water body, maps, representative coordinates, grid resolution, concentration gradients, etc.). The size of the domain and grid resolution is subject to approval by the reviewing authority.

In lieu of following the details in the paragraph above, the approach used for the other receptors (e.g., MEIR, MEIW) that uses a domain size not greater than 20 meters by 20 meters, located on the PMI within the area of interest, with a maximum grid spacing resolution of five meters, can be used. This default refined approach would apply to deposition areas greater than 20 meters by 20 meters. For smaller deposition areas, the simplified approach of using the PMI for the area, the concentration at the centroid or a specific point of interest, or averaging over the actual smaller domain can be used. This again is subject to approval by the reviewing authority.

The HRA or modeling protocol shall support all assumptions used, including, but not limited to, documentation of the deposition area (e.g., size and shape of the water body, pasture, or garden; all data; maps; representative coordinates, and etc.), and the details clarifying how and where the averaging was done (e.g., location and magnitude of concentration gradients, the grid spacing used).

#### **4.8 Meteorological Data**

Refined air dispersion models require hourly meteorological data. The first step in obtaining meteorological data should be to check with the District and the ARB for data availability. Other sources of data include the National Weather Service (NWS), National Climatic Data Center (NCDC), Asheville, North Carolina, ARB meteorological database (METDB), military stations and private networks. Meteorological data for a subset of NWS stations are available from the U.S. EPA Support Center for Regulatory Air Models (SCRAM). The SCRAM can be accessed at [www.epa.gov/scram001/main.htm](http://www.epa.gov/scram001/main.htm). All meteorological data sources should be approved by the District. Data not obtained directly from the District or the ARB should be checked for quality, representativeness, and completeness. It should be approved by the District before use. U.S. EPA provides guidance (U.S. EPA, 1995e) for these data. Meteorological data may need further processing. Data users can consult with the District or the ARB on how to process the raw meteorological data. The risk assessment should indicate if the District required the use of a specified meteorological data set. All memos indicating District approval of meteorological data should be attached in an appendix. If no representative meteorological data are available, screening procedures should be used as indicated in Section 4.10.

The analyst should acquire enough meteorological data to ensure that the worst-case meteorological conditions are represented in the model results. The US-EPA Guideline on Air Quality Models (U.S. EPA 2005) prefers that the latest five years of consecutive meteorological data be used to represent long term averages (i.e., cancer and chronic impacts). Previous OEHHA guidance allowed the use of the worst-case year to save

computer time. The processing speed of modern computers has increased to the point where processing five years of data over one year is no longer burdensome. However, the District may determine that one year of representative meteorological data is sufficient to adequately characterize the facility's impact. This may especially be the case when five years of quality consecutive data are not available.

To determine long term average concentrations the data can be averaged. For calculation of the one-hour maximum concentrations needed to evaluate acute effects, the worst-case year should be used in conjunction with the maximum hourly emission rate. For example, the long term average concentration and one-hour maximum concentration at a single receptor for five years of meteorological data are calculated below:

Year	Annual Average ( $\mu\text{g}/\text{m}^3$ )	Maximum One-Hour ( $\mu\text{g}/\text{m}^3$ )
1	7	100
2	5	80
3	9	90
4	8	110
5	6	90
5-year average	7	

In the above example, the long-term average concentration over five years is  $7 \mu\text{g}/\text{m}^3$ . Therefore,  $7 \mu\text{g}/\text{m}^3$  should be used to evaluate carcinogenic and chronic effects (i.e., annual average concentration). The one-hour maximum concentration is the highest one-hour concentration in the five-year period. Therefore,  $110 \mu\text{g}/\text{m}^3$  is the peak one-hour concentration that should be used to evaluate acute effects.

The higher hourly concentration usually occurs when meteorological dispersion conditions become worse, such as, calm or light wind, inversion, etc. Inversion usually happens in late afternoon through early morning. As the sun goes down, the atmospheric temperature near surface starts to fall, usually faster than the temperature in the upper atmosphere causing a temperature inversion layer to form and extend downward. This inversion layer usually sustains throughout the night, and remains until early morning. Because of the inversion (cold air sitting on warm air at the top of the inversion layer), pollutant vertical mixing is very low in the morning.

When predicted concentrations are high and the mixing height is very low for the corresponding averaging period, the modeling results deserve additional consideration. For receptors in the near field, it is within the model formulation to accept a very low mixing height for short durations. However, it would be unlikely that the very low mixing height would persist long enough for the pollutants to travel into the far field. In the

event that the analyst identifies any of these time periods, they should be discussed with the District on a case-by-case basis.

#### **4.8.1 Meteorological Data Formats**

Most short-term dispersion models require input of hourly meteorological data in a format which depends on the model. U.S. EPA provides software for processing meteorological data for use in U.S. EPA recommended dispersion models. U.S. EPA recommended meteorological processors include the Meteorological Processor for Regulatory Models (MPRM), PCRAMMET, and AERMET. Use of these processors will ensure that the meteorological data used in an U.S. EPA recommended dispersion model will be processed in a manner consistent with the requirements of the model.

Meteorological data for a subset of NWS stations are available on the World Wide Web at the U.S. EPA SCRAM address, <http://www.epa.gov/scram001>.

#### **4.8.2 Treatment of Calms**

Calms are hours when the wind speed is below the starting threshold of the anemometer. Gaussian plume models require a wind speed and direction to estimate plume dispersion in the downwind direction.

U.S. EPA's policy is to disregard calms until such time as an appropriate analytical approach is available. The recommended U.S. EPA models contain a routine that eliminates the effect of the calms by nullifying concentrations during calm hours and recalculating short-term and annual average concentrations. Certain models lacking this built-in feature can have their output processed by U.S. EPA's CALMPRO program (U.S. EPA, 1984a) to achieve the same effect. Because the adjustments to the concentrations for calms are made by either the models or the postprocessor, actual measured on-site wind speeds should always be input to the preprocessor. These actual wind speeds should then be adjusted as appropriate under the current U.S. EPA guidance by the preprocessor.

Following the U.S. EPA methodology, measured on-site wind speeds of less than 1.0 m/s, but above the instrument threshold, should be set equal to 1.0 m/s by the preprocessor when used as input to Gaussian models. Calms are identified in the preprocessed data file by a wind speed of 1.0 m/s and a wind direction equal to the previous hour. For input to AERMOD, no adjustment should be made to the site specific wind data. AERMOD can produce model estimates for conditions when the wind speed may be less than 1 m/s but still greater than the instrument threshold. Some air districts provide pre-processed meteorological data for use in their district that treats calms differently. Local air districts should be consulted for available meteorological data. In addition, to reduce the number of calms and missing winds in the surface data, EPA has developed a pre-processor – AERMINUTE – to process 1-minute ASOS wind data for generating hourly average wind speed and directions for input to AERMET in Stage 2. The details can be found in the EPA's AERMINUTE User's Instructions at:

[http://www.epa.gov/ttn/scram/models/aermod/aerminute\\_userguide\\_v11059\\_draft.pdf](http://www.epa.gov/ttn/scram/models/aermod/aerminute_userguide_v11059_draft.pdf)

If the fraction of calm hours is excessive, then an alternative approach may need to be considered to characterize dispersion. The Calpuff model modeling system can simulate calm winds as well as complex wind flow and therefore is a viable alternative. The local air district should be consulted for alternative approaches.

#### **4.8.3 Treatment of Missing Data**

Missing data refer to those hours for which no meteorological data are available from the primary on-site source for the variable in question. When missing values arise, they should be handled in one of the following ways listed below, in the following order of preference:

- (1) If there are other on-site data, such as measurements at another height, they may be used when the primary data are missing. If the height differences are significant, corrections based on established vertical profiles should be made. Site-specific vertical profiles based on historical on-site data may also be appropriate to use if their determination is approved by the reviewing authority. If there is question as to the representativeness of the other on-site data, they should not be used.
- (2) If there are only one or two missing hours, then linear interpolation of missing data may be acceptable, however, caution should be used when the missing hour(s) occur(s) during day/night transition periods.
- (3) If representative off-site data exist, they may be used. In many cases this approach may be acceptable for cloud cover, ceiling height, mixing height, and temperature. This approach will rarely be acceptable for wind speed and direction. The representativeness of off-site data should be discussed and agreed upon in advance with the reviewing authority.
- (4) An imputation methodology may be acceptable, provided it is well-documented, sufficiently justified, and properly applied.
- (5) Failing any of the above, the data field should be coded as missing using missing data codes appropriate to the applicable meteorological pre-processor.

Appropriate model options for treating missing data, if available in the model, should be employed. Substitutions for missing data should only be made in order to complete the data set for modeling applications, and should not be used to attain the “regulatory completeness” requirement of 90%. That is, the meteorological data base must be 90% complete on a monthly basis (before substitution) in order to be acceptable for use in air dispersion modeling. The use of any data substitution technique should be thoroughly documented to provide the District or reviewing authority with all the information necessary to determine its approvability.

If the recommended methods for addressing missing meteorological data cannot be achieved as described, then alternative approaches should be discussed and developed in conjunction with the District or reviewing authority.

#### **4.8.4 Representativeness of Meteorological Data**

The atmospheric dispersion characteristics at an emission source need to be evaluated to determine if the collected meteorological data can be used to adequately represent atmospheric dispersion for the project.

Such determinations are required when the available meteorological data are acquired at a location other than that of the proposed source. In some instances, even though meteorological data are acquired at the location of the pollutant source, they still may not correctly characterize the important atmospheric dispersion conditions.

Considerations of representativeness are always made in atmospheric dispersion modeling whether the data base is "on-site" or "off-site." These considerations call for the judgment of a meteorologist or an equivalent professional with expertise in atmospheric dispersion modeling. If in doubt, the District should be consulted.

##### **4.8.4.1 Spatial Dependence**

The location where the meteorological data are acquired should be compared to the source location for similarity of terrain features. For example, in complex terrain, the following considerations should be addressed in consultation with the District:

- Aspect ratio of terrain, i.e., ratio of:
  - Height of valley walls to width of valley;
  - Height of ridge to length of ridge; and
  - Height of isolated hill to width of hill at its base
- Slope of terrain
- Ratio of terrain height to stack/plume height
- Distance of source from terrain (i.e., how close to valley wall, ridge, isolated hill)
- Correlation of terrain feature to prevailing meteorological conditions

Likewise, if the source is located on a plateau or plain, the source of meteorological data used should be from a similar plateau or plain.

Judgments of representativeness should be made only when sites are climatologically similar. Sites in nearby, but different air sheds, often exhibit different weather patterns. For instance, meteorological data acquired along a shoreline are not normally representative of inland sites and vice versa.

Meteorological data collected need to be examined to determine if drainage, transition, and synoptic flow patterns are characteristics of the source, especially those critical to the regulatory application. Consideration of orientation, temperature, and ground cover should be included in the review.

An important aspect of space dependence is height above the ground. Where practical, meteorological data should be acquired at the release height, as well as above or below, depending on the buoyancy of the source's emissions. AERMOD at a minimum requires wind observations at a height above ground between seven times the local surface roughness height and 100 meters.

#### 4.8.4.2 Temporal Dependence

To be representative, meteorological data must be of sufficient duration to define the range of sequential atmospheric conditions anticipated at a site. As a minimum, one full year of on-site meteorological data is necessary to prescribe this time series. Multiple years of data are used to describe variations in annual and short-term impacts. Consecutive years from the most recent, readily available 5-year period are preferred to represent these yearly variations.

#### 4.8.4.3 Further Considerations

It may be necessary to recognize the non-homogeneity of meteorological variables in the air mass in which pollutants disperse. This non-homogeneity may be essential in correctly describing the dispersion phenomena. Therefore, measurements of meteorological variables at multiple locations and heights may be required to correctly represent these meteorological fields. Such measurements are generally required in complex terrain or near large land-water body interfaces.

It is important to recognize that, although certain meteorological variables may be considered unrepresentative of another site (for instance, wind direction or wind speed), other variables may be representative (such as temperature, dew point, cloud cover). Exclusion of one variable does not necessarily exclude all. For instance, one can argue that weather observations made at different locations are likely to be similar if the observers at each location are within sight of one another - a stronger argument can be made for some types of observations (e.g., cloud cover) than others. Although by no means a sufficient condition, the fact that two observers can "see" one another supports a conclusion that they would observe similar weather conditions.

Other factors affecting representativeness include change in surface roughness, topography and atmospheric stability. Currently there are no established analytical or statistical techniques to determine representativeness of meteorological data. The establishment and maintenance of an on-site data collection program generally fulfills the requirement for "representative" data. If in doubt, the District should be consulted.

#### **4.8.5 *Alternative Meteorological Data Sources***

It is necessary, in the consideration of most air pollution problems, to obtain data on site-specific atmospheric dispersion. Frequently, an on-site measurement program must be initiated. As discussed in Section 4.8.3, representative off-site data may be used to substitute for missing periods of on-site data. There are also situations where current or past meteorological records from a National Weather Service station may suffice. These considerations call for the judgment of a meteorologist or an equivalent professional with expertise in atmospheric dispersion modeling. More information on Weather Stations including: National Weather Service (NWS), military observations, supplementary airways reporting stations, upper air and private networks, is provided in "On-Site Meteorological Program Guidance for Regulatory Modeling Applications" (U.S. EPA, 1995e).

##### **4.8.5.1 Recommendations**

On-site meteorological data should be processed to provide input data in a format consistent with the particular models being used. The input format for U.S. EPA short-term regulatory models is defined in U.S. EPA's MPRM. The input format for AERMOD is defined in the AERMET meteorological pre-processor. Processors are available on the SCRAM web site. The actual wind speeds should be coded on the original input data set. Wind speeds less than 1.0 m/s but above the instrument threshold should be set equal to 1.0 m/s by the preprocessor when used as input to Gaussian models. Wind speeds below the instrument threshold of the cup or vane, whichever is greater, should be considered calm, and are identified in the preprocessed data file by a wind speed of 1.0 m/s and a wind direction equal to the previous hour. For input to AERMOD, no adjustment should be made to the site specific wind data. AERMOD can produce model estimates for conditions when the wind speed may be less than 1 m/s but still greater than the instrument threshold.

If data are missing from the primary source, they should be handled as follows, in order of preference: (1) substitution of other representative on-site data; (2) linear interpolation of one or two missing hours; (3) substitution of representative off-site data; (4) use of a well-documented and justified imputation methodology; or (5) coding as a missing data field, according to the discussions in Section 4.8.3. The use of any data substitution technique should be thoroughly documented to provide the District or reviewing authority with all the information necessary to determine its approvability.

If the data processing recommendations in this section cannot be achieved, then alternative approaches should be discussed and developed in conjunction with the District or reviewing authority.

#### **4.8.6 *Quality Assurance and Control***

The purpose of quality assurance and maintenance is the generation of a representative amount (90% of hourly values for a year on a monthly basis) of valid data. For more information on data validation consult reference U.S. EPA (1995e). Maintenance may

be considered the physical activity necessary to keep the measurement system operating as it should. Quality assurance is the management effort to achieve the goal of valid data through plans of action and documentation of compliance with the plans.

Quality assurance (QA) will be most effective when following a QA Plan which has been signed-off by appropriate project or organizational authority. The QA Plan should contain the following information (paraphrased and particularized to meteorology from Lockhart):

1. Project description - how meteorology data are to be used
2. Project organization - how data validity is supported
3. QA objective - how QA will document validity claims
4. Calibration method and frequency - for data
5. Data flow - from samples to archived valid values
6. Validation and reporting methods - for data
7. Audits - performance and system
8. Preventive maintenance
9. Procedures to implement QA objectives - details
10. Management support - corrective action and reports

It is important for the person providing the quality assurance (QA) function to be independent of the organization responsible for the collection of the data and the maintenance of the measurement systems. Ideally, the QA auditor works for a separate company.

#### **4.9 Model Selection**

There are several air dispersion models that can be used to estimate pollutant concentrations and new ones are likely to be developed. U.S. EPA added AERMOD, which incorporates the PRIME downwash algorithm, to the list of preferred models in 2005 as a replacement to ISCST3. CalPuff was added in 2003. The latest version of the U.S. EPA recommended models can be found at the SCRAM Bulletin board located at <http://www.epa.gov/scram001>. However, any model, whether a U.S. EPA guideline model or otherwise, must be approved for use by the local air district. Recommended models and guidelines for using alternative models are presented in this section. All air dispersion models used to estimate pollutant concentrations for risk assessment analyses must be in the public domain. Classification according to terrain, source type and level of analysis is necessary before selecting a model (see Section 4.4). The selection of averaging times in the modeling analysis is based on the health effects of concern. Annual average concentrations are required for an analysis of carcinogenic or other chronic effects. One-hour maximum concentrations are required for analysis of acute effects.

##### **4.9.1 Recommended Models**

Recommended air dispersion models to estimate concentrations for risk assessment analyses are generally referenced in US EPA's Guideline on Air Quality Models

available at <http://www.epa.gov/scram001>. Currently AERMOD is recommended for most refined risk assessments in flat or complex terrain and in rural or urban environments<sup>1</sup>. In addition, CalPuff is available where spatial wind fields are highly variable or transport distances are large (e.g., 50 km). AERSCREEN is a screening model based on AERMOD. AERSCREEN can be used when representative meteorological data are unavailable. CTSCREEN is available for screening risk assessments in complex terrain. The most current version of the models should be used for risk assessment analysis. Some facilities may also require models capable of special circumstances such as dispersion near coastal areas. For more information on modeling special cases see Sections 4.12 and 4.13.

Most air dispersion models contain provisions that allow the user to select among alternative algorithms to calculate pollutant concentrations. Only some of these algorithms are approved for regulatory application such as the preparation of health risk assessments. The sections in this guideline that provide a description of each recommended model contain information on the specific switches and/or algorithms that must be selected for regulatory application.

To further facilitate the model selection, the District should be consulted for additional recommendations on the appropriate model(s) or a protocol submitted for District review and approval (see Section 4.14.1).

#### **4.9.2 Alternative Models**

Alternative models are acceptable if applicability is demonstrated or if they produce results identical or superior to those obtained using one of the preferred models referenced in Section 4.9.1. For more information on the applicability of alternative models refer to the following documents:

- U.S. EPA (2005). "Guideline on Air Quality Models" Section 3.2.2
- U.S. EPA (1992). "Protocol for Determining the Best Performing Model"
- U.S. EPA (1985a). "Interim Procedures for Evaluating Air Quality Models – Experience with Implementation"
- U.S. EPA (1984b). "Interim Procedures for Evaluating Air Quality Models (Revised)"

#### **4.10 Screening Air Dispersion Models**

A screening model may be used to provide a maximum concentration that is biased toward overestimation of public exposure. Use of screening models in place of refined modeling procedures is optional unless the District specifically requires the use of a refined model. Screening models are normally used when no representative meteorological data are available and may be used as a preliminary estimate to determine if a more detailed assessment is warranted.

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<sup>1</sup> AERMOD was promulgated by U.S. EPA as a replacement to ISCST3 on November 9, 2006.

Some screening models provide only 1-hour average concentration estimates. Other averaging periods can be estimated based on the maximum 1-hour average concentration in consultation and approval of the responsible air district. Because of variations in local meteorology, the exact factor selected may vary from one district to another. Table 4.2 provides guidance on the range and typical values applied. The conversion factors are designed to bias predicted longer term averaging periods towards overestimation.

**Table 4.2 Recommended Factors to Convert Maximum 1-hour Avg. Concentrations to Other Averaging Periods (U.S. EPA, 2011, 1995a; ARB, 1994).**

Averaging Time	Range	Typical SCREEN3 Recommended	AERSCREEN Recommended
3 hours	0.8 - 1.0	0.9	1.0
8 hours	0.5 - 0.9	0.7	0.9
24 hours	0.2 - 0.6	0.4	0.6
30 days	0.2 - 0.3	0.3	
Annual	0.06 - 0.1	0.08	0.1

AERSCREEN automatically provides the converted concentration for longer than 1-hour averaging periods. For area sources, the AERSCREEN 3, 8, and 24-hour average concentration are equal to the 1-hour concentration. No annual average concentration is calculated. SCREEN3 values are shown for comparison purposes.

#### **4.10.1 AERSCREEN**

The AERSCREEN (U.S. EPA, 2011) model is now available and should be used in lieu of SCREEN3 with approval of the local District. AERSCREEN is a screening level air quality model based on AERMOD. AERSCREEN does not require the gathering of hourly meteorological data. Rather, AERSCREEN requires the use of the MAKEMET program which generates a site specific matrix of meteorological conditions for input to the AERMOD model. MAKEMET generates a matrix of meteorological conditions based on local surface characteristics, ambient temperatures, minimum wind speed, and anemometer height.

AERSCREEN is currently limited to modeling a single point, capped stack, horizontal stack, rectangular area, circular area, flare, or volume source. More than one source may be modeled by consolidating the emissions into one emission source.

### 4.10.2 Valley Screening

The Valley model is designed to simulate a specific worst-case condition in complex terrain, namely that of a plume impaction on terrain under stable atmospheric conditions. The algorithms of the VALLEY model are included in other models such as SCREEN3 and their use is recommended in place of the VALLEY model. The usefulness of the VALLEY model and its algorithms is limited to pollutants for which only long-term average concentrations are required. For more information on the Valley model consult the user's guide (Burt, 1977).

#### 4.10.2.1 Regulatory Options

Regulatory application of the Valley model requires the setting of the following values during a model run:

- Class F Stability (rural) and Class E Stability (urban)
- Wind Speed = 2.5 m/s
- 6 hours of occurrence of a single wind direction (not exceeding a 22.5 deg sector)
- 2.6 stable plume rise factor

### 4.10.3 CTSCREEN

The CTSCREEN model (Perry et al., 1990) is the screening mode of the Complex Terrain Dispersion Model (CTDMPLUS). CTSCREEN can be used to model single point sources only. It may be used in a screening mode for multiple sources on a case by case basis in consultation with the District. CTSCREEN is designed to provide conservative, yet theoretically sounder, worst-case 1-hour concentration estimates for receptors located on terrain above stack height. Internally-coded time-scaling factors are applied to obtain other averages (see Table 4.3). These factors were developed by comparing the results of simulations between CTSCREEN and CTDMPLUS for a variety of scenarios and provide conservative estimates (Perry et al., 1990).

CTSCREEN produces identical results as CTDMPLUS if the same meteorology is used in both models. CTSCREEN accounts for the three-dimensional nature of the plume and terrain interaction and requires detailed terrain data representative of the modeling domain. A summary of the input parameters required to run CTSCREEN is given in Table 4.4. The input parameters are provided in three separate text files. The terrain topography file (TERRAIN) and the receptor information file (RECEPTOR) may be generated with a preprocessor that is included in the CTSCREEN package. In order to generate the terrain topography file the analyst must have digitized contour information.

**Table 4.3 Time-scaling factors internally coded in CTSCREEN**

Averaging Period	Scaling Factor
3 hours	0.7
24 hour	0.15
Annual	0.03

**Table 4.4 Input Parameters Required to Run CTSCREEN**

Parameter	File
Miscellaneous program switches	CTDM.IN
Site Latitude and Longitude (degrees)	CTDM.IN
Site TIME ZONE	CTDM.IN
Meteorology Tower Coordinates (user units)	CTDM.IN
Source Coordinates: x and y (user units)	CTDM.IN
Source Base Elevation (user units)	CTDM.IN
Stack Height (m)	CTDM.IN
Stack Diameter (m)	CTDM.IN
Stack Gas Temperature (K)	CTDM.IN
Stack Gas Exit Velocity (m/s)	CTDM.IN
Emission Rate (g/s)	CTDM.IN
Surface Roughness for each Hill (m)	CTDM.IN
Meteorology: Wind Direction (optional)	CTDM.IN
Terrain Topography	TERRAIN
Receptor Information (coordinates and associated hill number)	RECEPTOR

## 4.11 Refined Air Dispersion Models

Refined air dispersion models are designed to provide more representative concentration estimates than screening models. In general, the algorithms of refined models are more robust and have the capability to account for site-specific meteorological conditions. For more information regarding general aspects of model selection see Section 4.9.

### 4.11.1 AERMOD

For a wide variety of applications in all types of terrain, the recommended model is AERMOD. AERMOD is a steady-state plume dispersion model for assessment of pollutant concentrations from a variety of sources. AERMOD simulates transport and dispersion from multiple point, area, or volume sources based on an up-to-date characterization of the atmospheric boundary layer. Sources may be located in rural or urban areas and receptors may be located in simple or complex terrain. AERMOD accounts for building wake effects (i.e., plume downwash) based on the PRIME building downwash algorithms. The model employs hourly sequential preprocessed meteorological data to estimate concentrations for averaging times from one hour to one year (also multiple years). AERMOD is designed to operate in concert with two pre-processor codes: AERMET processes meteorological data for input to AERMOD, and AERMAP processes terrain elevation data and generates receptor information for input to AERMOD. Guidance on input requirements may be found in the AERMOD Users Guide.

#### 4.11.1.1 Regulatory Options

U.S. EPA regulatory application of AERMOD requires the selection of specific switches (i.e., algorithms) during a model run. All the regulatory options can be set by selecting the DFAULT keyword. The U.S. EPA regulatory options, automatically selected when the DFAULT keyword is used, are:

- Stack-tip downwash
- Incorporates the effects of elevated terrain
- Includes calms and missing data processing routines
- Does not allow for exponential decay for applications other than a 4-hour half life for SO<sub>2</sub>

Additional information on these options is available in the AERMOD User's Guide.

#### 4.11.1.2 Special Cases

- a. Building Downwash:  
AERMOD automatically determines if the plume is affected by the wake region of buildings when their dimensions are given. The specification of building dimensions does not necessarily mean that there will be downwash. See

Section 4.13.1 for guidance on how to determine when downwash is likely to occur.

b. Area Sources:

The area source algorithm in AERMOD estimates source emission strength by integrating an area upwind of the receptor location. Receptors may be placed within the area itself, downwind of the area or adjacent to the area. However, since the vertical distribution parameter ( $\sigma_z$ ) goes to zero as the downwind distance goes to zero, the plume function solution is infinite for a downwind receptor distance of zero. In order to avoid such singularity in the plume function solution, the AERMOD model arbitrarily sets the plume function to zero when the receptor distance is less than one meter. As a result, the area source algorithm will not provide reliable solutions for receptors located within or adjacent to very small areas, with dimensions on the order of a few meters across. In these cases, the receptor should be placed at least one meter outside of the area.

c. Volume Sources:

The volume source algorithms in AERMOD require an estimate of the initial distribution of the emission source. The initial distribution of emissions for a volume source is in the horizontal and vertical directions. When modeling volume source emissions, one needs to provide initial horizontal ( $\sigma_{y0}$ ) and vertical ( $\sigma_{z0}$ ) dimensions as accurate as possible so that pollutant buoyancy and dispersion are also calculated accurately. US EPA's AERMOD User Guide provides suggested procedures to estimate these initial dimensions based on source type (Table 3-1) (U.S. EPA, 2004a).

d. Line Sources:

Examples of line sources include conveyor belts or roads. Depending on the source, these can be modeled three ways; as a line source, as a series of volume sources, or as an elongated area source. Where the emission source is neutrally buoyant, such as a conveyor belt, AERMOD can be used according to the user guide. In the event that the line source is a roadway, then additional considerations are required.

At the present time, CALINE (CALINE3, CAL3QHCR, and CALINE4) is the only model dedicated to modeling the enhanced mechanical and thermal turbulence created by motor vehicles traveling on a roadway. Of these, CAL3QHCR is the only model that accepts hourly meteorological data and can estimate annual average concentrations. However, CALINE uses the Pasquill-Gifford stability categories which are used in the ISCST model. AERMOD is now the preferred plume model over ISCST3 with continuous plume dispersion calculations based on observations but AERMOD does not include the enhanced roadway turbulence. Therefore, in the case where roadway emissions dominate the risk assessment, it may be most important to simulate the enhanced thermal and mechanical turbulence from motor vehicles with the CAL3QHCR model.

In the case where roadway emissions are a subset of all emissions for the risk assessment, including roadway emissions along with facility emissions, it may be best to use AERMOD for all emissions, roadway and facility, in order to maintain continuity with one dispersion model for the risk assessment. If AERMOD is used, it is important to consider that a major freeway may act similar to a large building which can cause some mixing and therefore initial vertical dispersion. This dispersion could be estimated with sensitivity studies based on wind speed, wind angle, roadway orientation, roadway width, and etc. This could be a complex estimation and needs very adept modeling skills. Roadway modeling should be evaluated on a case-by-case basis in consultation with the District or the reviewing authority.

Line sources inputs include a composite fleetwide emission factor, roadway geometry, hourly vehicle activity (i.e., diurnal vehicle per hour pattern), hourly meteorological data, and receptor placement. For practical information on how to simulate roadway emissions using these models, see CAPCOA's website at <http://www.capcoa.org> or the Sacramento Metropolitan AQMD (SMAQMD) website at <http://www.airquality.org/ceqa/RoadwayProtocol.shtml>. The SMAQMD has a document titled, "Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways"(January, 2010).

- e. Complex Terrain:  
AERMOD uses the Dividing Streamline ( $H_c$ ) concept for complex terrain. Above  $H_c$ , the plume is assumed to be "terrain following" in the convective boundary layer. Below  $H_c$ , the plume is assumed to be "terrain impacting" in the stable boundary layer. AERMOD computes the concentration at any receptor as a weighted function between the two plume states (U.S. EPA, 2004b).
- f. Deposition:  
AERMOD contains algorithms to model settling and deposition and requires additional information to do so including particle size distribution. For more information consult the AERMOD User's Guide (U.S. EPA, 2004a).
- g. Diurnal Considerations:  
Systematic diurnal changes in atmospheric conditions are expected along the coast (or any large body of water) or in substantially hilly terrain. The wind speed and direction are highly dependent on time of day as the sun rises and begins to heat the Earth. The sun heats the surface of the land faster than the water surface. Therefore the air above the land warms up sooner than over water. This creates a buoyant effect of warm air rising over land and the cool air from over water moves in to fill the void. Near large bodies of water (e.g., the ocean) this is known as a sea breeze. In complex terrain this is known as upslope flow as the hot air follows the terrain upwards. When the sun sets and the surface of the land begins to cool, the air above also cools and creates a draining effect. Near the water this is the land breeze; in complex terrain this is known as downslope or drainage flow. In addition, for the sea breeze, the atmospheric

conditions change rapidly from neutral or stable conditions over water to unstable conditions over land.

Near the large bodies of water the sea breeze is typical in the afternoon and the land breeze is typical for the early morning before sunrise. In complex terrain upslope flow is typical in the afternoon, while drainage flow is typical at night. Diurnal profiles need to be evaluated in conjunction with the facility emissions since sources can have varied emission profiles (e.g., some sources are continuously emitting while others are intermittent). These intermittent emission profiles may be influenced by diurnal patterns; therefore, they need to be evaluated to properly estimate potential exposures. For these reasons, it is especially important to simulate facility emissions with a hourly diurnal pattern reflective of source activity so that the risk assessment is representative of daily conditions.

- h. 8-hour Modeling for the Offsite Worker's Exposure and Residential Exposure:  
If the ground level air concentrations from a facility operating 5 days a week, 8 hours per day have been estimated by a 24 hour per day annual average, an adjustment factor can be applied to estimate the air concentration that an offsite worker with the same schedule would be exposed to. The 24-hour annual average concentration is multiplied times 4.2.

If the meteorology during the time that the facility is emitting is used, hourly model simulations need to be post-processed to cull out the data needed for the offsite worker exposure. See Appendix M for information on how to calculate the refined offsite worker concentrations using the hourly raw results from the AERMOD air dispersion model. For more discussion on worker exposure, see Section 4.8.1.

Eight-hour exposure modeling can be used to evaluate the potential for health impacts (including effects of repeated exposures) in children and teachers exposed during school hours. Although not required in the HRA, 8-hour exposure modeling could also be performed at the discretion of the District to a residential scenario (i.e., the MEIR) where a facility operates only a portion of the day and exposure to residences are not adequately reflected by averaging concentrations over a 24 hour day.

#### 4.11.1.3 HARP Dispersion Analysis

It is highly recommended that air dispersion analysis be performed using the HARP software. HARP can perform refined dispersion analysis by utilizing the U.S. EPA standard program AERMOD. In the future, the updated version of HARP will link the AERMOD outputs with risk assessment modules.

#### **4.11.2 CTDMPLUS**

CTDMPLUS is a Gaussian air quality model for use in all stability conditions in complex terrain. In comparison with other models, CTDMPLUS requires considerably more

detailed meteorological data and terrain information that must be supplied using specifically designed preprocessors. CTDMPLUS was designed to handle up to 40 point sources.

#### **4.12 Modeling to Obtain Concentrations used for Various Health Impacts**

The following section outlines how emissions and air dispersion modeling results are used or adjusted for a receptor that is exposed to either a non-continuous or continuously emitting source.

##### **4.12.1 Emission Rates for Cancer, Chronic, and Acute Health Impacts**

As discussed in Section 4.2.1.1, the HRA should include both annual average emissions and maximum 1-hour emissions for each pollutant emitted by the facility. Maximum 1-hour emissions are used for acute noncancer health impacts while annual emissions are used for chronic exposures (i.e., chronic and 8-hour noncancer health impacts or cancer risk assessment). When applying the emission rates in the air dispersion analysis, it is important not to artificially inflate or deplete the reported emission inventory.

For annual average emissions, the emissions are spread evenly over the entire year for continuous emitting sources. However, for sources where the emission patterns vary (i.e., non-continuous emitting sources), the emission rate should also account for the facility's emission schedule. If appropriate, the variable emissions rate option (e.g., hour-of-day) should be used in the air dispersion analysis. For more information consult the AERMOD User's Guide (U.S. EPA, 2004a). Also, when calculating emission rates for acute health impacts, it is important the emission rates never exceed the reported maximum 1-hour emissions.

##### **4.12.2 Modeling and Adjustments for Inhalation Cancer Risk at a Worksite**

Modeled long-term averages are typically used for cancer risk assessments for residents and workers. In an inhalation cancer risk assessment for an offsite worker, the long-term average should represent what the worker breathes during their work shift. However, the long-term averages calculated from AERMOD typically represent exposures for receptors that were present 24 hours a day and seven days per week (i.e., the schedule of a residential receptor). To estimate the offsite worker's concentration, there are two approaches. The more refined, complex, and time consuming approach is to post-process the hourly raw dispersion model output and examine the hourly concentrations that fall within the offsite worker's shift. See Appendix M for information on how to simulate the long-term concentration for the offsite worker that can be used to estimate inhalation cancer risk.

In lieu of post-processing the hourly dispersion model output, the more typical approach is to obtain the long-term average concentration as you would for modeling a residential receptor and approximate the worker's inhalation exposure using an adjustment factor. The actual adjustment factor that is used to adjust the concentration may differ from the example below based on the specifics of the source and worker receptor

(e.g., work-shift overlap). Once the worker's inhalation concentration is determined, the inhalation dose is calculated using additional exposure frequency and duration adjustments. See Chapter 5 for more information on the inhalation dose equation.

#### 4.12.2.1 Non-Continuous Sources

When modeling a non-continuously emitting source (e.g., operating for eight hours per day and five days per week), the modeled long-term average concentrations are based on 24 hours a day and seven days per week for the period of the meteorological data set. Even though the emitting source is modeled using a non-continuous emissions schedule, the long-term concentration is still based on 24 hours a day and seven days per week. Thus, this concentration includes the zero hours when the source was not operating. For the offsite worker inhalation risk, we want to determine the long-term concentration the worker is breathing during their work shift. Therefore, the long-term concentration needs to be adjusted so it is based only on the hours when the worker is present. For example, assuming the emitting source and worker's schedules are the same, the adjustment factor is  $4.2 = (24 \text{ hours per day}/8 \text{ hours per shift}) \times (7 \text{ days in a week}/5 \text{ days in a work week})$ . In this example, the long term residential exposure is adjusted upward to represent the exposure to a worker. Additional concentration adjustments may be appropriate depending on the work shift overlap. These adjustments are discussed below.

The calculation of the adjustment factor from a non-continuous emitting source is summarized in the following steps.

- a. Obtain the long-term concentrations from air dispersion modeling as is typical for residential receptors (all hours of a year for the entire period of the meteorological data set).
- b. Determine the coincident hours per day and days per week between the source's emission schedule and the offsite worker's schedule.
- c. Calculate the worker adjustment factor (WAF) using Equation 4.1. When assessing inhalation cancer health impacts, a discount factor (*DF*) may also be applied if the offsite worker's schedule partially overlaps with the source's emission schedule. The discount factor is based on the number of coincident hours per day and days per week between the source's emission schedule and the offsite worker's schedule (see Equation 4.2). The *DF* is always less than or equal to one.

Please note that worker adjustment factor does not apply if the source's emission schedule and the offsite worker's schedule do not overlap. Since the worker is not present during the time that the source is emitting, the worker is not exposed to the source's emission (i.e., the *DF* in Equation 4.2 becomes 0).

$$WAF = \frac{H_{residential}}{H_{source}} \times \frac{D_{residential}}{D_{source}} \times DF \quad \text{Eq. 4.1}$$

Where:

$WAF$  = the worker adjustment factor

$H_{residential}$  = the number of hours per day the long-term residential concentration is based on (always 24 hours)

$H_{source}$  = the number of hours the source operates per day

$D_{residential}$  = the number of days per week the long-term residential concentration is based on (always 7 days)

$D_{source}$  = the number of days the source operates per week

$DF$  = a discount factor for when the offsite worker's schedule partially overlaps the source's emission schedule. Use 1 if the offsite worker's schedule occurs within the source's emission schedule. If the offsite worker's schedule partially overlaps with the source's emission schedule, then calculate the discount factor using Equation 4.2 below.

$$DF = \frac{H_{coincident}}{H_{worker}} \times \frac{D_{coincident}}{D_{worker}} \quad \text{Eq. 4.2}$$

Where:

$DF$  = the discount factor for assessing cancer impacts

$H_{coincident}$  = the number of hours per day the offsite worker's schedule and the source's emission schedule overlap

$D_{coincident}$  = the number of days per week the offsite worker's schedule and the source's emission schedule overlap

$H_{worker}$  = the number of hours the offsite worker works per day

$D_{worker}$  = the number of days the offsite worker works per week

- d. The final step is to estimate the offsite worker's inhalation concentration by multiplying the worker adjustment factor with the long-term residential concentration. The worker's concentration is then plugged into the dose equation and risk calculation.

The HARP software has the ability to calculate worker impacts using an approximation factor and, in the future, it will have the ability to post-process refined worker concentrations using the hourly raw results from an air dispersion analysis.

#### 4.12.2.2 Continuous Sources

If the source is continuously emitting, then the worker is assumed to breathe the long-term annual average concentration during their work shift. Equation 4.1 becomes one and no concentration adjustments are necessary in this situation when estimating the inhalation cancer risk. Note however, if an assessor does not wish to apply the assumption the worker breathes the long-term annual average concentration during the work shift, then a refined concentration can be post-processed as described in Appendix M. All alternative assumptions should be approved by the reviewing authority and supported in the presentation of results.

#### 4.12.3 **Modeling and Adjustments for Noncancer 8-Hour RELs**

For 8-hour noncancer health impacts, we evaluate if the receptor (e.g., worker or resident) is exposed to an 8 hour average concentration, occurring daily, that exceeds the 8-hour REL. The 8 hour RELs were derived primarily for the offsite worker scenario. Although not required in an HRA, residential receptors can be evaluated with an 8-hour

REL at the discretion of the District or Reviewing authority. For ease, we use a worker receptor in this discussion and in the discussion below for a non-continuously emitting source. The daily average concentration is intended to represent the long-term average concentration the worker is breathing during the work shift. In general, there are two approaches for estimating the concentration used for the 8-hour hazard index. The more refined, complex, and time consuming approach is to post-process the hourly dispersion model output and use only the hourly concentrations that are coincident with the offsite worker hours to obtain the long-term concentration. See Appendix M for information on how to simulate the daily average concentration through air dispersion modeling.

Before proceeding through a refined analysis described in Appendix M, the assessor may wish to approximate the long-term concentration, as described below, and calculate the 8-hour hazard index. In lieu of post-processing the hourly dispersion model output described in Appendix M, the more typical approach is to obtain the long-term average concentration as you would for modeling a residential receptor and approximate the worker's inhalation concentration using an adjustment factor. The method for applying the adjustment factor is described in the section below.

The results from the 8-hour hazard index calculations should not be combined with the chronic or acute hazard indices. Each of the potential noncancer health impacts should be reported independently. See Chapter 8 for more discussion on calculating health impacts.

#### 4.12.3.1 Non-Continuous Sources

When modeling a non-continuously emitting source (e.g., operating for eight hours per day and five days per week), the modeled long-term average concentrations are based on 24 hours a day and seven days per week for the period of the meteorological data set. Even though the emitting source is modeled using a non-continuous emissions schedule, the long-term concentration is still based on 24 hours a day and seven days per week. Thus, this concentration includes the zero hours when the source was not operating. For the offsite worker 8-hour hazard index, we want to determine the long-term average daily concentration the worker may be breathing during their work shift. This is similar to the cancer approximation adjustment method with one difference; there is no adjustment for partial overlap between the worker's schedule and the source's emission schedule. The reason for this difference in methodology is because the 8-hour REL health factors are designed for repeated 8-hour exposures and cannot readily be adjusted to other durations of exposure. The 8-hour RELs should be used for typical daily work shifts of 8-9 hours. For further questions, assessors should contact OEHHA, the District, or reviewing authority to determine if the 8-hour RELs should be used in your HRA. Any discussions or directions to exclude the 8-hour REL evaluation should be documented in the HRA.

When calculating the long-term average daily concentration for the 8-hour REL comparison, the long-term residential concentration needs to be adjusted so it is based only on the operating hours of the emitting source with the assumption the offsite

worker's shift falls within the emitting source's schedule. For example, assuming the emitting source operates 8 hours per day, 5 days per week and the offsite worker's schedule falls anywhere within this period of emissions, then the adjustment factor is  $4.2 = (24 \text{ hours per day} / 8 \text{ hours of emissions per day}) \times (7 \text{ days in a week} / 5 \text{ days of emissions per week})$ . In this example, the long term residential exposure is adjusted upward to represent the 8-hour exposure to a worker. No adjustments are applied for partial work shift overlap with the emitting source. If the source emits at night, then see Appendix N for additional recommendations.

Using the approximation factor is a screening method. If the 8-hour hazard index is above a threshold of concern with this method, the district or assessor should contact OEHHA for further guidance regarding the substance of concern. If necessary, further evaluation can be performed using the refined daily average modeling methodology discussed in Appendix M.

The calculation of the adjustment factor from a non-continuous emitting source is summarized in the following steps.

- b. Obtain the long-term concentrations from air dispersion modeling as is typical for residential receptors (all hours of a year for the entire period of the meteorological data set).
- c. Calculate the worker adjustment factor (WAF) using Equation 4.3. The source's emission schedule is assumed to overlap offsite worker's schedule. Note that the worker adjustment factor and the 8-hour inhalation REL do not apply if the source's emission schedule and the offsite worker's schedule do not overlap at some point.

$$WAF = \frac{H_{residential}}{H_{source}} \times \frac{D_{residential}}{D_{source}} \quad \text{Eq. 4.3}$$

Where:

$WAF$  = the worker adjustment factor

$H_{residential}$  = the number of hours per day the long-term residential concentration is based on (always 24 hours)

$H_{source}$  = the number of hours the source operates per day

$D_{residential}$  = the number of days per week the long-term residential concentration is based on (always 7 days).

$D_{source}$  = the number of days the source operates per week.

- d. The final step is to estimate the offsite worker's daily average inhalation concentration by multiplying the WAF with the long-term residential concentration. The worker's concentration is then used to calculate the 8-hour hazard index. This method using the approximation factor is a screening method. If the 8-hour hazard index is above a threshold of concern, the district or assessor should contact OEHHA for further guidance regarding the substance of concern.

In the future, the HARP software will have the ability to use 8-hour RELs, calculate worker impacts using an approximation factor, and to post-process worker concentrations using the hourly raw results from an air dispersion analysis.

#### 4.12.3.2 Continuous Sources

If the source is continuously emitting, then the worker is assumed to breathe the long-term annual average concentration during their work shift and no concentration adjustments are made when estimating 8-hour health impacts. Note however, if an assessor does not wish to assume the worker breathes the long-term annual average concentration during the work shift, then a refined concentration can be post-processed as described in Appendix M. All alternative assumptions should be approved by the reviewing authority and supported in the presentation of results.

Note that 8-hour RELs are not typically used for continuously emitting sources for residential receptors. In this situation it is only necessary to estimate a chronic Hazard Index using the annual average concentrations and chronic RELs. However, there may be situations where the District may wish to assess an 8-hour Hazard Index, for example, where there are significant differences in modeled concentration of emissions during the day due to diurnal wind patterns.

#### **4.12.4 Modeling and Adjustment Factors for Noncancer Chronic RELs**

Potential chronic noncancer health impacts use the long-term annual average concentration regardless of the emitting facility's schedule. No adjustment factors should be used to adjust this concentration. Chronic RELs are used to assess not only residential health impacts, but in many cases worker health impacts as well. There are currently only a limited number of substances with an 8-hour inhalation REL, and a facility may emit only, or mostly, substances that currently have just a chronic REL. Until there are 8-hour RELs for all the Hot Spots substances emitted from a specified facility, we recommend determining the chronic HI for the MEIW to adequately protect the offsite worker.

The results from the chronic hazard index calculations are not combined with the 8-hour or acute hazard indices. All potential noncancer results should be reported independently. See Chapter 8 for more discussion on calculating health impacts.

#### **4.12.5 Modeling and Adjustments for Oral Cancer Potencies and Oral RELs**

When estimating the cancer risk or noncancer health impacts from noninhalation pathways, no adjustment is made to the long-term annual average concentration regardless of the emitting facility's schedule. Since the media (e.g., soil) at the receptor location where deposition takes place for noninhalation pathways is continuously present, the concentrations used for all noninhalation pathways are not adjusted (up or down) by an adjustment factor. However, some adjustments are made to the concentration once the pollutants reach the media, for example, pollutants undergo decay in soils. In addition, when the dose for each pathway is calculated, exposure adjustments may also be made. See Chapter 5 of this document and the Technical

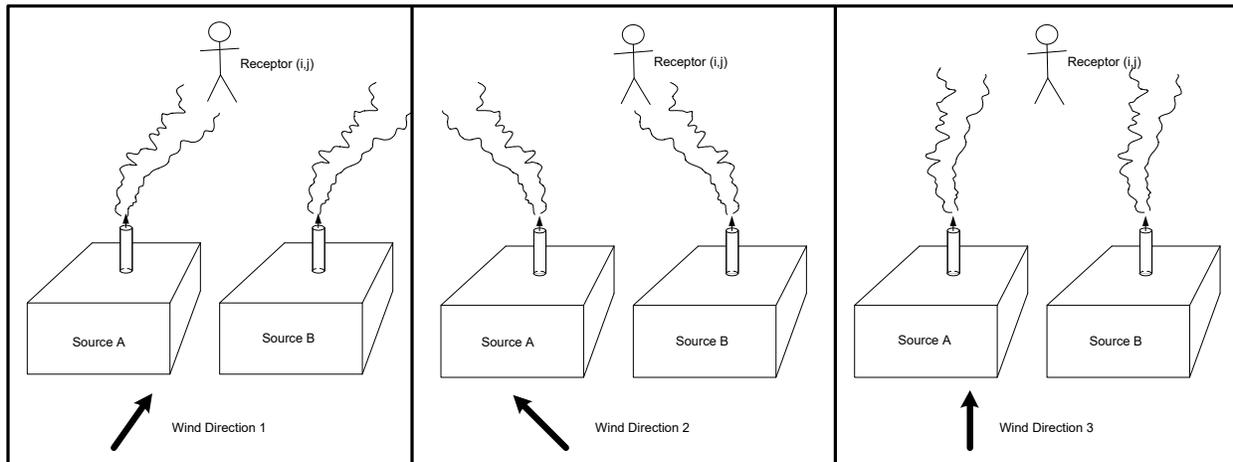
Support Document for Exposure Assessment and Stochastic Analysis (OEHHA, 2012) to get more information on these types of adjustments. Oral cancer potencies and oral RELs are used to assess both residential or worker health impacts.

#### **4.12.6 Modeling One-Hour Concentrations using Simple and Refined Acute Calculations**

Modeled one-hour concentrations are needed for the acute health hazard index calculations. HARP has two methods to calculate this concentration: Simple and Refined. As an aid to understanding the differences between Simple and Refined, Figure 2 shows three possible conditions showing how wind direction may vary and impact a downwind receptor (i,j) differently from just two sources (A and B).

For the Simple calculation, HARP stores only the maximum one-hour concentration at each receptor (i,j) from each source (A and B) as the dispersion model marches down each hour of the simulation (e.g., one to five years of hourly data). At the end of the simulation period, HARP reports back only the maximum impacts at each receptor from each source regardless of which hour of the simulation period this occurred. For example, the Simple Maximum Acute Impacts would be the summation of Source A impacts from Wind Direction 1 and Source B impacts from Wind Direction 2 as shown in Figure 2.

For the Refined simulation, HARP stores each hourly concentration at each receptor (i,j) from each source. At the end of the simulation period, HARP evaluates the coincident impact at each receptor from all sources for each hour of the simulation period. In this case the maximum impacts will be identified by a particular hour of the period with associated wind speed, direction, and atmospheric conditions. For example, the Refined Maximum Acute impact from Sources A and B on receptor (i,j) could be from any wind direction (1,2, or 3) as shown in Figure 2. Since HARP stores all simulations for all sources – at all receptors – for all hours to calculate the refined impacts, there is great potential to fill large amounts of disk storage space. The Refined simulation provides a more representative picture of the maximum acute hazard index from a facility. The Simple calculation will provide an upper bound to the acute hazard index.

**Figure 2 Acute Scenarios**

### 4.13 Modeling Special Cases; Specialized Models

Special situations arise in modeling some sources that require considerable professional judgment; a few are outlined below. It is recommended that the reader consider retaining professional consultation services if the procedures are unfamiliar. The following sections, taken mostly from the document “On-Site Meteorological Program Guidance for Regulatory Modeling Applications” (U.S. EPA, 1995e), provide general information on data formats and representativeness. Some Districts may have slightly different recommendations from those given here.

#### 4.13.1 Building Downwash

The entrainment of a plume in the wake of a building can result in the “downwash” of the plume to the ground. This effect can increase the maximum ground-level concentration downwind of the source. Therefore, stack sources must be evaluated to determine whether building downwash is a factor in the calculation of maximum ground-level concentrations.

The PRIME algorithm, included with AERMOD, has several advances in modeling building downwash effects including enhanced dispersion in the wake, reduced plume rise due to streamline deflection and increased turbulence, and continuous treatment of the near and far wakes (Schulman, 2000).

Complicated situations involving more than one building may necessitate the use of the Building Profile Input Program (BPIP) which can be used to generate the building dimension section of the input file of the ISC models (U.S. EPA, 1993). The BPIP program calculates each building’s direction-specific projected width. The Building Profile Input Program for PRIME (BPIP-PRM) is the same as BPIP but includes an algorithm for calculating downwash values for input into the PRIME algorithm which is contained in such models as AERMOD. The input structure of BPIP-PRM is the same as that of BPIP.

### **4.13.2 Deposition**

There are two types of deposition: wet deposition and dry deposition. Wet deposition is the incorporation of gases and particles into rain-, fog- or cloud water followed by a precipitation event and also rain scavenging of particles during a precipitation event. Wet deposition of gases is therefore more important for water soluble chemicals; particles (and hence particle-phase chemicals) are efficiently removed by precipitation events (Bidleman, 1988). Dry deposition refers to the removal of gases and particles from the atmosphere.

In the Air Toxics “Hot Spots” program, deposition is quantified for particle-bound pollutants and not gases. Wet deposition of water-soluble gas phase chemicals is thus not considered. When calculating pollutant mass deposited to surfaces without including depletion of pollutant mass from the plume, airborne concentrations remaining in the plume and deposition to surfaces can be overestimated, thereby resulting in overestimates of both the inhalation and multi-pathway risk estimates. However, neglecting deposition in the air dispersion model, while accounting for it in the multipathway health risk assessment, is a conservative, health protective approach (CAPCOA, 1987; Croes, 1988). Misapplication of plume depletion can also lead to possible underestimates of multi-pathway risk and for that reason no depletion is the default assumption. If plume depletion is incorporated, then some consideration for possible resuspension is warranted. An alternative modeling methodology accounting for plume depletion can be discussed with the Air District and used in an approved modeling protocol.

Although not generally used, several air dispersion models can provide downwind concentration estimates that take into account the upwind deposition of pollutants to surfaces and the consequential reduction of mass remaining in the plume. Air dispersion models having deposition and plume depletion algorithms require particle distribution data that are not always readily available. These variables include particle size, mass fraction, and density for input to AERMOD. In addition, the meteorological fields need to include additional parameters including relative humidity, precipitation, cloud cover, and surface pressure. Consequently, depletion of pollutant mass from the plume often is not taken into account.

In conclusion, multipathway risk assessment analyses normally incorporate deposition to surfaces in a screening mode, specifically by assigning a default deposition velocity of 2 cm/s for controlled sources and 5 cm/s for uncontrolled sources in lieu of actual measured size distributions (ARB, 1989). For particles (and particle-phase chemicals), the deposition velocity depends on particle size and is minimal for particles of diameter approximately 0.1-1 micrometer; smaller and larger particles are removed more rapidly.

### **4.13.3 Short Duration Emissions**

Short-duration emissions (i.e., much less than an hour) require special consideration. In general, “puff models” provide a better characterization of the dispersion of pollutants having short-duration emissions. Continuous Gaussian plume models have traditionally

been used for averaging periods as short as about 10 minutes and are not recommended for modeling sources having shorter continuous emission duration.

#### **4.13.4 Fumigation**

Fumigation occurs when a plume that was originally emitted into a stable layer in the atmosphere is mixed rapidly to ground-level when unstable air below the plume reaches plume level. Fumigation can cause very high ground-level concentrations. Typical situations in which fumigation occurs are:

- Breaking up of a nocturnal radiation inversion by solar warming of the ground surface (rising warm unstable air); note that the break-up of a nocturnal radiation inversion is a short-lived event and should be modeled accordingly.
- Shoreline fumigation caused by advection of pollutants from a stable marine environment to an unstable inland environment
- Advection of pollutants from a stable rural environment to a turbulent urban environment

SCREEN3 incorporates concentrations due to inversion break-up and shoreline fumigation and is limited to maximum hourly evaluations. The Offshore and Coastal Dispersion Model incorporates overwater plume transport and dispersion as well as changes that occur as the plume crosses the shoreline – hourly meteorological data are needed from both offshore and onshore locations.

#### **4.13.5 Raincap on Stack**

The presence of a raincap or any obstacle at the top of the stack hinders the momentum of the exiting gas. The extent of the effect is a function of the distance from the stack exit to the obstruction and of the dimensions and shape of the obstruction.

On the conservative side, the stack could be modeled as having a non-zero, but negligible exiting velocity, effectively eliminating any momentum rise. Such an approach would result in final plume heights closer to the ground and therefore higher concentrations nearby. There are situations where such a procedure might lower the actual population-dose and a comparison with and without reduced exit velocity should be examined.

Plume buoyancy is not strongly reduced by the occurrence of a raincap. Therefore, if the plume rise is dominated by buoyancy, it is not necessary to adjust the stack conditions. (The air dispersion models determine plume rise by either buoyancy or momentum, whichever is greater.)

The stack conditions should be modified when the plume rise is dominated by momentum and in the presence of a raincap or a horizontal stack. Sensitivity studies with the SCREEN3 model, on a case-by-case basis, can be used to determine whether

plume rise is dominated by buoyancy or momentum. The District should be consulted before applying these procedures.

- Set exit velocity to 0.001 m/sec
- Turn stack tip downwash off
- Reduce stack height by 3 times the stack diameter

Stack tip downwash is a function of stack diameter, exit velocity, and wind speed. The maximum stack tip downwash is limited to three times the stack diameter in the AERMOD air dispersion model. In the event of a horizontal stack, stack tip downwash should be turned off and no stack height adjustments should be made. Note: This approach may not be valid for large (several meter) diameter stacks.

An alternative, more refined, approach could be considered for stack gas temperatures which are slightly above ambient (e.g., ten to twenty degrees Fahrenheit above ambient). In this approach, the buoyancy and the volume of the plume remain constant and the momentum is minimized.

- Turn stack tip downwash off
- Reduce stack height by 3 times the stack diameter ( $3D_o$ )
- Set the stack diameter ( $D_b$ ) to a large value (e.g., 10 meters)
- Set the stack velocity to  $V_b = V_o (D_o/D_b)^2$

Where  $V_o$  and  $D_o$  are the original stack velocity and diameter and  $V_b$  and  $D_b$  are the alternative stack velocity and diameter for constant buoyancy. This approach is advantageous when  $D_b \gg D_o$  and  $V_b \ll V_o$  and should only be used with District approval.

In the presence of building downwash and in the event that PRIME downwash is being utilized in AERMOD, an alternative approach is recommended. PRIME algorithms use the stack diameter to define initial plume radius and to solve conservation laws. The user should input the actual stack diameter and exit temperature but set the exit velocity to a nominally low value (e.g., 0.001 m/s). Also since PRIME does not explicitly consider stack-tip downwash, no adjustments to stack height should be made.

Currently U.S. EPA is BETA testing options for capped and horizontal releases in AERMOD. It is expected that these options will replace the above guidance when BETA testing is complete.

#### **4.13.6 Landfill Sites**

Landfills should be modeled as area sources. The possibility of non-uniform emission rates throughout the landfill area should be investigated. A potential cause of non-uniform emission rates would be the existence of cracks or fissures in the landfill cap (where emissions may be much larger). If non-uniform emissions exist, the landfill should be modeled with several smaller areas assigning an appropriate emission factor to each one of them, especially if there are nearby receptors (distances on the same order as the dimensions of the landfill).

## 4.14 Specialized Models

Some models have been developed for application to very specific conditions. Examples include models capable of simulating sources where both land and water surfaces affect the dispersion of pollutants and models designed to simulate emissions from specific industries.

### 4.14.1 *Buoyant Line and Point Source Dispersion Model (BLP)*

BLP is a Gaussian plume dispersion model designed for the unique modeling problems associated with aluminum reduction plants, and other industrial sources where plume rise and downwash effects from stationary line sources are important.

#### 4.14.1.1 Regulatory Application

Regulatory application of BLP model requires the selection of the following options:

- rural (IRU=I) mixing height option;
- default (no selection) for all of the following: plume rise wind shear (LSHEAR), transitional point source plume rise (LTRANS), vertical potential temperature gradient (DTHTA), vertical wind speed power law profile exponents (PEXP), maximum variation in number of stability classes per hour (IDELS), pollutant decay (DECFA), the constant in Briggs' stable plume rise equation (CONST2), constant in Briggs' neutral plume rise equation (CONST3), convergence criterion for the line source calculations (CRIT), and maximum iterations allowed for line source calculations (MAXIT); and
- terrain option (TERAN) set equal to 0.0, 0.0, 0.0, 0.0, 0.0, 0.0.

For more information on the BLP model consult the user's guide (Schulman and Scire, 1980).

### 4.14.2 *Offshore and Coastal Dispersion Model (OCD)*

OCD (DiCristofaro and Hanna, 1989) is a straight-line Gaussian model developed to determine the impact of offshore emissions from point, area or line sources on the air quality of coastal regions. OCD incorporates "over-water" plume transport and dispersion as well as changes that occur as the plume crosses the shoreline. Hourly meteorological data are needed from both offshore and onshore locations. Additional data needed for OCD are water surface temperature, over-water air temperature, mixing height, and relative humidity.

Some of the key features include platform building downwash, partial plume penetration into elevated inversions, direct use of turbulence intensities for plume dispersion, interaction with the overland internal boundary layer, and continuous shoreline fumigation.

#### 4.14.2.1 Regulatory Application

OCD has been recommended for use by the Minerals Management Service for emissions located on the Outer Continental Shelf (50 FR 12248; 28 March 1985). OCD is applicable for over-water sources where onshore receptors are below the lowest source height. Where onshore receptors are above the lowest source height, offshore plume transport and dispersion may be modeled on a case-by-case basis in consultation with the District.

#### **4.14.3 *Shoreline Dispersion Model (SDM)***

SDM (PEI, 1988) is a hybrid multipoint Gaussian dispersion model that calculates source impact for those hours during the year when fumigation events are expected using a special fumigation algorithm and the MPTER regulatory model for the remaining hours.

SDM may be used on a case-by-case basis for the following applications:

- tall stationary point sources located at a shoreline of any large body of water;
- rural or urban areas;
- flat terrain;
- transport distances less than 50 km;
- 1-hour to 1-year averaging times.

#### **4.15 Interaction with the District**

The risk assessor must contact the District to determine if there are any specific requirements. Examples of such requirements may include, but are not limited to: specific receptor location guidance, specific usage of meteorological data, and specific report format (input and output). See Chapter 9 for more information on the format and content of modeling protocols and HRAs.

##### **4.15.1 *Submittal of Modeling Protocol***

It is strongly recommended that a modeling protocol be submitted to the District for review and approval prior to extensive analysis with an air dispersion model. The modeling protocol is a plan of the steps to be taken during the air dispersion modeling process. Following is an example of the format that may be followed in the preparation of the modeling protocol. **Consult with the District to confirm format and content requirements or to determine the availability of District modeling guidelines before submitting the protocol.**

## **Outline for a Modeling Protocol**

### ***I. Introduction***

***Include the facility name, address, and a brief overview describing the facility's operations.***

- Provide a description of the terrain and topography surrounding the facility and potential receptors.
- Indicate the format in which data will be provided. Ideally, the report and summary of data will be on paper and all data and model input and output files will be provided electronically (e.g., compact disk or CD).
- Identify the guidelines used to prepare the protocol (e.g., District Guidelines).

### ***II. Emissions***

***For each pollutant and process whose emissions are required to be quantified in the HRA, list the annual average emissions (pounds/year and grams/second) and the maximum one-hour emissions (pounds/hour and grams/second)<sup>2</sup>. Maximum 1-hour emissions are used for acute noncancer health impacts while annual emissions are used for chronic exposures (i.e., chronic and 8-hour noncancer health impacts or cancer risk assessment).***

- Identify the reference and method(s) used to determine emissions (e.g., source tests, emission factors, etc.). Clearly indicate any emission data that are not reflected in the previously submitted emission inventory report. In this event, a revised emission inventory report will need to be submitted to the District.
- Identify if this will be a multipathway assessment based on emitted substances.

### ***III. Models / Modeling Assumptions***

***Specify the model and modeling assumptions***

- Identify the model(s) to be used, including the version number.
- Identify the model options that will be used in the analysis.

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<sup>2</sup> Except radionuclides, for which annual and hourly emissions are reported in Curies/year and millicuries/hour, respectively.

- Identify the modeling domain(s) and the spacing of receptor grid(s). Grid spacing should be sufficient in number and detail to capture the concentration at all of the receptors of interest.
- Indicate complex terrain options that may be used, if applicable.
- Identify the source type(s) that will be used to represent the facility's operations (e.g., point, area, or volume sources, flare options or other).
- Indicate the preliminary source characteristics (e.g., stack height, gas temperature, exit velocity, dimensions of volume source, etc.).
- Identify and support the use of urban or rural dispersion coefficients for those models that require dispersion coefficients. For other models, identify and support the parameters required to characterize the atmospheric dispersion due to land characteristics (e.g., surface roughness, Monin-Obukhov length).

#### **IV. Meteorological Data**

***Specify the type, source, and year(s) of hourly meteorological data (e.g., hourly surface data, upper air mixing height information).***

- State how the data are representative for the facility site.
- Describe QA/QC procedures.
- Identify any gaps in the data; if gaps exist, describe how the data gaps are filled.

#### **V. Deposition**

- Specify the method to calculate deposition (if applicable).

#### **VI. Receptors**

***Specify the type and location of receptors. Include all relevant information describing how the individual and population-related receptors will be evaluated.***

- Identify and describe the location(s) of known or anticipated potential sensitive receptors, the point of maximum impact (PMI), and the maximum exposed individual residential (MEIR) and worker (MEIW) receptors. Identify any special considerations or grids that will be used to model these receptors. This information should correspond with information provided in Section III (e.g., fine receptor spacing of 20 meters at the fence line and centered on the maximum impacts; coarse receptor spacing of 100 meters out to 2,000 meters; extra coarse spacing of 1,000 meters out to 20,000 meters).

- Identify if spatial averaging will be used. Include necessary background information on each receptor including how the domain and spacing will be determined for each receptor or exposure pathway.
- Describe how the cancer burden or population impact estimates are calculated. Clarify the same information for the presentation of noncancer population impacts (e.g., centroids of the census tracts in the area within the zone of impact).
- Specify that actual UTM coordinates and the block/street locations (i.e., north side of 3,000 block of Smith Street), where possible, will be provided for specified receptor locations.
- Identify and support the use of any exposure adjustments (e.g., time a location, diurnal).
- Include the list of anticipated exposure pathways that will be included and indicate which substance will be evaluated in the multipathway assessment. Identify if sensitive receptors are present and which receptors will be evaluated in the HRA.

## **VII. Maps**

### ***Identify how the information will be graphically presented.***

- Indicate which cancer risk isopleths will be plotted for the cancer zone of impact (e.g.,  $10^{-7}$ ,  $10^{-6}$  see Section 4.6.1).
- Indicate the hazard quotients or hazard indices to be plotted for the noncancer acute, 8 hour, and chronic zones of impact (e.g., 0.5, 1.0, etc.).

## **4.16 Health Risk Assessment Report**

This section describes the information related to the air dispersion modeling process that needs to be reported in the risk assessment. This section is also presented in Chapter 9, Summary of the Requirements for a Modeling Protocol and a Health Risk Assessment Report, in Section 9.2. The District may have specific requirements regarding format and content (see Section 4.15). Sample calculations should be provided at each step to indicate how reported emissions data were used. Reviewing agencies must receive input, output, and supporting files of various model analyses on computer-readable media (e.g., CD).

### **4.16.1 Information on the Facility and its Surroundings**

Report the following information regarding the facility and its surroundings:

- Facility Name

- Location (UTM coordinates and street address)
- Land use type (see Section 2.4)
- Local topography
- Facility plot plan identifying:
  - source locations
  - property line
  - horizontal scale
  - building heights
  - emission sources

#### **4.16.2 Source and Emission Inventory Information<sup>3</sup>**

##### **4.16.2.1 Release Parameters**

Report the following information for each release location in table format:

- Release location identification number
- Release name
- Release type (e.g., point, volume, area, line, pit, etc.)
- Source identification number(s) used by the facility that emit out of this release location
- Release location using UTM coordinates
- Release parameters by release type (e.g., shown for point source):
  - Stack height (m), stack diameter (building dimensions for downwash), exhaust gas exit velocity (m/s), exhaust gas volumetric flow rate (ACFM), exhaust gas exit temperature (K), etc.

##### **4.16.2.2 Source Description and Operating Schedule**

The description and operating schedule for each source should be reported in table form including the following information:

- Source identification number used by the facility
- Source name
- Number of operating hours per day and per year (e.g., 0800-1700, 2700 hr/yr)
- Number of operating days per week (e.g., Mon-Sat)
- Number of operating days or weeks per year (e.g., 52 wk/yr excluding major holidays)
- Release point identification number(s) for where source emissions are released

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<sup>3</sup> Health and Safety Code section 44346 authorizes facility operators to designate certain "Hot Spots" information as trade secret. Section 44361(a) requires districts to make health risk assessments available for public review upon request. Section 44346 specifies procedures to be followed upon receipt of a request for the release of trade secret information. See also the Inventory Guidelines Report regarding the designation of trade secret information in the Inventory Reports.

- Fraction of source emissions emitted at each release point by release point ID number

#### 4.16.2.3 Emission Control Equipment and Efficiency

Report emission control equipment and efficiency by source and by substance

#### 4.16.2.4 Emissions Data Grouped By Source

Report emission rates for each toxic substance, grouped by source (i.e., emitting device or process identified in Inventory Report), in table form including the following information:

- Source name
- Source identification number
- Substance name and CAS number (from Inventory Guidelines)
- Annual average emissions for each substance (lb/yr)
- Hourly maximum emissions for each substance (lb/hr)

#### 4.16.2.5 Emissions Data Grouped by Substance

Report facility total emission rate by substance for all emitted substances listed in the Air Toxics "Hot Spots" Program including the following information:

- Substance name and CAS number (from Inventory Guidelines)
- Annual average emissions for each substance (lb/yr)
- Hourly maximum emissions for each substance (lb/hr)

#### 4.16.2.6 Emission Estimation Methods

Report the methods used in obtaining the emissions data indicating whether emissions were measured or estimated. Clearly indicate any emission data that are not reflected in the previously submitted emission inventory report and submit a revised emission inventory report to the district. A reader should be able to reproduce the risk assessment without the need for clarification.

#### 4.16.2.7 List of Substances

Include tables listing all "Hot Spots" Program substances which are emitted, plus any other substances required by the District. Indicate substances to be evaluated for cancer risks and noncancer health impacts.

### **4.16.3 *Exposed Population and Receptor Location***

Report the following information regarding exposed population and receptor locations. See Chapter 9 and specific sections within this chapter for more detailed information.

- Description of zone of impact including map showing the location of the facility, boundaries of zone of impact, census tracts, emission sources, sites of maximum exposure, and the location of all appropriate receptors. This should be a true map (one that shows roads, structures, etc.), drawn to scale, and not just a schematic drawing. USGS 7.5 minute maps or GIS based maps are usually the most appropriate choices. (If significant development has occurred since the user's survey, this should be indicated.)
- Separate maps for the cancer risk zone of impact and the hazard index (noncancer) zone of impact(s). The cancer zone of impact should include isopleths down to at least the 1/1,000,000 risk level. Because some districts use a level below 1/1,000,000 to define the zone of impact, the District should be consulted. Three separate maps (to represent both chronic, 8-hour, and acute HI) should be created to define the zone of impact for the hazard index from both inhalation and noninhalation pathways greater than or equal to 0.5. The point of maximum impact (PMI), maximum exposed individual at a residential receptor (MEIR), the maximum exposed individual worker (MEIW), and any other locations of interest for both cancer and noncancer risks should be located on the maps.
- Tables identifying population units and sensitive receptors (UTM coordinates, receptor IDs, and street addresses of specified receptors).
- Heights or elevations of the receptor points.
- For each receptor type (e.g., PMI, MEIR, MEIW, and any other location(s) of interest) that will utilize spatial averaging, the domain size and grid resolution must be clearly identified. If another domain or grid resolution other than 20 meters by 20 meters with 5-meter grid spacing will be used for a receptor, then care should be taken to determine the proper domain size and grid resolution that should be used. For a worker, the HRA shall support all assumptions used, including, but not limited to, documentation for all workers showing the area where each worker routinely performs their duties. The final domain size should not be greater than the smallest area of worker movement. Other considerations for determining domain size and grid spacing resolution may include an evaluation of the concentration gradients across the worker area. The grid spacing used within the domain should be sufficient in number and detail to obtain a representative concentration across the area of interest. When spatial averaging over the deposition area of a pasture, garden, or water body, care should be taken to determine the proper domain size to make sure it includes all reasonable areas of potential deposition. The size and shape of the pasture, garden, or water body of interest should be identified and used for the modeling domain. The grid spacing or resolution used within the domain should be sufficient in detail to obtain a representative deposition concentration across the area of interest. One way to determine the grid resolution is to include an evaluation of the concentration gradients across the deposition area. The HRA shall support all assumptions used, including, but not limited to, documentation of the deposition area (e.g., size and shape of the pasture or water body, maps,

representative coordinates, grid resolution, concentration gradients, etc.). The use or spatial averaging is subject to approval by the reviewing authority. This includes the size of the domain and grid resolution that is used for spatial averaging of a worksite or multipathway deposition area.

#### **4.16.4 Meteorological Data**

If meteorological data were not obtained directly from the District, then the report must clearly indicate the data source and time period used. Meteorological data not obtained from the District must be submitted in electronic form along with justification for their use including information regarding representativeness and quality assurance.

The risk assessment should indicate if the District required the use of a specified meteorological data set. All memos indicating the District's approval of meteorological data should be attached in an appendix.

#### **4.16.5 Model Selection and Modeling Rationale**

The report should include an explanation of the model chosen to perform the analysis and any other decisions made during the modeling process. The report should clearly indicate the name of the models that were used, the level of detail (screening or refined analysis) and the rationale behind the selection.

Also report the following information for each air dispersion model used:

- version number
- selected options and parameters in table form
- Identify the modeling domain(s) and the spacing of receptor grid(s). Grid spacing should be sufficient in number and detail to capture the concentration at all receptors of interest.

#### **4.16.6 Air Dispersion Modeling Results**

- Maximum hourly and annual average concentrations of chemicals at appropriate receptors such as the residential and worker MEI receptors
- Annual average and maximum one-hour (and 30-day average for lead only) concentrations of chemicals at appropriate receptors listed and referenced to computer printouts of model outputs
- Model printouts (numbered), annual concentrations, maximum hourly concentrations
- Disk with input/output files for air dispersion program (e.g., the AERMOD input file containing the regulatory options and emission parameters, receptor locations, meteorology, etc.)
- Include tables that summarize the annual average concentrations that are calculated for all the substances at each site. The use of tables that present the relative contribution of each emission point to the receptor concentration is recommended. (These tables should have clear reference to the computer

model which generated the data. It should be made clear to any reader how data from the computer output were transferred to these tables.) [As an alternative, the above two tables could contain just the values for sites of maximum impact (i.e., PMI, MEIR and MEIW), and sensitive receptors, if required. All the values would be found in the Appendices.]

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#### 4.17 References

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## 5 - Exposure Assessment

### Estimation of Concentration and Dose

#### 5.1 Introduction

This chapter provides a summary of how toxicant ground level air concentrations estimated from air dispersion modeling or monitoring results are used to determine dose at receptors of interest. This chapter includes all the algorithms and data (e.g., point estimates, distributions, and transfer factors) that are needed to determine the substance-specific concentration in exposure media and the dose at a receptor of interest. The determination of exposure concentration and dose precedes the calculations of potential health impacts. See Chapter 8 and Appendix I for information on calculating potential health impacts.

At a minimum, three receptors are evaluated in Hot Spots health risk assessments (HRA) (see Section 4.7); these are:

- the Point of Maximum Impact (PMI),
- the Maximally Exposed Individual Resident (MEIR), and
- the Maximally Exposed Individual Worker (MEIW).

The PMI is defined as the receptor point(s) with the highest acute, 8-hour, chronic, or cancer health impact outside the facility boundary. The facility boundary is defined as the property line. Often the fence is on the property line. The MEIR is typically defined as the existing off-site residence(s) (i.e., house, apartment or other dwelling) with the highest acute, chronic, or cancer health impact. Calculating an 8-hour hazard index is not required for the MEIR, but can be performed at the discretion of the District. The MEIW is typically defined as the existing offsite workplace with the highest acute, 8-hour, chronic, or cancer health impact.

In addition, it may be necessary to determine risks at sensitive receptors (e.g., schools, day care centers, elder care centers, and hospitals). The District or reviewing authority should be consulted in order to determine the appropriate sensitive receptors for evaluation. Some situations may require that on-site receptor (worker or residential) locations be evaluated. Some examples where the health impacts of on-site receptors may be appropriate could be military base housing, prisons, universities, or locations where the public may have regular access for the appropriate exposure period (e.g., a lunch time café or museum for acute exposures). The risk assessor should contact the Air Pollution Control or Air Quality Management District (the District) for guidance about any on-site exposure situations at the emitting facility. These on-site locations should be included in the health risk assessment (HRA). If the facility emits multiple substances from two or more stacks, the acute, 8-hour, chronic, and cancer health impacts at the PMI may be located at different physical locations. The MEIR or MEIW cancer, acute, 8-hour, and chronic receptors may also be at different locations.

The process for determining dose at the receptor location, and ultimately potential health impacts, will likely include air dispersion modeling, and, with less frequency, air monitoring data. Air dispersion modeling combines the facility emissions and release parameters and uses default or site-specific meteorological conditions to estimate downwind, ground-level concentrations at various (user-defined) receptor locations. Air dispersion modeling is described in Chapter 4 and is presented in detail in the *Air Toxics Hot Spots Program Risk Assessment Guidelines; Technical Support Document for Exposure Assessment and Stochastic Analysis* (OEHHA, 2012a).

In summary, the process of using air dispersion modeling results as the basis of an HRA follows these four steps:

- Air dispersion modeling is used to estimate annual average and maximum one-hour ground level concentrations (GLC). The air dispersion modeling results are expressed as an air concentration or in terms of (Chi over Q) for each receptor point. (Chi over Q) is the modeled downwind air concentration (Chi) based on an emission rate of one gram per second (Q). (Chi over Q) is expressed in units of micrograms per cubic meter per gram per second, or  $(\mu\text{g}/\text{m}^3)/(\text{g}/\text{s})$ . (Chi over Q) is sometimes written as  $(\chi/Q)$  and is sometimes referred to as the dilution factor.
- When multiple substances are evaluated, the  $\chi/Q$  is normally utilized since it is based on an emission rate of one gram per second. The  $\chi/Q$  at the receptor point of interest is multiplied by the substance-specific emission rate (in g/s) to yield the substance-specific ground-level concentration (GLC) in units of  $\mu\text{g}/\text{m}^3$ . The following equations illustrate this point.

$$\text{GLC} = \left( \chi/Q \right) \times (Q_{\text{substance}})$$

$$\chi/Q = (\text{Chi over Q}) \text{ in } \left( \frac{\mu\text{g}/\text{m}^3}{\text{g}/\text{s}} \right), \text{ from model results with unit emission rate}$$

$$Q_{\text{substance}} = \text{substance specific emission rate} \left( \frac{\text{g}}{\text{s}} \right)$$

- The applicable exposure pathways (e.g., inhalation, soil contact, fish consumption) are identified for the emitted substances, and the receptor locations are identified. This determines which exposure algorithms in this chapter are ultimately used to estimate dose. After the exposure pathways are identified, the fate and transport algorithms described in this chapter are used to estimate concentrations in the applicable exposure media (e.g., soil or water) and the exposure algorithms are used to determine the substance-specific dose.
- The dose is used with cancer and noncancer health values to calculate the potential health impacts for the receptor (Chapter 8). An example calculation

using the high-end point-estimates for the inhalation (breathing) exposure pathway can be found in Appendix I. Appendix I and Chapters 5 (this Section) and 8 also contain information on how the annual average and maximum one-hour ground level concentrations are used for chronic, 8-hour, and acute health risk calculations.

The algorithms in this chapter are also used to calculate media concentrations and dose in the rare instance, for the Hot Spots program, when monitoring equipment was used rather than air dispersion modeling to obtain a receptor's substance-specific GLC. One situation that is specific to monitored data is the treatment of results below the sampling method level of detection (LOD). In short, it is standard risk assessment practice when monitoring results are reported both above and below the LOD to use one-half of the LOD for those sample concentrations reported below the LOD. If all testing or monitoring results fall below the LOD, then assessors should contact the District for appropriate procedures. For more information about reporting emissions under the Hot Spots Program, see the ARB's *Emission Inventory Criteria and Guidelines Regulations (Title 17, California Code of Regulations, Sections 93300-93300.5)*, and the *Emission Inventory Criteria and Guidelines Report (EICG Report)*, which is incorporated by reference therein (ARB, 2007).

The recommended model for calculating and presenting HRA results for the Hot Spots Program is the HARP software, available from the Air Resources Board (ARB). More information on HARP and directions for downloading the software can be found on the ARB's web site at <http://www.arb.ca.gov/toxics/harp/downloads.htm>.

## 5.2 Criteria for Exposure Pathway Evaluation

In order to determine total dose to the receptor the applicable pathways of exposure need to be identified. The inhalation pathway must be evaluated for all Hot Spots substances emitted by the facility. A small subset of Hot Spots substances is subject to deposition onto soil, plants, and water bodies. These substances need to be evaluated by the appropriate noninhalation pathways, as well as by the inhalation pathway, and the results must be presented in all HRAs. These substances include semi-volatile organic chemicals and heavy metals. Such substances are referred to as multipathway substances. Two steps are necessary to determine if a substance should be evaluated for multipathway impacts:

1. Determine whether the substance or its group (e.g., dioxins, PAHs) is listed in Table 5.1.
2. Determine if the substance has an oral reference exposure level (REL) listed in Table 6.4, or if it has an oral cancer slope factor listed in Table 7.1. Two other references for checking the presence of oral health factors are OEHHA's website (OEHHA, 2012b) and the *Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values* on the Air Resources Board website (ARB, 2012). Oral or noninhalation exposure pathways include the ingestion of soil, angler-caught fish, drinking water from surface water sources, mother's milk,

homegrown produce, beef, pork, chicken, eggs and cow's milk. The dermal pathway is also evaluated via contact with contaminated soil.

For all multipathway substances, the minimum exposure pathways that must be evaluated at every residential site (in addition to inhalation) are soil ingestion and dermal exposure. If dioxins, furans, PCBs, PAHs or lead are emitted, then the breast-milk consumption pathway also becomes mandatory. The other exposure pathways (e.g., the ingestion of homegrown produce or angler-caught fish) are evaluated on a site-by-site basis. If the resident can be exposed through an impacted exposure pathway, then it must be included in the HRA. However, if there are no vegetable gardens or fruit trees within the zone of impact for a facility, for example, then the produce pathways need not be evaluated. Note that on-site residential receptors are potentially subject to inhalation and noninhalation exposure pathways. Table 8.2 identifies the residential and worker receptor exposure pathways that are mandatory and those that are dependent on the site-specific decisions. While residents can be exposed through several exposure pathways, worker receptors are only evaluated for inhalation, soil ingestion, and dermal exposure using point estimates.

Table 5.1 shows the multipathway substances that, based on available scientific data, can be considered for each noninhalation exposure pathway. The exposure pathways that are evaluated for a substance depend on two factors: 1) whether the substance is considered a multipathway substance for the Hot Spots Program (Table 5.1), and 2) what the site-specific conditions are. A multipathway substance may be excluded from a particular exposure pathway because its physical-chemical properties can preclude significant exposure via the pathway. For example, some water-soluble substances do not appreciably bioaccumulate in fish; therefore, the fish pathway is not appropriate. In addition, if a particular exposure pathway is not impacted by the facility or is not present at the receptor site, then the pathway is not evaluated. For example, if a fishable water body is not impacted by the facility, or the water source is impacted but no receptor uses it for fishing, then the angler-caught fish pathway is not evaluated.

**Table 5.1 Specific Pathways to be Analyzed for Each Multipathway Substance**

Substance	Soil Ingestion	Dermal	Meat, Milk & Egg Ingestion	Fish Ingestion	Exposed Vegetable Ingestion	Leafy Vegetable Ingestion	Protected Vegetable Ingestion	Root Vegetable Ingestion	Water Ingestion	Breast Milk Ingestion
<b><i>Inorganic chemicals</i></b>										
Arsenic & compounds	X	X	X	X	X	X	X	X	X	
Beryllium & compounds	X	X	X	X	X	X	X	X	X	
Cadmium & compounds	X	X	X	X	X	X	X	X	X	
Chromium VI & compounds	X	X	X <sup>a</sup>	X	X	X	X	X	X	
Fluorides (soluble compounds)	X	X	X		X	X	X	X	X	
Lead & compounds	X	X	X	X	X	X	X	X	X	X
Mercury & compounds	X	X	X	X	X	X	X	X	X	
Nickel & compounds	X	X	X	X	X	X	X	X	X	
Selenium & compounds	X	X	X	X	X	X	X	X	X	
<b><i>Organic chemicals</i></b>										
Creosotes	X	X	X	X	X	X			X	X
Diethylhexylphthalate	X	X	X	X	X	X			X	
Hexachlorobenzene	X	X	X	X	X	X			X	
Hexachlorocyclohexanes	X	X	X	X	X	X			X	
4,4'-Methylene dianiline	X	X			X	X			X	
Pentachlorophenol <sup>b</sup>										
PCBs	X	X	X	X	X	X			X	X
Polychlorinated dibenzo-p-dioxins and dibenzofurans	X	X	X	X	X	X			X	X
PAHs	X	X	X	X	X	X			X	X

<sup>a</sup> Cow's milk only; no multipathway analysis for meat and egg ingestion

<sup>b</sup> To be evaluated by pathway in future amendments to the Hot Spots Program

### 5.3 Estimation of Concentrations in Air, Soil, and Water

Once emissions exit the source, the substances emitted will be dispersed in the air. The substances in the exhaust gas with high vapor pressures will remain largely in the vapor phase, and substances with lower vapor pressures will tend to adsorb to fly ash or other particulate matter. The emission plume may contain both vapor phase substances and particulates. A semivolatile organic toxicant can partition into both vapor and particulate phases. Particulates will deposit on vegetation, on soil, and in water at a rate that is dependent on the particle size. Use the 0.02 m/s deposition rate for emission sources that have verifiable particulate matter control devices or for emission sources that may be uncontrolled but only emit particulate matter that is less than 2.5 microns (e.g., internal combustion engines). The following algorithms are used to estimate concentrations in environmental media including air, soil, water, vegetation, and animal products.

### 5.3.1 Air

The ground level concentration (GLC, or  $C_{\text{air}}$  as shown in EQ 5.3.1) of a substance in air is a function of the facility emission rate and the dilution factor ( $\chi/Q$ ) at the points under evaluation.

#### **A. Equation 5.3.1:**

$$C_{\text{air}} = Q_{\text{substance}} \times \chi/Q$$

1.  $C_{\text{air}}$  = Ground level concentration ( $\mu\text{g}/\text{m}^3$ )
2.  $Q_{\text{substance}}$  = Substance emission rate (g/sec)
3.  $\chi/Q$  = Dilution factor provided by dispersion modeling ( $\mu\text{g}/\text{m}^3/\text{g}/\text{sec}$ )

#### **a. Recommended values for EQ 5.3.1:**

1.  $Q_{\text{substance}}$  = Facility-specific, substance emission rate
2.  $\chi/Q$  = For point of interest, site specific, from dispersion modeling

#### **b. Assumptions for EQ 5.3.1:**

1. No plume depletion
2. Emission rate is constant, i.e., assumes steady state

### 5.3.2 Soil

The average concentration of the substance in soil ( $C_s$ ) is a function of the deposition, accumulation period, chemical specific soil half-life, mixing depth, and soil bulk density. For simplicity and health protection, the Tier 1 default assumes 70-year soil deposition for the accumulation period at end of 70-year facility lifetime. The risk assessor may also choose a supplemental Tier 2 approach, subject to District approval or reviewing authority approval, in which the assessor applies a soil accumulation period based on the facility's start date of operation (e.g., historical date when emissions began), or the current exposure conditions, and the expected duration of operation.

#### **A. Equation 5.3.2 A:**

$$C_s = \text{Dep} \times X / (K_s \times \text{SD} \times \text{BD} \times T_t)$$

1.  $C_s$  = Average soil concentration over the evaluation period ( $\mu\text{g}/\text{kg}$ )
2. Dep = Deposition on the affected soil area per day ( $\mu\text{g}/\text{m}^2\text{-d}$ )
3. X = Integral function for soil accumulation (d), see **EQ 5.3.2 C** below
4.  $K_s$  = Soil elimination constant ( $\text{d}^{-1}$ )
5. SD = Soil mixing depth (m)
6. BD = Soil bulk density ( $\text{kg}/\text{m}^3$ )
7.  $T_t$  = Soil exposure duration or soil accumulation period (d)

**a: Recommended default values for EQ 5.3.2 A:**

1. Dep = Calculated in EQ 5.3.2 B
2. X = Calculated in EQ 5.3.2 C
3.  $K_s$  = Calculated in EQ 5.3.2 D
4. SD = 0.01 (m) for playground setting (soil ingestion and dermal pathways) and 0.15 (m) for agricultural setting (produce and meat pathways)
5. BD = 1,333 ( $\text{kg}/\text{m}^3$ )
6.  $T_t$  = 25,550 (d) = 70 years

**b: Assumptions for EQ 5.3.2 A:**

1. Substances are uniformly mixed in soil.
2. Substances are not leached or washed away, except where evidence exists to the contrary.
3. It is assumed that toxicants accumulate in the soil for 70 years from deposition over the 70 year lifespan of the facility. Use 70-year soil accumulation ( $T_t$ ) for Tier 1 estimation of 9-, 30- and 70-year residential exposure, and 25-year off-site worker exposure.
4. For a receptor ingesting mother's milk, the mother is exposed from birth to 25 years of age; the infant is then born and receives mother's milk for one year. Default assumes 70-year soil accumulation for mother's milk pathway. See Table 5.1 for information on which substances or groups of substances must be evaluated by the mother's milk pathway.

**B. Equation 5.3.2 B:**

$$\text{Dep} = C_{\text{air}} \times \text{Dep-rate} \times 86,400$$

1.  $C_{\text{air}}$  = Ground level concentration ( $\mu\text{g}/\text{m}^3$ )
2. Dep-rate = Vertical rate of deposition (m/sec)
3. 86,400 = Seconds per day conversion factor (sec/d)

**a: Recommended default values for EQ 5.3.2 B:**

1.  $C_{\text{air}}$  = Calculated above in EQ 5.3.1 A
2. Dep-rate = Use 0.02 meters/second for controlled sources, or 0.05 meters/second for uncontrolled sources.

**b: Assumptions for EQ 5.3.2 B:**

1. Deposition rate remains constant. A deposition rate must be used when determining potential noninhalation health impacts. In the absence of facility specific information on the size of the emitted particles, the default values for deposition rate should be used. Currently, the default value of 0.02 meters per second is used for emission sources that have verifiable particulate matter control devices or for emission sources that may be uncontrolled but only emit particulate matter that is less than 2.5 microns

(e.g., internal combustion engines). The 0.05 meters per second default value is used for risk assessment if the emissions are uncontrolled. If other deposition rate factors are used, sufficient support documentation must be included with the HRA.

**C. Equation 5.3.2 C:**

$$X = \left[ \frac{e^{-K_s \cdot T_f} - e^{-K_s \cdot T_o}}{K_s} \right] + T_t$$

1.  $e = 2.718$
2.  $K_s$  = Soil elimination constant
3.  $T_f$  = End of soil accumulation evaluation period (d)
4.  $T_o$  = Beginning of soil accumulation evaluation period (d)
5.  $T_t$  = Total days of soil exposure (soil accumulation period)  $T_f - T_o$  (d)

**a: Recommended default values for EQ 5.3.2 C:**

- 1:  $K_s$  = Calculated in EQ 5.3.2 D
- 2:  $T_f = 25,550$  (d) = 70 years. Total soil exposure time at end of facility operation
- 3:  $T_o = 0$  (d) The initial time (start period) of soil exposure to all receptors that are impacted by the soil pathway.

Note: Under a Tier 2 scenario, the risk assessor may also adjust  $T_f$  and  $T_t$ , subject to District approval, to replicate current soil accumulation and expected accumulation at the end of facility operation.

**D. Equation 5.3.2 D:**

$$K_s = 0.693 / t_{1/2}$$

1. 0.693 = Natural log of 2
2.  $t_{1/2}$  = Chemical specific soil half-life (d)

**a: Recommended default values for EQ 5.3.2 D:**

1.  $t_{1/2}$  = Chemical-specific. See Table 5.2

**5.3.3 Water**

The water pathway is evaluated if a standing water body (e.g., pond or lake) is impacted by facility emissions and is used as a source for drinking water by food-producing animals or humans, or is a source of angler-caught fish. The average concentration of the substance in water ( $C_w$ ) is a function of direct deposition and material carried in by surface run-off. However, only the contribution from direct deposition will be considered at this time.

**A. Equation 5.3.3 A:**

$$C_w = C_{depw}$$

1.  $C_w$  = Average concentration in water ( $\mu\text{g}/\text{kg}$ )
2.  $C_{depw}$  = Contribution due to direct deposition ( $\mu\text{g}/\text{kg}$ )

**B. Equation 5.3.3 B:**

$$C_{\text{depw}} = \text{Dep} \times \text{SA} \times 365 / (\text{WV} \times \text{VC})$$

1. Dep = Deposition on water body per day ( $\mu\text{g}/\text{m}^2/\text{d}$ )
2. SA = Water surface area ( $\text{m}^2$ )
3. 365 = Days per year (d/yr)
4. WV = Water volume (kg)
5. VC = Number of volume changes per year

**a: Recommended default values for EQ 5.3.3 B:**

1. Dep = Calculated above in EQ 5.3.2 B
2. SA = Site specific water surface area ( $\text{m}^2$ )
3. WV = Site specific water volume in (kg) (1L = 1 kg)
4. VC = Site specific number of volume changes per year  
(SA, WV, and VC values can be obtained from the appropriate Department of Water Resources (DWR) Regional office)

**b: Assumptions for EQ 5.3.3 B:**

1. With the exception of dilution via number of volume changes per year, all material deposited into the water remains suspended or dissolved in the water column and is available for bioaccumulation in fish.

**5.3.4 Estimation of Concentrations in Vegetation, Animal Products, and Mother's Milk**

Estimates of the concentration of the substance in vegetation, animal products and mother's milk require the use of the results of the air, water, and soil environmental fate evaluation. Plants, animals and nursing mothers will be exposed to the substances at the concentrations previously calculated in Section 5.31 to 5.33 above.

**5.3.4.1 Vegetation**

The average concentration of a substance in and on vegetation ( $C_v$ ) is a function of direct deposition of the substance onto the vegetation and of root translocation or uptake from soil contaminated by the substance. We currently recommend root translocation only for the inorganic compounds.

**A. Equation 5.3.4.1 A:**

$$C_v = C_{\text{depv}} + C_{\text{trans}}$$

1.  $C_v$  = Average concentration in and on specific types of vegetation ( $\mu\text{g}/\text{kg}$ )
2.  $C_{\text{depv}}$  = Concentration due to direct deposition ( $\mu\text{g}/\text{kg}$ )
3.  $C_{\text{trans}}$  = Concentration in vegetation due to root translocation or uptake ( $\mu\text{g}/\text{kg}$ ) – see EQ 5.3.4.1 C below

**B. Equation 5.3.4.1 B:**

$$C_{\text{depv}} = [\text{Dep} \times \text{IF} / (k \times Y)] \times (1 - e^{-kT})$$

1. Dep = Deposition on affected vegetation per day ( $\mu\text{g}/\text{m}^2/\text{d}$ )
2. IF = Interception fraction
3. k = Weathering constant ( $\text{d}^{-1}$ )
4. Y = Yield ( $\text{kg}/\text{m}^2$ )
5. e = Base of natural logarithm (2.718)
6. T = Growth period (d)

**a: Recommended default values for EQ 5.3.4.1 B:**

1. Dep = Calculated above in EQ 5.3.2 B
2. IF = Crop specific:
  - a: Root crops = 0.0
  - b: Leafy crops = 0.2
  - c: Protected crops = 0.0
  - d: Exposed crops = 0.1
  - e: Pasture = 0.7
3. k = 0.1 ( $\text{d}^{-1}$ )
4. Y = 2 ( $\text{kg}/\text{m}^2$ ) for root, leafy, protected, exposed and pasture [CA Department of Food and Agriculture dot maps]
5. T = 45 (d) for leafy crops  
T = 90 (d) for exposed crops

**b: Crop-type definitions for EQ 5.3.4.1 B:**

1. **Leafy** crop category consists of broad-leafed vegetables in which the leaf is the edible part. Examples include spinach, lettuce, cabbage, and kale.
2. **Root** crop category includes vegetables in which the edible portion is underground. Examples are potato, radish, and carrot.
3. **Exposed** produce category consists of crops with a small surface area subject to air deposition. Examples include strawberries, tomato, cucumber, zucchini, green bean and bell pepper.
4. **Protected** produce category consists of crops in which the edible part is not exposed to air deposition (e.g., the exposed skin of the crop is removed and not eaten). Examples are corn, pea, pumpkin and oranges.

Tables H-9 through H-15 in Appendix H provide more examples of various leafy, root, exposed and protected crop types.

**c: Assumptions for EQ 5.3.4.1 B:**

1. No deposition on root or protected crops
2. No uptake and translocation of deposited chemicals onto crops

**C. Equation 5.3.4.1 C: (for inorganic compounds)**

$$C_{\text{trans}} = C_s \times UF_2$$

1.  $C_s$  = Average soil concentration ( $\mu\text{g}/\text{kg}$ )
2.  $UF_2$  = Uptake factor based on soil concentration

**a: Recommended default values for EQ 5.3.4.1 C:**

1.  $C_s$  = Calculated above in EQ 5.3.2 A
2.  $UF_2$  = See Table 5.2

**D. Equation 5.3.4.1 D: (for organic compounds)**

$$UF_2 = [(0.03 \times K_{ow}^{0.77}) + 0.82] / [(K_{oc})(F_{oc})]$$

1. 0.03 = Empirical constant
2.  $K_{ow}$  = Octanol:water partition factor
3. 0.77 = Empirical constant
4. 0.82 = Empirical constant
5.  $K_{oc}$  = Organic carbon partition coefficient
6.  $F_{oc}$  = Fraction organic carbon in soil

**a: Recommended default values for EQ 5.3.4.1 D:**

1.  $K_{ow}$  = Chemical specific, see Table 5.2
2.  $K_{oc}$  = Chemical specific, see Table 5.2
3.  $F_{oc}$  = 0.1

**b: Assumptions for EQ 5.3.4.1 D:**

1. OEHHA currently has no recommended root uptake factors for organic compounds listed in Table 5.2. Evidence suggests this route is insignificant compared to airborne deposition. Nevertheless, if it becomes necessary in specific cases to assess root uptake for an organic compound, Equation 5.3.4.1 D would be the algorithm OEHHA recommends using to assess root uptake.

**5.3.4.2 Animal Products**

The average concentration of the substance in animal products ( $C_{fa}$ ) depends on which routes of exposure exist for the animals. Animal exposure routes include inhalation, soil ingestion, ingestion of contaminated feed and pasture, and ingestion of contaminated water.

**A. Equation 5.3.4.2:**

$$C_{fa} = (\text{Inhalation} + \text{Water ingestion} + \text{Feed ingestion} + \text{Pasture/Grazing ingestion} + \text{Soil ingestion}) * T_{co}$$

1.  $C_{fa}$  = Average concentration in farm animals and their products ( $\mu\text{g}/\text{kg}$ )
2. Inhalation, water ingestion, etc. = Dose through inhalation, water ingestion, etc. ( $\mu\text{g}/\text{d}$ )
3.  $T_{co}$  = Chemical-specific transfer coefficient of contaminant from diet to animal product ( $\text{d}/\text{kg}$ )

**a: Recommended default values for EQ 5.3.4.2:**

1.  $T_{co}$  = See Tables 5.3a and 5.3b

**b: Assumptions for EQ 5.3.4.2:**

1. The  $T_{co}$  for a given chemical is the same for all exposure routes

**5.3.4.2.1 Inhalation****A. Equation 5.3.4.2.1:**

$$\text{Inhalation} = BR_a \times C_{air}$$

1. Inhalation = Dose through inhalation ( $\mu\text{g}/\text{d}$ )
2.  $BR_a$  = Breathing rate for animal ( $\text{m}^3/\text{d}$ )
3.  $C_{air}$  = Ground-level concentration ( $\mu\text{g}/\text{m}^3$ )

**a: Recommended default values for EQ 5.3.4.2.1:**

1.  $BR_a$  = See Table 5.4
2.  $C_{air}$  = Calculated above in EQ 5.3.1 A

**b: Assumptions for EQ 5.3.4.2.1:**

1. All material inhaled is 100% absorbed

**5.3.4.2.2 Water Ingestion**

The water ingestion pathway is applied if there are surface water sources of drinking water, such as springs, ponds or lakes, which are exposed to airborne deposition of facility emissions. Due to the site-specific nature for this exposure pathway, OEHHA recommends that the risk assessor conduct a survey at the site to estimate the fraction of contaminated drinking water ingested by the animals, if such sources exist.

**A. Equation 5.3.4.2.2:**

$$\text{Water ingestion} = WI_a \times FSW \times C_w$$

1. Water ingestion = Dose through water ingestion ( $\mu\text{g}/\text{d}$ )
2.  $WI_a$  = Water ingestion for animal ( $\text{kg}/\text{d}$ )
3. FSW = Fraction of water ingested from a contaminated body of water (site-specific)
4.  $C_w$  = Average concentration in water ( $\mu\text{g}/\text{kg}$ )  
For water 1 kg = 1 L

**a: Recommended default values for EQ 5.3.4.2.2:**

1.  $WI_a$  = See Table 5.4
2. FSW = Site specific fraction, need to survey water ingestion practices in affected area
3.  $C_w$  = Calculated above in EQ 5.3.3 A

**5.3.4.2.3 Feed Ingestion**

The fraction of feed intake by cattle, pigs and poultry that is contaminated by facility emissions can vary considerably depending on the manner in which the animals are raised. Due to the site-specific nature for this exposure pathway, OEHHA recommends that the risk assessor conduct a survey at the site to estimate the fraction of contaminated feed eaten by the animals. For a Tier 1 assessment, default values are provided by OEHHA (see Table 5.4 and Table 5.4 footnotes) for estimation of exposure to the animals.

Agricultural mixing depth should be used for calculating soil concentration for feed and pasture contamination.

**5.3.4.2.3.1 Feed Ingestion****A. Equation 5.3.4.2.3.1:**

$$\text{Feed ingestion} = (1.0 - FG) \times FI \times L \times C_v$$

1. Feed ingestion = Dose through the ingestion of feed ( $\mu\text{g}/\text{d}$ ) that is harvested after it is impacted by source emissions
2. FG = Fraction of diet provided by grazing (site-specific)
3. FI = Feed ingestion rate ( $\text{kg}/\text{d}$ )
4. L = Fraction of locally grown (source impacted) feed that is not pasture (site-specific)
5.  $C_v$  = Concentration in feed ( $\mu\text{g}/\text{kg}$ )

**a: Recommended default values EQ 5.3.4.2.3.1:**

1. FG = Default values in Table 5.4 footnote b, although a site-specific survey for the fraction of diet provided by grazing is recommended
2. FI = See Table 5.4
3. L = Default values in Table 5.4 footnote b, although a site-specific survey for fraction of locally grown (source impacted) feed that is not pasture is recommended
4.  $C_v$  = As calculated above in EQ 5.3.4.1 A

**b: Assumptions for EQ 5.3.4.2.3.1:**

1. Feed (FI) transported from an off-site location (i.e., not grown locally) is not contaminated by facility emissions.

## 5.3.4.2.3.2 Pasture/Grazing ingestion

**A. Equation 5.3.4.2.3.2:**

$$\text{Pasture/Grazing ingestion} = FG \times C_v \times FI$$

1. Pasture/Grazing ingestion = Dose through pasture/grazing ( $\mu\text{g}/\text{d}$ )
2. FG = Fraction of diet provided by grazing (site-specific)
3.  $C_v$  = Concentration in pasture/grazing material ( $\mu\text{g}/\text{kg}$ )
4. FI = Feed ingestion rate ( $\text{kg}/\text{d}$ )

**a: Recommended default values EQ 5.3.4.2.3.2:**

1. FG = Default values in Table 5.4 for fraction of diet provided by grazing, although a site-specific survey is recommended
2.  $C_v$  = As calculated above in EQ 5.3.4.1 A
3. FI = See Table 5.4

## 5.3.4.2.4 Soil ingestion

The feeds provided to dairy and beef cattle may contain small quantities of soil. A larger fraction of soil by weight of food is taken up during grazing. Rooting behavior by pigs with access to soil will result in soil ingestion. Likewise, poultry with free access to soil or pasture will also ingest soil. Defaults for soil ingestion are shown in Table 5.4.

**A. Equation 5.3.4.2.4 A:**

$$\text{Soil ingestion} = SI_a \times C_s$$

1. Soil ingestion = Dose through soil ingestion ( $\mu\text{g}/\text{d}$ )
2.  $SI_a$  = Soil ingestion rate for animal ( $\text{kg}/\text{d}$ )
3.  $C_s$  = Average soil concentration ( $\mu\text{g}/\text{kg}$ )

**a: Recommended default values for EQ 5.3.4.2.4 A:**

1.  $SI_a$  = Calculated below
2.  $C_s$  = Calculated above in EQ 5.3.2 A

**B. Equation 5.3.4.2.4 B:**

$$SI_a = [(1 - FG) \times FS_f \times FI] + [FG \times FS_p \times FI]$$

1. FG = Fraction of diet provided by grazing
2.  $FS_f$  = Soil ingested as a fraction of feed ingested
3. FI = Feed ingestion rate (kg/d)
4.  $FS_p$  = Soil ingested as a fraction of pasture ingested

**a: Recommended default values for EQ 5.3.4.2.4 B:**

1. FG = Site specific fraction of diet provided by grazing
2.  $FS_f$  = See Table 5.4
3. FI = See Table 5.4
4.  $FS_p$  = See Table 5.4

**b: Assumptions for EQ 5.3.4.2.4 B:**

1. The transfer coefficient is the same for all exposure routes.
2. Soil ingested in feed ( $FS_f$ ) transported from an off-site location (i.e., not grown locally) is assumed not to be contaminated by facility emissions.

**5.3.4.3 Bioaccumulation in Angler-Caught Fish**

The average concentration in fish ( $C_f$ ) is based on the concentration in water and a chemical-specific bioaccumulation factor.

**A. Equation 5.3.4.3:**

$$C_t = C_w \times BAF$$

1.  $C_t$  = Concentration in wet weight tissue (muscle) of fish ( $\mu\text{g}/\text{kg}$ )
2.  $C_w$  = Concentration in water ( $\mu\text{g}/\text{kg}$ )
3. BAF = Fish bioaccumulation factor (unitless)

**a: Recommended default values for Equation 5.3.4.3:**

1.  $C_w$  = As calculated above in Equation 5.3.3 A
2. BAF = Chemical-specific; see Table 5.2

**b: Assumptions for Equation 5.3.4.3:**

1. For conversion of a chemical concentration in a volume of water shown as  $\mu\text{g/L}$ , 1 L water = 1 kg water; thus, for concentration of chemical in water,  $\mu\text{g/L} = \mu\text{g/kg}$ .
2. For organic chemicals, BAFs lipid-normalized to adult rainbow trout with 4% lipid content in muscle tissue
3. For organic chemicals, BAFs based on the freely dissolved fraction in water under conditions of average particulate organic carbon and dissolved organic carbon in U.S. lakes and other water bodies
4. For inorganic compounds, BAFs based on wet weight muscle tissue concentration and on the total water concentration of the inorganic compound in water.
5. Contaminant concentrations are uniform in water based on dispersion

**5.3.4.4 Bioaccumulation in Mother's Milk**

The average concentration of a chemical in mother's milk ( $C_m$ ) is a function of the mother's exposure through all exposure routes (i.e., inhalation, ingestion via food, drinking water, and soil, and dermal absorption via skin contact with soil contaminated with the chemical), the contaminant half-life in the mother's body, and transfer of absorbed chemical to mother's milk. The contaminant half-life in the body and transfer to mother's milk is incorporated in biotransfer coefficients ( $T_{co}$ ) in Equation 5.3.4.4. See the TSD (OEHHA, 2012a), Appendix J for details on development of biotransfer factors. The substances assessed by the mother's milk pathway are shown in Table 5.1.

**A. Equation 5.3.4.4:**  $C_m = [(D_{\text{inder}} \times T_{co_{m\_inder}}) + (D_{\text{ing}} \times T_{co_{m\_ing}})] \times BW$

1.  $C_m$  = Concentration in mother's milk (mg/kg-milk)
2.  $D_{\text{inder}}$  = The sum of  $DOSE_{\text{air}}$  +  $DOSE_{\text{dermal}}$  through inhalation and dermal absorption (mg/kg-BW-day)
3.  $D_{\text{ing}}$  = The sum of  $DOSE_{\text{food}}$  +  $DOSE_{\text{soil}}$  +  $DOSE_{\text{water}}$  through ingestion (mg/kg-BW-day)
4.  $T_{co_{m\_inder}}$  = Biotransfer coefficient from inhalation and dermal absorption to mother's milk (d/kg-milk)
5.  $T_{co_{m\_ing}}$  = Biotransfer coefficient from ingestion to mother's milk (d/kg-milk)
6.  $BW$  = Body weight of mother (Kg)

**a: Recommended cancer risk default values for EQ 5.3.4.4:**

1.  $D_{ing}$  = As calculated through ingestion of soil in EQ 5.4.3.1.1 + home-grown produce in EQ 5.4.3.2.1 + home-raised animal products in EQ 5.4.3.2.2 + drinking water in EQ 5.4.3.3.1 + angler-caught fish in EQ 5.4.3.4.1
2.  $D_{inder}$  = As calculated through inhalation in EQ 5.4.1.1 + dermal exposure in EQ 5.4.2.1
3.  $Tco_{m\_inder}$  = See Table 5.5
4.  $Tco_{m\_ing}$  = See Table 5.5

**b: Recommended noncancer risk default values for EQ 5.3.4.4:**

1.  $D_{ing}$  = As calculated through ingestion of soil in EQ 5.4.3.1.2 + home-grown produce and home-raised animal products in EQ 5.4.3.2.3 + drinking water in EQ 5.4.3.3.2 + angler-caught fish in EQ 5.4.3.4.2
2.  $D_{inder}$  = As calculated through inhalation in EQ 5.4.1.1 + dermal exposure in EQ 5.4.2.2
3.  $Tco_{m\_inder}$  = See Table 5.5
4.  $Tco_{m\_ing}$  = See Table 5.5

**c: Assumptions for EQ 5.3.4.4:**

1. Default age of mother at birth is 25 years of age, then nurses the infant for 1 year; Use 16<30 year old high-end (95<sup>th</sup> percentile) daily breathing rate and intake rates for  $D_{ing}$  and  $D_{inder}$  for estimating dose to mother.
2. For inhalation dose to mother's milk, it is recommended that the EF variate in EQ 5.4.1.1 is left out for calculation of inhalation dose in the mother's milk pathway.
3. Biotransfer coefficient,  $Tco_{m\_inder}$ , the same for both inhalation and dermal pathways based on lack of first-pass metabolism through the liver for both of these pathways.
4. Biotransfer coefficient,  $Tco_{m\_ing}$ , the same for all ingestion pathways based on first-pass metabolism through the liver.
5. For chemicals in Table 5.5 lacking either an oral or inhalation Tco, use the oral Tco for the absent inhalation Tco (i.e., for PCDDs and PCDFs and dioxin-like PCBs), or the inhalation Tco for the absent oral Tco (i.e., for lead) in Equation 5.3.4.4.
6. The concentration in the mother's milk is determined using the derived approach to risk assessment. This method allows use of the high-end dose point estimate for driving exposure pathways and the average dose point estimates for other exposure pathways. See Sections 8.2.6 (cancer) and 8.3.3 (noncancer) for the description of the methodology on how to implement the derived methodology.

**Table 5.2a Substance-Specific Default Values for Organic Multipathway Substances**

Multipathway Substance	Log K <sub>oc</sub>	Log K <sub>ow</sub>	Fish BAF	Root Uptake Factors				GRAF <sup>2</sup>	Soil HalfLife (days)
				Root	Leafy	Exposed	Protected		
<b>Creosotes</b>	NA	NA	8 x 10 <sup>+2</sup>	NA	NA	NA	NA	1.0	4.3 x 10 <sup>+2</sup>
<b>Diethylhexyl-phthalate</b>	5.34 <sup>1</sup>	7.63 <sup>1</sup>	4 x 10 <sup>+1</sup>	NA	NA	NA	NA	1.0	1.5 x 10 <sup>+1</sup>
<b>Dioxins and Furans</b>	NA	NA	3 x 10 <sup>+5</sup>	NA	NA	NA	NA	0.43	7.0 x 10 <sup>+3</sup>
<b>Hexachlorobenzene</b>	NA	NA	8 x 10 <sup>+4</sup>	NA	NA	NA	NA	1.0	1.0 x 10 <sup>+8</sup>
<b>Hexachlorocyclohexanes</b>	NA	NA	3 x 10 <sup>+3</sup>	NA	NA	NA	NA	1.0	9.4 x 10 <sup>+1</sup>
<b>4,4'-Methylene dianiline</b>	2.24 <sup>3</sup>	1.59 <sup>4</sup>	NA	NA	NA	NA	NA	1.0	4.6 x 10 <sup>+2</sup>
<b>Pentachlorophenol<sup>5</sup></b>									
<b>Polycyclic Aromatic Hydrocarbons (PAHs)</b>	NA	NA	8 x 10 <sup>+2</sup>	NA	NA	NA	NA	1.0	4.3 x 10 <sup>+2</sup>
<b>Polychlorinated Biphenyls</b>	NA	NA	2 x 10 <sup>+6</sup>	NA	NA	NA	NA	1.0	3.2 x 10 <sup>+3</sup>

(1) Averaged log Kow and Koc values determined by most reliable methods (Staples et al., 1997)

(2) GRAF (Gastrointestinal Relative Absorption Factor). The guidelines allow for adjusting for bioavailability where the evidence warrants. For example, there are good data which indicate that dioxin is not as available to an organism when bound to soil or fly ash matrices relative to when it is in solution or in food. Therefore, a bioavailability factor is incorporated into the model to account for this difference. When information becomes available for other chemicals of concern, this type of bioavailability will be incorporated into the model.

(3) Measured by Hansch et al. (1985)

(4) Estimated according to methodology of Lyman et al. (1990)

(5) To be evaluated for specific default values in future amendments to the Hot Spots Program.

NA - Data Not Available or Not Applicable

**Table 5.2b Substance-Specific Default Values for Inorganic Multipathway Substances**

Multipathway Substance	Log K <sub>oc</sub>	Log K <sub>ow</sub>	Fish BAF	Root Uptake Factors				GRAF <sup>1</sup>	Soil HalfLife (days)
				Root	Leafy	Exposed	Protected		
<b>Arsenic &amp; Inorganic Compounds</b>	NA	NA	2 x 10 <sup>+1</sup>	8 x 10 <sup>-3</sup>	1 x 10 <sup>-2</sup>	2 x 10 <sup>-2</sup>	7 x 10 <sup>-2</sup>	1.0	1.0 x 10 <sup>+8</sup>
<b>Beryllium &amp; Compounds</b>	NA	NA	4 x 10 <sup>+1</sup>	5 x 10 <sup>-3</sup>	2 x 10 <sup>-4</sup>	8 x 10 <sup>-3</sup>	3 x 10 <sup>-4</sup>	1.0	1.0 x 10 <sup>+8</sup>
<b>Cadmium &amp; Compounds</b>	NA	NA	4 x 10 <sup>+1</sup>	8 x 10 <sup>-2</sup>	1 x 10 <sup>-1</sup>	2 x 10 <sup>-2</sup>	1 x 10 <sup>-2</sup>	1.0	1.0 x 10 <sup>+8</sup>
<b>Chromium VI &amp; Compounds</b>	NA	NA	2 x 10 <sup>+1</sup>	3 x 10 <sup>+0</sup>	3 x 10 <sup>-1</sup>	2 x 10 <sup>-2</sup>	7 x 10 <sup>-2</sup>	1.0	1.0 x 10 <sup>+8</sup>
<b>Fluorides (soluble compounds)</b>	NA	NA	NA	9 x 10 <sup>-3</sup>	4 x 10 <sup>-2</sup>	4 x 10 <sup>-3</sup>	4 x 10 <sup>-3</sup>	1.0	1.0 x 10 <sup>+8</sup>
<b>Lead &amp; Compounds</b>	NA	NA	2 x 10 <sup>+1</sup>	4 x 10 <sup>-3</sup>	8 x 10 <sup>-3</sup>	7 x 10 <sup>-3</sup>	3 x 10 <sup>-3</sup>	1.0	1.0 x 10 <sup>+8</sup>
<b>Mercury &amp; Inorganic Compounds<sup>2</sup></b>	NA	NA	8 x 10 <sup>+1</sup>	2 x 10 <sup>-2</sup>	2 x 10 <sup>-2</sup>	9 x 10 <sup>-3</sup>	1 x 10 <sup>-2</sup>	1.0	1.0 x 10 <sup>+8</sup>
<b>Nickel and compounds</b>	NA	NA	2 x 10 <sup>+1</sup>	6 x 10 <sup>-3</sup>	1 x 10 <sup>-2</sup>	3 x 10 <sup>-3</sup>	3 x 10 <sup>-2</sup>	1.0	1.0 x 10 <sup>+8</sup>
<b>Selenium &amp; compounds</b>	NA	NA	1 x 10 <sup>+3</sup>	7 x 10 <sup>-2</sup>	6 x 10 <sup>-2</sup>	4 x 10 <sup>-2</sup>	3 x 10 <sup>-1</sup>	1.0	1.0 x 10 <sup>+8</sup>

(1) GRAF (Gastrointestinal Relative Absorption Factor). The guidelines allow for adjusting for bioavailability where the evidence warrants. For example, there are good data which indicate that dioxin is not as available to an organism when bound to soil or fly ash matrices relative to when it is in solution or in food. Therefore, a bioavailability factor is incorporated into the model to account for this difference. When information becomes available for other chemicals of concern, this type of bioavailability will be incorporated into the model.

(2) Methyl mercury (MeHg) is not represented in the category "mercury & inorganic compounds". The BAF for methyl mercury is orders of magnitude higher than for inorganic mercury. Assessment of MeHg for the fish pathway is not directly applicable to the Hot Spots program, as no facilities are known to emit MeHg directly into the air (OEHHA, 2012; OEHHA, 2006), but it may be formed by action of microbes in sediment. Assessing the methylation of mercury deposited into a water body is difficult, and is also very water body-specific. At this time OEHHA cannot address this issue in the Hot Spots program, but will consider addressing this problem in future amendments of the Guidance.

NA - Data Not Available or Not Applicable.

**Table 5.3a Animal Transfer Coefficients for Persistent Organic Chemicals**

Organic Chemical	Tco (d/kg) <sup>a</sup>				
	Cow's Milk	Chicken Egg	Chicken Meat	Cattle Meat	Pig Meat
Diethylhexylphthalate	9 x 10 <sup>-5</sup>	0.04	0.002	6 x 10 <sup>-4</sup>	5 x 10 <sup>-4</sup>
Hexachlorobenzene	0.02	20	10	0.2	0.08
Hexachlorocyclohexanes	0.01	7	5	0.2	0.09
PAHs	0.01	0.003	0.003	0.07	0.06
Polychlorinated biphenyls					
Congener 77	0.001	6	4	0.07	0.4
81	0.004	10	7	0.2	0.4
105	0.01	10	7	0.6	0.7
114	0.02	10	7	0.9	0.7
118	0.03	10	7	1	0.7
123	0.004	10	7	0.2	0.7
126	0.04	10	7	2	0.7
156	0.02	10	8	0.9	2
157	0.01	10	8	0.5	2
167	0.02	10	8	1	2
169	0.04	10	8	2	2
189	0.005	10	8	0.2	1
Unspeciated (PCB 126) <sup>b</sup>	0.04	10	7	2	0.7
PCDD/Fs					
Congener 2,3,7,8-TCDD	0.02	10	9	0.7	0.1
1,2,3,7,8-PeCDD	0.01	10	9	0.3	0.09
1,2,3,4,7,8-HxCDD	0.009	10	6	0.3	0.2
1,2,3,6,7,8-HxCDD	0.01	10	6	0.4	0.1
1,2,3,7,8,9-HxCDD	0.007	7	3	0.06	0.02
1,2,3,4,6,7,8-HpCDD	0.001	5	2	0.05	0.2
OCDD	0.0006	3	1	0.02	0.1
2,3,7,8-TCDF	0.004	10	6	0.1	0.02
1,2,3,7,8-PeCDF	0.004	30	10	0.1	0.01
2,3,4,7,8-PeCDF	0.02	10	8	0.7	0.09
1,2,3,4,7,8-HxCDF	0.009	10	5	0.3	0.1
1,2,3,6,7,8-HxCDF	0.009	10	6	0.3	0.09
2,3,4,6,7,8-HxCDF	0.008	5	3	0.3	0.06
1,2,3,7,8,9-HxCDF	0.009	3	3	0.3	0.03
1,2,3,4,6,7,8-HpCDF	0.002	3	1	0.07	0.06
1,2,3,4,7,8,9-HpCDF	0.003	3	1	0.1	0.02
OCDF	0.002	1	0.6	0.02	0.03
Unspeciated (2,3,7,8-TCDD) <sup>b</sup>	0.02	10	9	0.7	0.1

<sup>a</sup> All Tco values were rounded to the nearest whole number.

<sup>b</sup> For unspciated mixtures, use PCB 126 Tcos to represent the class of PCBs, and 2378-TCDD Tcos to represent the class of PCDDs/Fs.

**Table 5.3b Animal Transfer Coefficients for Inorganic Chemicals**

Inorganic Metals and Chemicals	Tco (d/kg) <sup>a</sup>				
	Cow's Milk	Chicken Egg	Chicken Meat	Cattle Meat	Pig Meat
Arsenic	$5 \times 10^{-5}$	0.07	0.03	$2 \times 10^{-3}$	$0.01^b$
Beryllium	$9 \times 10^{-7}$	0.09	0.2	$3 \times 10^{-4}$	0.001
Cadmium	$5 \times 10^{-6}$	0.01	0.5	$2 \times 10^{-4}$	0.005
Chromium (VI)	$9 \times 10^{-6}$	NA <sup>c</sup>	NA	NA	NA
Fluoride	$3 \times 10^{-4}$	0.008	0.03	$8 \times 10^{-4}$	$0.004^b$
Lead	$6 \times 10^{-5}$	0.04	0.4	$3 \times 10^{-4}$	$0.001^b$
Mercury	$7 \times 10^{-5}$	0.8	0.1	$4 \times 10^{-4}$	$0.002^b$
Nickel	$3 \times 10^{-5}$	0.02	0.02	$3 \times 10^{-4}$	0.001
Selenium	0.009	3	0.9	0.04	0.5

<sup>a</sup> All Tco values were rounded to the nearest whole number.

<sup>b</sup> The meat Tco was estimated using the metabolic weight adjustment ratio of 4.8 from cattle to pig

<sup>c</sup> NA – no data available or was not applicable

**Table 5.4 Point Estimates for Animal Pathway**

Parameter	Beef Cattle	Lactating Dairy Cattle	Pigs	Meat Poultry	Egg-laying Poultry
BW (body weight in kg)	533	575	55	1.7	1.6
BR <sub>a</sub> (inhalation rate in m <sup>3</sup> /d)	107	115	7	0.4	0.4
WL <sub>a</sub> (water consumption in kg/d)	45	110	6.6	0.16	0.23
FI (Food Intake in kg/d) DMI <sup>a</sup> and/or pasture grazing <sup>b</sup>	9	22	2.4	0.13	0.12
FS <sub>f</sub> (soil fraction of feed)	0.01	0.01	NA	NA	NA
FS <sub>p</sub> (soil fraction of pasture)	0.05	0.05	0.04	0.02	0.02

<sup>a</sup> Dry matter intake

<sup>b</sup> For beef and dairy cattle, pasture grazing is assumed to be leafy vegetation (grasses, including greenchop) and accounts for half of the cattle's diet (FG=0.5 in Section 5.3.4.2.3). The default assumes on-site pasture grazing contaminated by facility emissions. Fraction of feed or dry matter intake (e.g., hay, grain) grown on-site is assumed to be contaminated by facility emissions and fraction of feed that is grown off-site is not assumed to be contaminated. A default may be used that assumes all feed is grown off-site (L=0 in Section 5.3.4.2.3), but a survey is recommended to verify the fractions of feed grown on-site and off-site.

For pigs with access to soil, but usually confined to a pen, default assumes no pasture grazing (FG=0 in Section 5.3.4.2.3). For feed, estimated intake consists of equal portions of all plant types including exposed, leafy, protected and root in which 10% (L=0.1 in Section 5.3.4.2.3) of the diet is homegrown and contaminated by facility emissions. The fraction of feed that was transported from an off-site location is assumed not to be contaminated by facility emissions.

For poultry including egg-laying and broiler chickens that have access to soil, default assumes no pasture grazing (FG=0 in Section 5.3.4.2.3). Estimated feed intake is composed of equal proportions of all plant types with 5% (L=0.05 in Section 5.3.4.2.3) homegrown and contaminated by facility emissions. The fraction of feed grown off-site and transported to the receptor was not contaminated by facility emissions.

NA - Not applicable. Assume FS<sub>f</sub> is equal to zero.

**Table 5.5 Mother's Milk Transfer Coefficients (Tco<sub>m</sub>)<sup>a</sup>**

<b>Chemical/chem. group</b>	<b>Tco<sub>m</sub> (day/kg-milk)</b>
PCDDs - oral <sup>b</sup>	3.7
PCDFs - oral <sup>b</sup>	1.8
Dioxin-like PCBs - oral <sup>b</sup>	1.7
PAHs – inhalation <sup>c</sup>	1.55
PAHs – oral	0.401
Lead - inhalation <sup>d</sup>	0.064

<sup>a</sup> These compound classes represent the chemicals of greatest concern for the mother's milk pathway under the Hot Spots program. It is expected that additional transfer coefficients will be developed for other multipathway chemicals in the Hot Spots Program as data becomes available and is reviewed.

<sup>b</sup> Use the oral Tco<sub>m</sub> for the inhalation and dermal pathways. The PCDD, PCDF and dioxin-like PCB Tcos were derived using a Random-effects model from individual Tco<sub>m</sub> estimates for 7 PCDDs, 9 PCDFs and 12 dioxin-like PCBs (See OEHHA, 2012, Appendix J).

<sup>c</sup> Use the inhalation Tco<sub>m</sub> for the dermal pathway

<sup>d</sup> Use the inhalation Tco<sub>m</sub> for the ingestion and dermal pathways

## 5.4 Estimation of Dose

Once the concentrations of substances are estimated in air, soil, water, plants, and animal products, they are used to evaluate estimated exposure to people. Exposure is evaluated by calculating the daily dose in milligrams per kilogram body weight per day (mg/kg/d). The following algorithms calculate this dose for exposure through inhalation, dermal absorption, and ingestion pathways. All chemicals must be assessed for exposure through inhalation. If there are emissions of one or more of the subset of semi- or non-volatile multipathway substances, the soil ingestion pathway and the dermal soil exposure pathway are also assessed. The mother's milk pathway may also be a mandatory pathway depending on the multipathway substance released (See Table 5.1). The other exposure pathways may also need to be assessed if a survey of the exposure site shows they are present (e.g., ingestion of water, home-grown crops, home-raised animal products, and angler-caught fish).

This section contains average and high-end point estimates and data distributions for adults and children for many exposure pathways. The point-estimates and data distributions for children fall within the 3<sup>rd</sup> trimester, 0<2, 2<9, and 2<16 year age groupings. The point-estimates and data distributions for adults fall within the 16<30 and 16-70 year age groupings. When evaluating 9-, 30-, and 70-year exposure durations for cancer risk assessment, assessors will use distributions starting at the third trimester.

Workers are assessed for cancer risk as adults using 8-hour breathing rate point estimates (See Table 5.8). Point estimates for workers are listed under "offsite worker." OEHHA has not developed stochastic distributions for worker exposure. Therefore, there is no Tier 3 stochastic approach for offsite worker cancer risk assessment.

### 5.4.1 *Estimation of Exposure through Inhalation*

The dose through the inhalation route is estimated for cancer risk assessment and noncancer hazard assessment. Both residential and offsite worker exposures are considered. Since residential exposure includes near-continuous long-term exposure at a residence and workers are exposed only during working hours (i.e., 8 hours/day), different breathing rate distributions are used.

#### 5.4.1.1 Residential Inhalation Dose for Cancer Risk Assessment

Exposure through inhalation is a function of the breathing rate, the exposure frequency, and the concentration of a substance in the air. For residential exposure, the breathing rates are determined for specific age groups, so inhalation dose (Dose-air) is calculated for each of these age groups, 3<sup>rd</sup> trimester, 0<2, 2<9, 2<16, 16<30 and 16-70 years. OEHHA used the mother's breathing rates to estimate dose for the 3<sup>rd</sup> trimester fetus assuming the dose to the fetus during the 3<sup>rd</sup> trimester is the same as the mother's dose. These age-specific groupings are needed in order to properly use the age sensitivity factors for cancer risk assessment (see Chapter 8). A Tier 1 evaluation uses the high-end point estimate (i.e., the 95<sup>th</sup> percentiles) breathing rates for the inhalation

pathway in order to avoid underestimating cancer risk to the public, including children. A possible exception for using high-end breathing rates are when there is exposure to multipathway substances and two of the non-inhalation pathways drive the risk, rather than the inhalation pathway (see Chapter 8).

**A. Equation 5.4.1.1:**  $\text{Dose-air} = C_{\text{air}} \times \{\text{BR/BW}\} \times A \times \text{EF} \times 10^{-6}$

1. Dose-air = Dose through inhalation (mg/kg/d)
2.  $C_{\text{air}}$  = Concentration in air ( $\mu\text{g}/\text{m}^3$ )
3.  $\{\text{BR/BW}\}$  = Daily Breathing rate normalized to body weight (L/kg body weight - day)
4. A = Inhalation absorption factor (unitless)
5. EF = Exposure frequency (unitless), days/365 days
6.  $10^{-6}$  = Micrograms to milligrams conversion, liters to cubic meters conversion

**a: Recommended default values for EQ 5.4.1.1:**

1.  $\{\text{BR/BW}\}$  = Daily breathing rates by age groupings, see As supplemental information, the assessor may wish to evaluate the inhalation dose by using the mean point estimates in Table 5.6 to provide a range of breathing rates for cancer risk assessment to the risk manager.
2. Table (point estimates) and Table 5.7 (parametric model distributions for Tier III stochastic risk assessment). For Tier 1 residential estimates, use 95<sup>th</sup> percentile breathing rates in Table 5.6.
3. A = 1
4. EF = 0.96 (350 days/365 days in a year for a resident)

**b: Assumption for EQ 5.4.1.1:**

1. The fraction of chemical absorbed (A) is the same fraction absorbed in the study on which the cancer potency or Reference Exposure Level is based.

As supplemental information, the assessor may wish to evaluate the inhalation dose by using the mean point estimates in Table 5.6 to provide a range of breathing rates for cancer risk assessment to the risk manager.

**Table 5.6 Point Estimates of Residential Daily Breathing Rates for 3<sup>rd</sup> trimester, 0<2, 2<9, 2<16, 16<30 and 16-70 years (L/kg BW-day)**

	3 <sup>rd</sup> Trimester <sup>a</sup>	0<2 years	2<9 years	2<16 years	16<30 years	16<70 years
	L/kg-day					
Mean	225	658	535	452	210	185
95th Percentile	361	1090	861	745	335	290

<sup>a</sup> 3<sup>rd</sup> trimester **breathing rates** based on breathing rates of pregnant women using the assumption that the dose to the fetus during the 3rd trimester is the same as that to the mother.

**Table 5.7 Daily Breathing Rate Distributions by Age Group for Residential Stochastic Analysis (L/kg BW-day)**

	3 <sup>rd</sup> Trimester	0<2 years	2<9 years	2<16 years	16<30 years	16-70 years
Distribution	Max extreme	Max extreme	Max extreme	Log-normal	Logistic	Logistic
Minimum	78	196	156	57	40	13
Maximum	491	2,584	1,713	1,692	635	860
Scale	59.31	568.09	125.59		40.92	36.19
Likeliest	191.50	152.12	462.61			
Location				-144.06		
Mean	225	658	535	452	210	185
Std Dev	72	217	168	172	75	67
Skewness	0.83	2.01	1.64	1.11	0.83	1.32
Kurtosis	3.68	10.61	7.88	6.02	5.17	10.83
<b>Percentiles</b>						
5%	127	416	328	216	96	86
10%	142	454	367	259	118	104
25%	179	525	427	331	161	141
50%	212	618	504	432	207	181
75%	260	723	602	545	252	222
80%	273	758	631	572	261	233
90%	333	934	732	659	307	262
95%	361	1090	861	745	335	290
99%	412	1430	1140	996	432	361

#### 5.4.1.2 Offsite Worker (MEIW) Inhalation Dose for Cancer Risk Assessment

For worker exposure, the default assumes working age begins at 16 years, and that exposures to facility emissions occur during the work shift, typically up to 8 hours per day during work days. Breathing rates that occur over an 8-hour period vary depending on the intensity of the activity (See Table 5.8), and are used to estimate the inhalation dose. The 8-hour breathing rates may also be useful for cancer risk assessment of children and teachers exposed at schools during school hours.

Another risk management consideration for the offsite worker scenario for cancer assessment of a Hot Spots facility is whether there are women of child-bearing age at the MEIW location and whether the MEIW has a daycare center. Since the third trimester is only a short segment of the 25 year exposure duration used for the MEIW, the resulting risk estimate would not differ significantly. An exception to this assumption is high exposure to carcinogens over a short period, as might occur during short-term projects (see Section 8.2.10). In this case, risk assessment during the third trimester may be warranted. However, if there is onsite daycare at the MEIW, then the risks to the children will be underestimated using the offsite adult worker scenario due to increased exposure (per kg body weight) and increased sensitivity to carcinogen exposure (see Section 8.2.1). In this case, the Districts may wish to include a calculation of inhalation dose for the children in the onsite daycare, assuming they could be there from 0 to age 6 years.

Exposed workers may be engaged in activities ranging from desk work, which would reflect breathing rates of sedentary/passive or light activities, to farm worker activities, which would reflect breathing rates of moderate intensity (See Table 5.9). OEHHA recommends default (Tier 1) point estimate 8-hour breathing rates in L/kg-8-hrs based on the mean and 95<sup>th</sup> percentile of moderate intensity activities, 170 and 230 L/kg-8-hrs, respectively, for adults 16-70 years old.

Many facilities operate non-continuously, as in only 8-10 hours per day, but the air dispersion modeling is performed as if the emissions were uniformly emitted over 24 hours a day, 7 days per week. The air dispersion computer model used, including AERMOD and other models, typically calculate an annual average air concentration based on actual operating conditions but also include the hours of nonoperation in the average concentration.

Therefore, there are two components that determine the worker exposure to facility emissions:

- 1) What is the estimated concentration the worker is exposed to (i.e., breathes), during the work shift, and
- 2) What is the amount of time the offsite worker's schedule overlaps with the facility's emission schedule?

There are two approaches to estimating the modeled concentration the worker is breathing during the work shift. The first approach uses a worker adjustment factor (i.e.,

the WAF) to approximate what the worker is breathing based on the modeling run used for residential receptors. The second approach uses a special modeling run with the hourly raw results from an air dispersion analysis and is described in Appendix M.

The first and more basic approach is to obtain the long term average concentration as you would for modeling a residential receptor, then adjusting this exposure concentration using the calculated WAF (EQ 5.4.1.2 B) to estimate the concentration the offsite worker is exposed to during the work shift (shown as  $(C_{\text{air}} \times \text{WAF})$  in EQ 5.4.1.2 A). This method is characteristic of a default approach used in a Tier 1 assessment. Once the exposure concentration is determined, the worker's inhalation dose (Dose-air) can be calculated as shown in EQ 5.4.1.2 A.

The second approach for determining the air concentration the worker is exposed to uses a refined modeling run where the hourly raw dispersion model output are post processed to examine the hourly concentrations that fall within the offsite worker's shift. This method provides a more representative estimate of the air concentration, but is more complex, and time consuming than the first method. See Appendix M for information on how to simulate the long term concentration for the offsite worker that can be used to estimate inhalation cancer risk.

The HARP software has the ability to calculate worker impacts using an approximation factor and, in the future, it will have the ability to post process refined worker concentrations using the hourly raw results from an air dispersion analysis.

If the off-site worker's shift does not completely overlap the emission schedule of the facility, then a Discount Factor (DF) may be applied to the WAF. Calculation of the DF is shown in EQ 5.4.1.2 C. The default assumption is that the offsite worker's shift falls completely within the emission schedule of the facility, in which case  $DF=1$ . Use of a DF less than 1 requires a survey at the MIEW to verify that some portion of the off-site worker shift is not subject to the facility emissions.

**A. Equation 5.4.1.2 A:**  $\text{Dose-air} = (C_{\text{air}} \times \text{WAF}) \times \{\text{BR}/\text{BW}\} \times A \times \text{EF} \times 10^{-6}$

1. Dose-air = Dose through inhalation (mg/kg/d)
2.  $C_{\text{air}}$  = Annual average concentration in air ( $\mu\text{g}/\text{m}^3$ )
3. WAF = Worker air concentration adjustment factor (unitless)
4.  $\{\text{BR}/\text{BW}\}$  = Eight-hour breathing rate normalized to body weight (L/kg body weight - day)
5. A = Inhalation absorption factor (unitless)
6. EF = Exposure frequency (unitless), days/365 days)
7.  $10^{-6}$  = Micrograms to milligrams conversion, Liters to cubic meters conversion

**a: Recommended default values for EQ 5.4.1.2 A:**

1. WAF = See EQ. 5.4.1.2 B for formula to calculate WAF, or App. M for refined post-processing modeling to calculate WAF.
2.  $\{\text{BR}/\text{BW}\}$  = For workers, use age 16-70 year, 95<sup>th</sup> percentile, moderate intensity 8-hour point estimate breathing rates (see Table 5.8). No worker breathing rate distributions exist for stochastic risk assessment.
3. A = 1
4. EF = 0.68 (250 days / 365 days). Equivalent to working 5 days/week, 50 weeks/year.

**b: Assumption for EQ 5.4.1.2 A:**

1. The fraction of chemical absorbed (A) through the lungs is the same fraction absorbed in the study on which the cancer potency factor is based.
2. The source emits during the daylight hours. Calculate WAF (EQ 5.4.1.2 B) if a special post-processing modeling run described in App. M was not completed. For nighttime emissions and exposure scenarios, see Appendix N.

**B. Equation 5.4.1.2 B:**

$$\text{WAF} = (H_{\text{res}} / H_{\text{source}}) \times (D_{\text{res}} / D_{\text{source}}) \times \text{DF}$$

1. WAF = Worker adjustment factor (unitless)
2.  $H_{\text{res}}$  = Number of hours per day the annual average residential air concentration is based on (always 24 hours)
3.  $H_{\text{source}}$  = Number of hours the source operates per day
4.  $D_{\text{res}}$  = Number of days per week the annual average residential air concentration is based on (always 7 days)
5.  $D_{\text{source}}$  = Number of days the emitting source operates per week
6. DF = Discount factor, for when the offsite worker's schedule partially overlaps the source's emission schedule

**b: Recommended default values for EQ 5.4.1.2 B:**

1. DF = 1 for offsite worker's schedule occurring within the source's emission schedule. A site-specific survey may be used to adjust the DF using EQ 5.4.1.2 C.

**C. Equation 5.4.1.2 C:**

$$\text{DF} = (H_{\text{coincident}} / H_{\text{worker}}) \times (D_{\text{coincident}} / D_{\text{worker}})$$

1.  $H_{\text{coincident}}$  = Number of hours per day the offsite worker's schedule and the source's emission schedule coincide
2.  $H_{\text{worker}}$  = Number of hours the offsite worker works per day
3.  $D_{\text{coincident}}$  = Number of days per week the offsite worker's schedule and the source's emission schedule coincide
4.  $D_{\text{worker}}$  = Number of days the offsite worker works per week

Tier 2 adjustments for EQ 5.4.1.2 A-C may be used for:

1. Eight-hour breathing rate. Point estimates in Table 5.8 for lower breathing rates of sedentary/passive and light intensity work activities may be substituted in site-specific Tier 2 scenarios. Table 5.9 can be used to estimate breathing rate intensities for various job activities. Use of different breathing rates requires a survey of the exposed workplace and approval by Air District, ARB and OEHHA.
2. Discount Factor (DF) in EQ 5.4.1.2 C. If a site-specific survey of the offsite worker schedule only partially overlaps with the source's emission schedule, then a DF less than 1 may be calculated. Use of a DF less than 1 requires a survey of the exposed workplace and approval by the Air District or ARB.

The 8-hour breathing rates are based on minute ventilation rates derived by U.S. EPA (2009). U.S. EPA employed a metabolic equivalent (METs) approach for estimating breathing rates. This method determines daily time-weighted averages of energy expenditure (expressed as multipliers of the basal metabolic rate) across different levels of physical activity. The 8-hour breathing rates shown in Table 5.8 are divided into three categories:

Sedentary & Passive Activities (METs  $\leq$  1.5)

Light Intensity Activities (1.5 < METs  $\leq$  3.0)

Moderate Intensity Activities (3.0 < METs  $\leq$  6.0)

For example, a METS = 1 is roughly equivalent to energy expenditure during sleep and is close to the basal metabolic rate. A METS activity that is two to three times greater (METS = 2 to 3) is characteristic of light intensity activities, such as administrative office work or sales work as shown in Table 5.9.

Under a Tier 1 scenario, the risk assessor may simply use the 95<sup>th</sup> percentile breathing rate for moderate intensity activities of 230 L/kg-8 hrs in Eq. 5.4.1.2 A to calculate the daily dose via the inhalation route to the worker. In an example of a Tier 2 scenario, the risk assessor surveys the workplace and determines that the worker(s) at the MEIW receptor are primarily sitting at a desk performing administrative-type work on a computer. Referring to Table 5.9, this activity corresponds most closely to “administrative office work” with a mean activity level of 1.7 and a SD = 0.3. This level of activity is considered “light intensity activity” (i.e., 1.5 < METs  $\leq$  3.0). With the prior approval of the Air District or ARB, the risk assessor may then use the 95<sup>th</sup> percentile breathing rate of 100 L/kg-8 hr for light intensity activities in Equation 5.4.1.2 A.

**Table 5.8. Eight-Hour Breathing Rate (L/kg per 8 Hrs) Point Estimates for Males and Females Combined<sup>a,b</sup>**

	0<2 years	2<9 years	2<16 years	16<30 years	16-70 years
	<b>Sedentary &amp; Passive Activities (METs <math>\leq</math> 1.5)</b>				
Mean	200	100	80	30	30
95 <sup>th</sup> Percentile	250	140	120	40	40
	<b>Light Intensity Activities (1.5 &lt; METs <math>\leq</math> 3.0)</b>				
Mean	490	250	200	80	80
95 <sup>th</sup> Percentile	600	340	270	100	100
	<b>Moderate Intensity Activities (3.0 &lt; METs <math>\leq</math> 6.0)</b>				
Mean	890	470	380	170	170
95 <sup>th</sup> Percentile	1200	640	520	240	230

<sup>a</sup> For pregnant women, OEHHA recommends using the mean and 95<sup>th</sup> percentile 8-hour breathing rates based on moderate intensity activity of 16<30 year-olds for 3rd trimester.

<sup>b</sup> Breathing rates in the table may be used for worker, school, or residential exposures

**Table 5.9. METS Distributions for Workplace and Home Activities**

Activity Description	Mean	Median	SD	Min	Max
<b>Workplace Activities</b>					
Administrative office work	1.7	1.7	0.3	1.4	2.7
Sales work	2.9	2.7	1.0	1.2	5.6
Professional	2.9	2.7	1.0	1.2	5.6
Precision/production/craft/repair	3.3	3.3	0.4	2.5	4.5
Technicians	3.3	3.3	0.4	2.5	4.5
Private household work	3.6	3.5	0.8	2.5	6.0
Service	5.2	5.3	1.4	1.6	8.4
Machinists	5.3	5.3	0.7	4.0	6.5
Farming activities	7.5	7.0	3.0	3.6	17.0
Work breaks	1.8	1.8	0.4	1.0	2.5
<b>Household/Neighborhood Activities</b>					
Sleep or nap	0.9	0.9	0.1	0.8	1.1
Watch TV	1.0	1.0	-	1.0	1.0
General reading	1.3	1.3	0.2	1.0	1.6
Eat	1.8	1.8	0.1	1.5	2.0
Do homework	1.8	1.8	-	1.8	1.8
General personal needs and care	2.0	2.0	0.6	1.0	3.0
Indoor chores	3.4	3.0	1.4	2.0	5.0
Care of plants	3.5	3.5	0.9	2.0	5.0
Clean house	4.1	3.5	1.9	2.2	5.0
Home repairs	4.7	4.5	0.7	4.0	6.0
General household chores	4.7	4.6	1.3	1.5	8.0
Outdoor chores	5.0	5.0	1.0	2.0	7.0
Walk/bike/jog (not in transit) age 20	5.8	5.5	1.8	1.8	11.3
Walk/bike/jog (not in transit) age 30	5.7	5.7	1.2	2.1	9.3
Walk/bike/jog (not in transit) age 40	4.7	4.7	1.8	2.3	7.1

Table 5.10 lists some WAFs for a few typical scenarios. For example, if the source is continuously emitting, then the offsite worker is assumed to breathe the long-term annual average concentration during their work shift. The WAF then becomes one and no concentration adjustments are necessary in this situation when estimating the inhalation cancer risk. If the source is non-continuously emitting for 8 hours/day, 5 days/week and the offsite worker's shift completely overlaps the emitting facility's operating schedule, then the WAF would be 4.2:

$$(24 \text{ hrs/day} / 8 \text{ hrs/day}) \times (7 \text{ days/week} / 5 \text{ days/week}) = 4.2$$

If the offsite worker's 8 hour/day shift only overlaps the emitting facility's operation schedule for 4 hrs/day, then the WAF is 2.1 because the DF = 0.5 will reduce the WAF by half:  $DF = (4 \text{ hrs/day} / 8 \text{ hrs/day}) \times (5 \text{ days/week} / 5 \text{ days/week}) = 0.5$

**Table 5.10: Example Worker Adjustment Factors (WAF) to Convert a Long-Term Daily Average Emission Concentration to an Off-Site Worker Receptor Exposure**

Off-Site Workers' Shift Overlap with Facility's Emission Schedule <sup>a</sup>	Facility Operating Schedule	Adjustment Factor
8 hrs/day, 5 days/week	Continuous (24 hrs/7 days/week)	1.0
8 hrs/day, 5 days/week <sup>b</sup>	Non-continuous (8 hrs/5 days/week)	4.2
4 hrs/day, 5 days/week	Non-continuous (8 hrs/5 days/week)	2.1

<sup>a</sup> Worker works 8 hours per day, 5 days per week

<sup>b</sup> Workers' work hours completely overlap the facilities operating hours

#### 5.4.1.3 Inhalation Dose for Children at Schools and Daycare Facilities for Cancer Risk Assessment

The 8-hour breathing rates and inhalation dose equations (EQ 5.4.1.2 A-C) may also be used to estimate risk to children when exposures occur while at school or at day care facilities. Breathing rate point estimates to use in Table 5.8 depend on the ages of the children at the exposed schools and day cares. As a Tier 1 default, moderate intensity breathing rates are recommended. Equations 5.4.1.2 A-C is used in the same way to estimate dose in children as it is for workers.

#### 5.4.1.4 Non-Cancer Inhalation Exposure for Workers and Residents

For typical daily work shifts of 8-9 hours, acute, 8-hour and chronic Reference Exposure Levels (RELs) described in Chapter 8 are used in health risk assessments to characterize the noncancer risks using the Hazard Index approach described in Chapter 8 and in OEHHA (2008). Uncertainty factors are already incorporated into the RELs used to assess noncancer risk, as explained in Chapter 8, so all that is needed to evaluate the noncancer hazard is the air concentration that the worker is exposed to. The modeled maximum 1-hour air concentration is determined for acute hazard assessment and the annual average air concentration is determined for chronic hazard assessment. The modeled average air concentration during a work shift is determined for 8-hour hazard assessment using the adjusted annual average air concentration described below.

The 8-hour RELs are primarily designed to address offsite worker inhalation exposure at the MEIW because they better characterize the daily intermittent exposures of workers than the chronic RELs do. They are used in estimating the 8 hour Hazard Index for offsite workers. The 8-hour RELs should be used for typical daily work shifts of 8-9 hours. For further questions, assessors should contact OEHHA, the District, or reviewing authority to determine if the 8-hour RELs should be used in your HRA. Any discussions or directions to exclude the 8-hour REL evaluation should be documented in the HRA.

Note, however, there are only a handful of 8-hour RELs currently adopted for use in the Hot Spots program. Therefore, we also recommend performing chronic noncancer exposure assessment for the offsite worker (MEIW) based on the annual average air concentration at the MEIW. Evaluation of the chronic Hazard Index should help protect workers who routinely work longer than 8 hour shifts. Exposure to multipathway substances also requires noncancer hazard assessment for the dermal and oral soil exposure pathways for offsite workers. Because there are few 8-hour RELs currently available, hazard assessment for the noninhalation pathways for multipathway substances is only applied when estimating the chronic Hazard Index.

In addition, the Districts may wish to determine if there is an onsite daycare at the MEIW and include a calculation of the chronic and 8-hour inhalation dose for children, although onsite hazard assessment is not a requirement for a Hot Spots risk assessment.

As explained in Section 5.4.1.2 for cancer risk, the modeled annual average air concentration is adjusted to the air concentration that the worker is actually exposed to if the facility operates non-continuously. The typical method for this adjustment is by calculating the Worker Adjustment Factor (WAF) shown in EQ 5.4.1.4 B and multiplying this value by the annual average air concentration ( $C_{air}$ , in  $\mu\text{g}/\text{m}^3$ ) in EQ 5.4.1.4 A.

Unlike cancer risk assessment, no discount factor (DF) is applied in noncancer assessment for partial overlap between the worker's schedule and the source's emission schedule. Adjustments for worker vacations, work shifts for shortened weeks (e.g., 1 - 4 days), and worker time away on weekends are also not appropriate.

An alternative refined post-processing method, described in Appendix M, may be used to estimate the air concentration the worker is exposed to during their work schedule. OEHHA may be consulted about the particular chemical involved if it is important to make a more refined analysis.

The equation to adjust the annual average air concentration to a worker 8-hour exposure concentration (i.e., the adjusted annual average ground level concentration) is expressed as:

**A. Equation 5.4.1.4 A:**

$$\text{Adjusted } C_{air} (\mu\text{g}/\text{m}^3) = C_{air} \times \text{WAF}$$

Where WAF is determined as:

**B. Equation 5.4.1.4 B:**

$$\text{WAF} = (H_{res} / H_{source}) \times (D_{res} / D_{source})$$

**a: Assumptions for EQ 5.4.1.4 B:**

1. No adjustment of the WAF allowed for partial overlap of the worker's schedule and the source's emission schedule.

Alternatives for calculating off-site worker Adjusted  $C_{air}$  in EQ 5.4.1.4 A-B:

1. Rather than calculate the WAF for a non-continuous emitting facility, a post-processing of the hourly raw dispersion model output and examination of the hourly concentrations that fall within the offsite worker's shift can be conducted to estimate the air concentration the worker is exposed to. This method is a more refined, complex, and time consuming approach, but should result in a more representative exposure concentration. See Appendix M for information on how to simulate the exposure concentration for the off-site worker.
2. For continuously-emitting facilities (i.e., 24 hrs/day, 7 days/week), if an assessor does not wish to assume the worker breathes the long-term annual average concentration during the work shift, then a refined concentration can also be post-processed as described in Appendix M. All alternative assumptions should be approved by the reviewing authority and supported in the presentation of results.

For residential exposure to non-continuously operating facilities, the modeled maximum 1-hour and chronic air concentrations at the MEIR are determined for noncancer hazard assessment. Hazard assessment for repeated 8-hour exposure at the MEIR is not required. Chronic exposure assessment based on the annual average air concentration should adequately protect individuals, in part because residents are considered to be present at the MEIR at or near 24 hrs per day. Many facilities operate for periods longer than 8 hours per day and the hazards are better characterized based on chronic exposure. Nevertheless, differences between 8-hour and chronic exposures (i.e., higher daily 8-hour exposures vs. lower longer daily exposure 24 hrs/day) may result in different toxicological responses including potentially greater toxicological responses with either 8-hour or chronic exposure. There may also be cases such as special meteorological situations (e.g., significant diurnal-nocturnal meteorological differences) where the 8-hour REL will be more protective than the chronic REL. Thus, the air districts may also elect to have an 8-hour hazard assessment performed at the MEIR, using daily 8 hour exposures and the 8 hr RELs.

Eight-hour exposure assessment is not recommended for continuously emitting sources for residential receptors. In this situation it is only necessary to estimate chronic exposure based on the annual average concentration. However, there may be situations where the air district may wish to assess an 8-hour residential exposure to continuously operating facilities, for example, where there are significant differences in modeled concentration of emissions during the day due to diurnal wind patterns.

For estimating the air concentration from non-continuously operating facilities, EQ 5.4.1.4.A is also used to adjust the annual average concentration to what the residents are exposed to. This is the air concentration that the 8-hour REL will be compared to as discussed in Chapter 8. The alternative refined post-processing method described in Appendix M may also be used to estimate residential exposure.

In summary, the requirements for noncancer hazard assessment using the Hazard Index approach at the MEIW and MEIR are as follows.

For offsite worker exposure:

- Acute hazard assessment based on the maximum 1-hour air concentrations and 1-hour RELs
- Eight-hour hazard assessment based on daily average 8-hour exposure (estimated using adjusted annual average air concentration in EQ 5.4.1.4 A and B or by post-processing method in App. M) for those substances with 8-hour RELs
- Chronic hazard assessment based on annual average exposure and chronic RELs, and oral chronic RELs for noninhalation routes of multipathway substances

For residential exposure:

- Acute hazard assessment based on the maximum 1-hour air concentration and 1-hour RELs
- Eight-hour hazard assessment based on daily average 8-hour exposure not required, but can be performed at the discretion of the air districts for exposure to non-continuously operating facilities based on the adjusted annual average air concentration (EQ 5.4.1.4 A and B or method in App. M). Eight-hour assessments not recommended for exposure to continuously operating facilities
- Chronic hazard assessment based on annual average exposure and chronic RELs, and oral chronic RELs for noninhalation routes of multipathway substances

#### 5.4.1.5 Exposure Frequency and Age Groupings for Noncancer Hazard Assessment

For cancer risk, the basic assumption is that risk is associated with cumulative dose of carcinogen. Thus, the dose used to estimate cancer risk can be adjusted for exposure frequency, as well as time spent within the MEIR or MEIW location. Chronic RELs are not necessarily related to cumulative dose. Thus, adjusting the estimated dose used to calculate hazard index for exposure frequency or time away from the MEIR or MEIW is not appropriate.

The average daily dose for chronic noncancer assessment is based on exposure beginning at birth to 70 years of age, necessitating calculation of a time-weighted average for age 0-2, 2-16 and 16-70 years. Since we are not applying Age Sensitivity Factors for assessing non-cancer hazard, the 3<sup>rd</sup> trimester is not explicitly called out for determining dose, as it is for cancer risk assessment. Rather adult exposure is considered, which would include pregnant women in any trimester. Both inhalation and oral RELs incorporate safety factors to protect sensitive human populations.

#### **5.4.2 Estimation of Exposure through Dermal Absorption**

Exposure through dermal absorption (dose-dermal) is a function of the soil or dust loading of the exposed skin surface, the amount of skin surface area exposed, and the concentration and availability of the substance. In the previous edition of OEHHA's

exposure guidelines document (OEHHA, 2000), we recommended using specified average and high-end point estimate values for four of the variates (body weight, exposed surface area of skin, soil load on skin and frequency of exposure) in the stochastic analysis for dermal dose. This equation required multiplying values together, which could lead to overly conservative exposure estimates when high-end values were used. By combining information from the four variates into one composite distribution, over-conservatism may be avoided.

To this end, OEHHA created a new variate, “annual dermal load”, or ADL, which is a composite of the body surface area (BSA) per kg body weight, exposure frequency, and soil adherence variates. Point estimates from the composite “annual dermal load” can be used for point estimate assessments while parameters and information on the type of distribution (e.g., lognormal) can be used for Tier III stochastic risk assessments. For details on the development of the ADL, refer to the Technical Support Document for Exposure and Stochastic Analysis (OEHHA, 2012).

#### 5.4.2.1 Dermal Dose for Cancer Risk Assessment

The dose through residential dermal exposure to contaminated soil varies by age and is calculated for each age group (e.g., 3rd trimester, 0<2 yrs, 2<9 yrs, 2<16 yrs, 16<30 and 16-70 yrs). These age-specific groupings are needed in order to properly use the age sensitivity factors for cancer risk assessment (see Chapter 8). This pathway is also assessed for exposure to offsite workers; a separate ADL for offsite workers is presented in Table 5.11. Children at a MEIW daycare, if present, may also be assessed for exposure if the District deems it advisable.

#### **A. Equation 5.4.2.1:**

$$\text{Dose}_{\text{dermal}} = \text{ADL} \times C_s \times \text{ABS} \times 10^{-9} / 365$$

1.  $\text{Dose}_{\text{dermal}}$  = Exposure dose through dermal absorption (mg/kg-d)
2. ADL = Annual dermal load (mg soil/kg BW-yr)
3.  $C_s$  = Average soil concentration ( $\mu\text{g}/\text{kg}$ )
4. ABS = Fraction absorbed across skin (unitless)
5.  $10^{-9}$  = Conversion factor for chemical & soil ( $\mu\text{g}$  to mg, mg to kg)
6.  $1/365$  = Conversion factor for ADL from yrs to days

#### **a: Recommended default values for EQ 5.4.2.1:**

1. ADL = See Table 5.11 (point estimates) & Table 5.12 a-d (distributions)
2.  $C_s$  = Calculated above in EQ 5.3.2 A
3. ABS = See Table 5.13

#### **b: Assumption for EQ 5.4.2.1:**

1. The ADL for the third trimester of the fetus is based on the ADL of the mother; when normalized to body weight, we assume that exposure to the

mother and the fetus will be the same. The mother's exposure is based on that of adults 16-30 years of age in Table 5.11 and 5.12d.

2. Exposure frequency (EF) for vacation time spent away from exposure does not appear as a variate in EQ 5.4.2.1, as it is incorporated in the ADL and includes a 2-week vacation per year away from dermal soil exposure for both residents and offsite workers.

Climate will strongly influence people's choice of clothing. Due to California's varied climatic regions and existing data on clothing choices at different temperatures, three levels of climatic conditions, warm, mixed, and cold, are used to describe California's climate regions:

1. A warm climate is characteristic of Southern California areas such as Los Angeles, which can have warm to hot temperatures throughout the year.
2. A "mixed" climate is one that has warm-to-hot temperatures during much of the year (daily highs over 80 degrees are common), roughly from April to October, and cold temperatures (lows near or below freezing) during the remainder of the year. The mountains and central valley are examples of a mixed climate.
3. A cold climate is representative of San Francisco, Eureka, and other northern coastal communities, which have cool temperatures (daily highs of less than 65 degrees) for the majority of the year and can receive a considerable amount of fog and rainfall.

OEHHA recommends consulting the local air district for assistance on selecting the most appropriate climate.

**Table 5.11 Recommended Annual Dermal Load Point Estimates (in mg/kg-yr) for Dermal Exposure**

	3 <sup>rd</sup> Trimester <sup>a</sup>	Children 0<2 yrs	Children 2<9 yrs	Children 2<16 yrs	Adults <sup>b</sup>	Offsite Worker <sup>c</sup>
<b>Warm climate</b>						
Mean	1.2 x 10 <sup>3</sup>	3.6 x 10 <sup>3</sup>	7.5 x 10 <sup>3</sup>	6.4 x 10 <sup>3</sup>	1.2 x 10 <sup>3</sup>	2.6 x 10 <sup>3</sup>
95 <sup>th</sup> percentile	2.6 x 10 <sup>3</sup>	4.3 x 10 <sup>3</sup>	9.1 x 10 <sup>3</sup>	8.5 x 10 <sup>3</sup>	2.6 x 10 <sup>3</sup>	5.0 x 10 <sup>3</sup>
<b>Mixed climate</b>						
Mean	1.1 x 10 <sup>3</sup>	2.2 x 10 <sup>3</sup>	6.6 x 10 <sup>3</sup>	5.7 x 10 <sup>3</sup>	1.1 x 10 <sup>3</sup>	2.6 x 10 <sup>3</sup>
95 <sup>th</sup> percentile	2.4 x 10 <sup>3</sup>	2.9 x 10 <sup>3</sup>	8.7 x 10 <sup>3</sup>	8.1 x 10 <sup>3</sup>	2.4 x 10 <sup>3</sup>	5.0 x 10 <sup>3</sup>
<b>Cold climate</b>						
Mean	0.7 x 10 <sup>3</sup>	1.2 x 10 <sup>3</sup>	3.1 x 10 <sup>3</sup>	2.8 x 10 <sup>3</sup>	0.7 x 10 <sup>3</sup>	2.6 x 10 <sup>3</sup>
95 <sup>th</sup> percentile	2.1 x 10 <sup>3</sup>	1.9 x 10 <sup>3</sup>	5.2 x 10 <sup>3</sup>	5.1 x 10 <sup>3</sup>	2.1 x 10 <sup>3</sup>	5.0 x 10 <sup>3</sup>

<sup>a</sup> The ADL for the 3rd trimester of the fetus is based on the ADL of the mother; when normalized to body weight, we assume that exposure to the mother and the fetus will be the same

<sup>b</sup> Residential adult ADLs are for both 16<30 and 16-70 year age groups

<sup>c</sup> Assumes exposure only to face, hands and forearms regardless of climate region

**Tables 5.12a - d Annual Dermal Load Distributions by Age Group  
and Climate for Stochastic Analysis**

**Table 5.12a Annual Dermal Load (mg/kg-yr) Distributions for the  
0<2 Year Age Group**

Climate Type	Warm climate	Mixed climate	Cold climate
Distribution	Student's t	Logistic	Triangular
Minimum			$0.2 \times 10^3$
Likeliest			$0.7 \times 10^3$
Maximum			$2.6 \times 10^3$
Scale	0.41	0.28	
Deg. freedom	3		
Midpoint	$3.6 \times 10^3$		
Mean	$3.6 \times 10^3$	$2.2 \times 10^3$	$1.2 \times 10^3$
50 <sup>th</sup> percentile	$3.6 \times 10^3$	$2.2 \times 10^3$	$0.9 \times 10^3$
90 <sup>th</sup> percentile	$4.1 \times 10^3$	$2.8 \times 10^3$	$1.9 \times 10^3$
95 <sup>th</sup> percentile	$4.3 \times 10^3$	$2.9 \times 10^3$	$1.9 \times 10^3$
99 <sup>th</sup> percentile	$4.7 \times 10^3$	$3.1 \times 10^3$	$2.1 \times 10^3$

**Table 5.12b Annual Dermal Load (mg/kg-yr) Distributions for the  
2<9 Year Age Group**

Climate Type	Warm climate	Mixed climate	Cold climate
Distribution	Min extreme	Min extreme	Triangular
Minimum			$0.4 \times 10^3$
Likeliest	$8.0 \times 10^3$	$7.3 \times 10^3$	$1.9 \times 10^3$
Maximum			$6.9 \times 10^3$
Scale	0.1	1.3	
Mean	$7.5 \times 10^3$	$6.6 \times 10^3$	$3.1 \times 10^3$
50 <sup>th</sup> percentile	$7.7 \times 10^3$	$6.5 \times 10^3$	$2.3 \times 10^3$
90 <sup>th</sup> percentile	$8.7 \times 10^3$	$8.4 \times 10^3$	$5.1 \times 10^3$
95 <sup>th</sup> percentile	$9.1 \times 10^3$	$8.7 \times 10^3$	$5.2 \times 10^3$
99 <sup>th</sup> percentile	$9.7 \times 10^3$	$9.4 \times 10^3$	$5.7 \times 10^3$

**Table 5.12c Annual Dermal Load (mg/kg-yr) Distributions for the 2<16 Year Age Group**

Climate Type	Warm climate	Mixed climate	Cold climate
Distribution	Min extreme	Logistic	Triangular
Minimum			$0.3 \times 10^3$
Likeliest	$7.2 \times 10^3$		$1.6 \times 10^3$
Maximum			$6.9 \times 10^3$
Scale	1.29	0.91	
Mean	$6.4 \times 10^3$	$5.7 \times 10^3$	$2.8 \times 10^3$
50 <sup>th</sup> percentile	$6.6 \times 10^3$	$5.7 \times 10^3$	$2.2 \times 10^3$
90 <sup>th</sup> percentile	$8.1 \times 10^3$	$7.7 \times 10^3$	$4.8 \times 10^3$
95 <sup>th</sup> percentile	$8.5 \times 10^3$	$8.1 \times 10^3$	$5.1 \times 10^3$
99 <sup>th</sup> percentile	$9.3 \times 10^3$	$8.9 \times 10^3$	$5.6 \times 10^3$

**Table 5.12d Annual Dermal Load (mg/kg-yr) Distributions for Residential Adults (Age 16-30 and 16-70 Years)<sup>a</sup> and Offsite Workers**

Receptor	Residential Adult			Offsite Worker
	Warm	Mixed	Cold	All Climates <sup>b</sup>
Distribution	Beta	Beta	Gamma	Lognormal
Minimum	$0.2 \times 10^3$	$0.02 \times 10^3$		
Maximum	$3.3 \times 10^3$	$0.3 \times 10^3$		
Scale			0.07	
Mean	$1.2 \times 10^3$	$1.1 \times 10^3$	$0.7 \times 10^3$	$2.6 \times 10^3$
50 <sup>th</sup> percentile	$1.2 \times 10^3$	$1.0 \times 10^3$	$0.5 \times 10^3$	$2.3 \times 10^3$
90 <sup>th</sup> percentile	$2.4 \times 10^3$	$2.1 \times 10^3$	$1.6 \times 10^3$	$4.5 \times 10^3$
95 <sup>th</sup> percentile	$2.6 \times 10^3$	$2.4 \times 10^3$	$2.1 \times 10^3$	$5.0 \times 10^3$
99 <sup>th</sup> percentile	$2.9 \times 10^3$	$2.6 \times 10^3$	$2.3 \times 10^3$	$6.4 \times 10^3$

<sup>a</sup> The ADL distribution for the 3rd trimester is based on the ADL distribution of the mother; we assume the same ADL distribution for residential adult (the mother) and the fetus

<sup>b</sup> Face, hands and forearms are exposed only, regardless of climate

**Table 5.13 Dermal Absorption Fraction Factors (ABS) as Percent from Soil for Semi-Volatile and Solid Chemicals under the OEHHA “Hot Spots” Program**

Chemical	ABS
<b><i>Inorganic chemicals</i></b>	
Arsenic	6
Beryllium	3
Cadmium	0.2
Chromium (VI)	2
Fluorides (soluble compounds)	3
Lead	3
Mercury	4
Nickel	2
Selenium	3
<b><i>Organic chemicals</i></b>	
Creosotes	13
Diethylhexylphthalate	9
Hexachlorobenzene	4
Hexachlorocyclohexanes	3
4,4'methylene dianiline	10
Pentachlorophenol	<sup>a</sup>
Polychlorinated biphenyls	14
Polychlorinated dibenzo-p-dioxins and dibenzofurans	3
Polycyclic aromatic hydrocarbons	13

<sup>a</sup> To be determined in future amendments to the Hot Spots Program

Skin permeability is related to the solubility or strength of binding of the chemical in the delivery matrix (soil or other particles) versus the receptor matrix, the skin's stratum corneum. Fractional dermal absorption point estimate values were derived by OEHHA from available literature sources for the semi-volatile and nonvolatile chemicals in the “Hot Spots” program. The rationale for the chemical-specific dermal absorption fraction values, and the use of default values in cases where sufficient data are lacking, can be found in Appendix F of the Technical Support Document for Exposure and Stochastic Analysis (OEHHA, 2012).

#### 5.4.2.2 Chronic Noncancer Dermal Dose

Dermal exposure, and thus annual dermal load (ADL), varies by age group. Therefore, a time-weighted average ADL for age 0-70 years (0-2, 2-16, and 16-70 years) is estimated for chronic residential exposure using ADL values in Table 5.12. This exposure pathway is also assessed for offsite workers using the offsite worker ADL values in Table 5.12d. Children at a MEIW daycare, if present, may also be assessed for exposure if the District deems it advisable. The contribution to the dermal dose is determined for each age group in EQ 5.4.2.2:

**A. Equation 5.4.2.2:**  $\text{Dose}_{\text{dermal}} = \text{ADL} \times \text{Cs} \times \text{ABS} \times 10^{-9} \times \text{ED}/\text{AT} \times (1/350)$

1.  $\text{Dose}_{\text{dermal}}$  = Exposure dose through dermal absorption (mg/kg/d)
2. ADL = Annual dermal load (mg/kg-yr), age-specific
3. Cs = Average soil concentration ( $\mu\text{g}/\text{kg}$ )
4. ABS = Fraction absorbed across skin (unitless)
5.  $10^{-9}$  = Conversion factor for chemical & soil ( $\mu\text{g}$  to mg, mg to kg)
6. 1/350 = Conversion factor for ADL from yrs to days (Note: this conversion is needed to remove EF, expressed as 350 days/365 days, from the ADLs in Table 5.12a-d)
7. ED = Exposure duration for specified age groups: 2 yrs for 0<2, 14 yrs for 2<16, 54 yrs for 16-70 for residential exposure,
8. AT = Averaging time for residential exposure – 70 yrs

**a: Recommended default values for EQ 5.4.2.2:**

1. ADL = See Table 5.11 for point estimates by age group, climate region and receptor type (resident or worker)
2. Cs = Calculated above in EQ 5.3.2 A
3. ABS = See Table 5.13

**b: Recommended off-site worker default modifications to EQ 5.4.2.2:**

1. Chronic dermal dose to the off-site worker assumes only adult exposure and is incorporated into the off-site worker ADL in Table 5.12d.
2. A time-weighted average estimate of dose is not necessary and the ED and AT variates are left out of EQ 5.4.2.2 for dermal dose to the worker.

**c: Recommended nursing mother default modifications to EQ 5.4.2.2:**

1. For dermal dose to mother's milk, use the ADL for age 16-30 years in Table 5.12d.
2. The ED and AT variates in EQ 5.4.2.2 are left out for dermal dose in the mother's milk pathway.

**d: Assumptions for EQ 5.4.2.2:**

1. For cancer risk assessment, Exposure Frequency (EF) for vacation time away from exposure is incorporated into the ADLs shown in Tables 5.11 and 5.12 using the basic assumption that cancer risk is associated with cumulative dose of carcinogen. The dose used to estimate cancer risk can be adjusted for EF, and for time spent within the MEIR or MEIW location. Chronic RELs are not necessarily related to cumulative dose. Thus, adjusting the estimated dose for EF at the MEIR or MEIW is not appropriate, and the unadjusted daily rate is used in EQ 5.4.2.2.
2. For worker exposure, the annual average concentration should not be adjusted to account for worker and facility emission schedules, as done for

inhalation cancer risk assessment. The pollutant will be deposited and accumulate in the soil in the absence or presence of the worker; therefore, the total deposition and soil concentration will be dependent on the annual average air concentration.

For residential chronic exposure, the dermal dose contribution for each age group is summed together to obtain the time-weighted average daily dermal dose for chronic hazard assessment:

$$\begin{aligned} & (\text{ADL age } 0 < 2 \times C_s \times \text{ABS} \times 10^{-9} \times 2 / 70 \times (1/350)) + \\ & (\text{ADL age } 2 < 16 \times C_s \times \text{ABS} \times 10^{-9} \times 14 / 70 \times (1/350)) + \\ & (\text{ADL age } 16 - 70 \times C_s \times \text{ABS} \times 10^{-9} \times 54 / 70 \times (1/350)) = \text{Chronic Dose}_{\text{dermal}} \end{aligned}$$

### 5.4.3 *Estimation of Exposure through Ingestion*

Exposure through ingestion is a function of the concentration of the substance in the ingested soil, water, and food, the gastrointestinal absorption of the substance, and the amount ingested.

#### 5.4.3.1 Exposure through Ingestion of Soil

There are no distributions for soil ingestion currently recommended. Tier III stochastic risk assessments should include a high-end point estimate of soil ingestion, soil loading, exposure frequency and soil area.

##### 5.4.3.1.1 *Soil Ingestion Dose for Cancer Risk*

The exposure dose through residential soil ingestion varies by age and is calculated for each age group ((e.g., 3rd trimester, 0<2 yrs, 2<9 yrs, 2<16 yrs, 16<30 and 16-70 yrs). These age-specific groupings are needed in order to properly use the age sensitivity factors for cancer risk assessment (see Chapter 8). This pathway is also assessed for exposure to off-site workers. Children at a MEIW daycare, if present, may also be assessed for exposure if the District deems it advisable. The dose from inadvertent soil ingestion can be estimated by the point estimate approach using the following general equation:

**A. Equation 5.4.3.1.1:**

$$\text{DOSE}_{\text{soil}} = C_{\text{soil}} \times \text{GRAF} \times \text{SIR} \times 10^{-9} \times \text{EF}$$

1.  $\text{DOSE}_{\text{soil}}$  = Dose from soil ingestion (mg/kg BW-day)
2.  $10^{-9}$  = Conversion factor ( $\mu\text{g}$  to mg, mg to kg)
3.  $C_{\text{soil}}$  = Concentration of contaminant in soil ( $\mu\text{g}/\text{kg}$ )
4. GRAF = Gastrointestinal relative absorption fraction, chemical-specific (unitless)
5. SIR = Soil ingestion rate (mg/kg BW-day)
6. EF = Exposure frequency (unitless), (days/365 days)

**a: Recommended default values for EQ 5.4.3.1.1:**

1.  $C_{\text{soil}}$  = Calculated above in EQ 5.3.2 A
2. GRAF = See Table 5.2
3. SIR = See Table 5.14
4. EF = 350 d/year resident, 250 d/year worker

In this approach, it is assumed that the soil ingested contains a representative concentration of the contaminant(s) and the concentration is constant over the exposure period.

The term **GRAF**, or gastrointestinal relative absorption factor, is defined as the fraction of contaminant absorbed by the GI tract relative to the fraction of contaminant absorbed from the matrix (feed, water, other) used in the study(ies) that is the basis of either the cancer potency factor (CPF) or the Reference Exposure Level (REL). If no data are available to distinguish absorption in the toxicity study from absorption from the environmental matrix in question (i.e., soil), then  $\text{GRAF} = 1$ . The GRAF allows for adjustment for absorption from a soil matrix if it is known to be different from absorption across the GI tract in the study used to calculate the CPF or REL. In most instances, the GRAF will be 1.

**Table 5.14 Recommended Soil Ingestion Rate (SIR) Estimates for Adults and Children (mg/kg-day)\***

Age Groups (years)	Mean (mg/kg-day)	95 <sup>th</sup> % (mg/kg-day)
3rd Trimester <sup>a</sup>	0.7	3
0<2	20	40
2<9	5	20
2<16	3	10
16<30	0.7	3
16 to 70	0.6	3
PICA adult	NR	-

<sup>a</sup> Assumed to be the mother's soil ingestion rate (adult age 16 <30)

\* Soil includes outdoor settled dust

NR = No recommendation

#### 5.4.3.1.2 Chronic Noncancer Dose for Soil Ingestion

The soil ingestion rate varies by age. A time-weighted average approach is used to combine soil intake rates of the age groupings (i.e., 0<2 yrs, 2<16 yrs, and 16-70 yrs) to determine the residential soil ingestion dose for chronic noncancer hazard assessment. This pathway is also assessed for exposure to offsite workers using the adult intake values for age 16-70 years in Table 5.14. Children at a MEIW daycare, if present, may also be assessed for exposure if the District deems it advisable. The contribution to the soil ingestion dose by each age group is determined in EQ 5.4.3.1.2:

**A. Equation 5.4.3.1.2:**  $\text{DOSE}_{\text{soil}} = C_{\text{soil}} \times \text{GRAF} \times \text{SIR} \times 10^{-9} \times \text{ED}/\text{AT}$

1.  $\text{DOSE}_{\text{soil}}$  = Dose from soil ingestion (mg/kg BW-day)
2.  $10^{-9}$  = Conversion factor ( $\mu\text{g}$  to mg, mg to kg)
3.  $C_{\text{soil}}$  = Concentration of contaminant in soil ( $\mu\text{g}/\text{kg}$ )
4. GRAF = Gastrointestinal relative absorption fraction, unitless; chemical-specific
5. SIR = Soil ingestion rate (mg/kg BW-day)
6. ED = Exposure duration for a specified age group: 2 yrs for 0<2, 14 yrs for 2<16, 54 yrs for 16-70
7. AT = Averaging time for lifetime exposure – 70 yrs

**a: Recommended default values for EQ 5.4.3.1.2:**

1.  $C_{\text{soil}}$  = Calculated above in EQ 5.3.2 A
2. GRAF = See Table 5.2
3. SIR = See Table 5.14; use 16-70 age group SIR for workers

**b: Recommended off-site worker default modifications to EQ 5.4.3.1.2:**

1. A time-weighted average estimate of dose is not necessary and the ED and AT variates are left out of EQ 5.4.3.1.2 for oral soil dose to the worker.

**c: Recommended nursing mother default modifications to EQ 5.4.3.1.2:**

1. For mother's ingested soil dose to milk, use the SIR for age 16-30 years in Table 5.14.
2. The ED and AT variates in EQ 5.4.3.1.2 are left out for soil ingestion dose in the mother's milk pathway.

**d: Assumptions for EQ 5.4.3.1.2:**

1. For worker exposure, the annual average concentration should not be adjusted to account for overlap of worker and facility emission schedules. The pollutant will be deposited and accumulate in the soil in the absence or presence of the worker; therefore, the total deposition and soil concentration will be dependent on the annual average air concentration.

For residential exposure, the soil ingestion dose contribution for each age group is summed together to obtain the time-weighted average daily soil intake dose for chronic hazard assessment:

$$\begin{aligned} & (\text{SIR for age } 0 < 2 \text{ yrs} \times C_{\text{soil}} \times \text{GRAF} \times 10^{-9} \times 2 / 70) + \\ & (\text{SIR for age } 2 < 16 \text{ yrs} \times C_{\text{soil}} \times \text{GRAF} \times 10^{-9} \times 14 / 70) + \\ & (\text{SIR for age } 16 - 70 \text{ yrs} \times C_{\text{soil}} \times \text{GRAF} \times 10^{-9} \times 54 / 70) = \text{Chronic Dose}_{\text{soil}} \end{aligned}$$

**5.4.3.2 Exposure through Ingestion of Food**

The exposure through food ingestion can be through ingestion of home-grown plant products (categorized as leafy, protected, exposed and root produce), home-raised animals (categorized as meat, cow's milk and eggs), angler-caught fish and mother's milk. When a specific food pathway is a dominant pathway (e.g., homegrown produce), and multiple pathways such as home raised meat, milk, and eggs categories all need to be assessed, the 95<sup>th</sup> percentile default consumption rate for the driving exposure pathway is used, while the mean consumption values for the remaining exposure pathways (i.e., food categories) are used. See Section 8.2.6 for a complete discussion of the methodology on how to implement the derived methodology.

**5.4.3.2.1 *Dose for Cancer Risk from Home-Grown Produce***

Exposure through ingesting home-grown produce (DOSE<sub>p</sub>) is a function of the type of crop (i.e., exposed, leafy, protected, root), gastrointestinal relative absorption factor, bioavailability and the fraction of plant ingested that is homegrown. The calculation is done for each type of crop, then summed to get total dose for this pathway. The

exposure dose through ingestion of home-grown produce varies by age and is calculated for each age group (e.g., 3rd trimester, 0<2 yrs, 2<9 yrs, 2<16 yrs, 16<30 and 16-70 yrs). These age-specific groupings are needed in order to properly use the age sensitivity factors for cancer risk assessment (see Chapter 8).

**A. Equation 5.4.3.2.1:**

$$\text{DOSEp} = C_v \times \text{IP} \times \text{GRAF} \times L \times \text{EF} \times 10^{-6}$$

1. DOSEp = Exposure dose through ingestion of home-grown produce (mg/kg/d)
2.  $C_v$  = Concentration in specific type of crop, i.e., exposed, leafy, protected, root ( $\mu\text{g}/\text{kg}$ )
3. IP = Consumption of specific type of crop (g/kg BW\*day)
4. GRAF = Gastrointestinal relative absorption factor (unitless)
5. L = Fraction of plant type consumed that is home-grown or locally grown (unitless)
6. EF = Exposure frequency (unitless, days/365 days)
7.  $10^{-6}$  = Conversion factors ( $\mu\text{g}/\text{kg}$  to mg/g)

**a: Recommended default values for Equation 5.4.3.2.1:**

1.  $C_v$  = Calculated above in EQ 5.3.4.1 A
2. IP = See Table 5.15 (point estimates) and 5.16a-e (distributions)
3. GRAF = See Table 5.2
4. L = Site-specific survey is recommended. Otherwise, see Table 5.17 for Tier I default values
5. EF = 0.96 (350 d/365 d in a yr)

Once the dose for each type of crop that applies is calculated (See Section 5.3.4.1 for definition of crops types), the doses are summed to get the total dose for the home-grown produce pathway:

$$\text{Total DOSEp} = \text{DOSEp (leafy)} + \text{DOSEp (root)} + \text{DOSEp (exposed)} + \text{DOSEp (protected)}$$

The total home-grown produce dose will need to be calculated for each age group that applies.

**5.4.3.2.2 Dose for cancer risk from home-raised meat, eggs, and cow's milk**

Exposure through ingesting home-raised or farm animal products ( $\text{DOSE}_{\text{fa}}$ ) is a function of the type of food (meat, eggs and cow's milk), gastrointestinal relative absorption factor, bioavailability and the fraction of food ingested that is home-raised. The only meat sources considered here are beef, pork and poultry. Unlike the home-grown produce pathway, the dose is calculated and presented separately for each type of home-raised food. The age-specific groupings to determine dose (3rd trimester, 0<2 yrs, 2<9 yrs, 2<16 yrs, 16<30 yrs or 16-70 yrs) is needed in order to properly use the age sensitivity factors for cancer risk assessment (see Chapter 8).

**A. Equation 5.4.3.2.2:**

$$\text{DOSE}_{\text{fa}} = C_{\text{fa}} \times I_{\text{fa}} \times \text{GRAF} \times L \times \text{EF} \times 10^{-6}$$

1.  $\text{DOSE}_{\text{fa}}$  = Exposure dose through ingestion of home-raised animal product (mg/kg/d)
2.  $C_{\text{fa}}$  = Concentration in animal product, e.g., beef, pork, poultry, dairy, eggs ( $\mu\text{g}/\text{kg}$ )
3.  $I_{\text{fa}}$  = Consumption of animal product (g/kg BW-day)
4. GRAF = Gastrointestinal relative absorption factor (unitless)
5. L = Fraction of animal product consumed that is home-raised or locally produced (unitless)
6. EF = Exposure frequency (unitless, days/365 days)
7.  $10^{-6}$  = Conversion factors ( $\mu\text{g}/\text{kg}$  to mg/g)

**a: Recommended default values for EQ 5.4.3.2.2:**

1.  $C_{\text{fa}}$  = Calculated above in EQ 5.3.4.2 A
2.  $I_{\text{fa}}$  = See Table 5.15 (point estimates) and Table 5.16a-e (distributions)
3. GRAF = See Table 5.2
4. L = Site-specific survey is recommended. Otherwise, see Table 5.17 for Tier I default values
5. EF = 0.96 (350 days / 365 days in a year)

**5.4.3.2.3 Chronic Noncancer Dose for Ingestion of Food**

For oral noncancer hazard assessment, a time-weighted average approach is used to combine food ingestion rates for the age groups (i.e., 0<2, 2<16 and 16-70 yrs) to estimate the chronic dose for residential exposure. The equation used to estimate dose through home-grown produce and home-raised meat/eggs/cow's milk is similar and is shown below in one equation. Similar to the cancer risk dose calculation, home-grown produce is presented as a total dose for all types of crops (See Section 5.4.3.2.1) and home-raised animal product dose is presented separately for each type of animal product that applies (See Section 5.4.3.2.2).

The contribution to the food intake dose is determined for each age group in EQ 5.4.3.2.3:

**A. Equation 5.4.3.2.3:**  $\text{DOSE}_{\text{food}} = C_{\text{food}} \times I_{\text{food}} \times \text{GRAF} \times L \times 10^{-6} \times \text{ED}/\text{AT}$

1.  $\text{DOSE}_{\text{food}}$  = Exposure dose through ingestion of home-grown produce or home-raised animal product (mg/kg/d)
2.  $C_{\text{food}}$  = Concentration ( $\mu\text{g}/\text{kg}$ ) in produce (e.g., exposed, leafy, protected, root) or animal product (e.g., beef, pork, poultry, dairy, eggs)
3.  $I_{\text{food}}$  = Consumption of produce or animal product (g/kg BW-day)
4. GRAF = Gastrointestinal relative absorption factor (unitless)
5. L = Fraction of produce or animal product consumed that is home-grown (unitless)
6.  $10^{-6}$  = Conversion factors ( $\mu\text{g}/\text{kg}$  to mg/g)
7. ED = Exposure duration for a specified age group (2 yrs for 0<2, 14 yrs for 2<16, 54 yrs for 16-70)
8. AT = Averaging time for lifetime exposure: 70 yrs

**a: Recommended default values for EQ 5.4.3.2.3:**

1.  $C_{\text{food}}$  = Calculated above in EQ 5.3.4.1 A (for home-grown produce) or EQ 5.3.4.2 A (for home-raised animal products)
2.  $I_{\text{food}}$  = Age-specific, see Table 5.15 for point estimates
3. GRAF = See Table 5.2
4. L = Site-specific survey is recommended. Otherwise, see Table 5.17 for Tier I default values

**b: Recommended nursing mother default modifications to EQ 5.4.3.2.3:**

1. For the mother's dose to milk through ingested food, use the food intake rates for age 16-30 years in Table 5.15 and 5.16d.
2. The ED and AT variates in EQ 5.4.3.2.3 are left out for ingested food dose in the mother's milk pathway.

Following calculation of the intake dose contributions for each age group, the intake rates for home-grown produce and the intake rates for home-raised animal products are summed separately to obtain the residential time-weighted average intake dose for chronic residential exposure to home-grown produce and to home-raised animal products:

$$(I_{\text{food}} \text{ for age } 0<2 \text{ yrs} \times C_{\text{food}} \times \text{GRAF} \times L \times 10^{-6} \times 2 / 70) +$$

$$(I_{\text{food}} \text{ for age } 2<16 \text{ yrs} \times C_{\text{food}} \times \text{GRAF} \times L \times 10^{-6} \times 14 / 70) +$$

$$(I_{\text{food}} \text{ for age } 16-70 \text{ yrs} \times C_{\text{food}} \times \text{GRAF} \times L \times 10^{-6} \times 54 / 70) = \text{Chronic Dose}_{\text{food}}$$

**Table 5.15 Recommended Average and High End Point Estimate Values for Home Produced Food Consumption (g/kg-day)<sup>a</sup>**

Food Category	Third Trimester <sup>b</sup>		Ages 0<2		Ages 2<9	
	Avg.	High End	Avg.	High End	Avg.	High End
Produce						
Exposed	1.9	5.9	11.7	30.2	7.4	21.7
Leafy	0.9	3.2	3.8	10.8	2.5	7.9
Protected	1.7	5.8	5.9	17.5	4.7	13.3
Root	1.7	4.6	5.7	15.3	3.9	10.8
Meat						
Beef	2.0	4.8	3.9	11.3	3.5	8.6
Pork	0.9	2.9	2.9	10.5	2.2	7.8
Poultry	1.8	4.7	4.5	11.4	3.7	9.0
Milk	5.4	15.9	50.9	116.1	23.3	61.4
Eggs	1.6	4.2	6.1	15.0	3.9	9.4
	Ages 2<16		Ages 16<30		Ages 16-70	
	Avg.	High End	Avg.	High End	Avg.	High End
Produce						
Exposed	5.5	16.6	1.9	5.9	1.8	5.6
Leafy	1.7	5.8	0.9	3.2	1.1	3.4
Protected	3.6	10.6	1.7	5.8	1.6	5.2
Root	3.0	8.7	1.7	4.6	1.5	4.2
Meat						
Beef	3.0	7.6	2.0	4.8	1.7	4.4
Pork	1.8	5.7	0.9	2.9	0.9	2.8
Poultry	3.0	7.5	1.8	4.7	1.5	3.8
Milk	16.5	48.4	5.4	15.9	4.3	13.2
Eggs	3.1	8.1	1.6	4.2	1.3	3.4

<sup>a</sup> April 22, 2022: Transcription errors in Table 5.15 were corrected in accordance with corrections made to the source table, Table 7.1 of the 2012 Exposure Assessment and Stochastic Analysis Technical Support Document (EASA TSD). In the original Table 7.1 of the EASA TSD, data from Table 7.12 were incorrectly copied onto the “Ages 2<16” column. The corrected Table 7.1 replaces the data for this age group with data from Table 7.11 and replaces the column header “Ages 2>16” with “Ages 2<16”. Additionally, the corrected Table 7.1 also switches the order of meat types in the Food Category column to reflect the order shown in the source data tables (Tables 7.8 – 7.13 of EASA TSD). The corrections made to Table 7.1 of the EASA TSD on April 22, 2022 were also made to Table 5.15 of this document.).

<sup>b</sup> Food consumption values for 3<sup>rd</sup> trimester calculated by assuming that the fetus receives the same amount of contaminated food on a per kg BW basis as the mother (adult age 16 to less than 30).

**Table 5.16a - e Parametric Models of Per Capita Food Consumption by Age Group for Stochastic Analysis****Table 5.16a Per Capita Food Consumption (g/kg-day) for Ages 0<2**

Food Category	Distrib. Type	Anderson-Darling Statistic	Mean	Std. Dev	Location	Scale	Shape	Like-liest
Produce								
Exposed	Gamma	60			0.01	6.56	0.830	
Leafy	Gamma	167			0.01	3.30	1.161	
Protected	LogN	67	6.03	7.31				
Root	Gamma	83			0.06	4.44	1.28	
Meat								
Beef	LogN	16	1.97	1.73				
Poultry	LogN	58	4.5	4.08				
Pork	LogN	230	3.00	4.46				
Dairy	Max Ext.	169				27.82		33.79
Eggs	LogN	172	6.11	4.21				

**Table 5.16b Per Capita Food Consumption (g/kg-day) for Ages 2<9**

Food Category	Distribution Type	Anderson-Darling Statistic	Mean	Std. Dev	Location	Scale	Shape	Rate
Produce								
Exposed	Exponential	206						0.14
Leafy	LogN	127	2.64	3.89				
Protected	Weibull	68			0.02	4.76	1.063	
Root	LogN	60	3.95	3.85				
Meat								
Beef	LogN	35	3.55	2.79				
Poultry	LogN	17	3.71	2.67				
Pork	LogN	66	2.25	2.84				
Milk	LogN	12	23.4	20.78				
Eggs	LogN	38	3.93	3.00				

**Table 5.16c Per Capita Food Consumption (g/kg-day) for Ages 2<16**

Food Category	Distribution Type	Anderson-Darling Statistic	Mean	Std. Dev	Location	Scale	Shape
Produce							
Exposed	Gamma	60			0.01	6.54	0.8325
Leafy	LogN	68	1.83	2.91			
Protected	Gamma	47			0.00	3.69	0.9729
Root	LogN	51	3.10	3.44			
Meat							
Beef	LogN	10	2.96	2.49			
Poultry	LogN	27	2.98	2.52			
Pork	LogN	48	1.84	2.79			
Milk	LogN	35	16.8	19.2			
Eggs	LogN	71	3.16	2.95			

**Table 5.16d Per Capita Food Consumption (g/kg-day) for Ages 16-30<sup>a</sup>**

Food Category	Distribution Type	Anderson-Darling Statistic	Mean	Std. Dev	Location	Scale	Shape
Produce							
Exposed	Gamma	70			0.01	2.05	0.9220
Leafy	Weibull	191			0.00	0.88	0.8732
Protected	LogN	93	1.81	3.31			
Root	LogN	43	1.69	1.69			
Meat							
Beef	LogN	26	1.98	1.54			
Poultry	LogN	26	1.80	1.42			
Pork	LogN	242	1.01	1.74			
Milk	Gamma	22			0.02	5.66	0.9421
Eggs	LogN	29	1.55	1.36			

<sup>a</sup> These distributions are also recommended for the third trimester. Food consumption values for 3<sup>rd</sup> trimester are calculated by assuming that the fetus receives the same amount of contaminated food on a per kg BW basis as the mother (adult age 16<30).

**Table 5.16e Per Capita Food Consumption (g/kg-day) for Ages 16-70**

Food Category	Distribution Type	Anderson-Darling Statistic	Mean	Std. Dev	Location	Scale	Shape
Produce							
Exposed	Gamma	148			0.01	2.07	0.8628
Leafy	Gamma	83			0.00	1.15	0.9713
Protected	Gamma	78			0.01	1.90	0.8325
Root	Gamma	14			0.00	1.28	1.166
Meat							
Beef	LogN	20	1.75	1.40			
Poultry	LogN	18	1.53	1.18			
Pork	LogN	190	0.97	1.59			
Milk	Gamma	20			0.00	4.50	0.9627
Eggs	LogN	30	1.3	1.01			

**Table 5.17 Default Values for L in EQs 5.4.3.2.1., 5.4.3.2.2 and 5.4.3.2.3: Fraction of Food Intake that is Home-Produced**

Food Type	Households that Garden <sup>a</sup>	Households that Farm <sup>a</sup>
Avg. Total Veg & Fruits	0.137	0.235
	Households that Garden/Hunt <sup>b</sup>	Households that Farm <sup>b</sup>
Beef	0.485	0.478
Pork	0.242	0.239
Poultry	0.156	0.151
Eggs	0.146	0.214
Total Dairy (Cow's milk)	0.207	0.254

<sup>a</sup> As a default for home-produced leafy, exposed, protected and root produce, OEHHA recommends 0.137 as the fraction of produce that is home-grown. The households that grow their own vegetables and fruits are the population of concern. In rural situations where the receptor is engaged in farming, OEHHA recommends 0.235 as the default value for fraction of leafy, exposed, protected and root produce that is home-grown.

<sup>b</sup> OEHHA recommends the fraction home-raised under "Households that raise animals/hunt" (for beef, pork, poultry (chicken), eggs and dairy (cow's milk), with the exception of rural household receptors engaged in farming. OEHHA recommends that the fractions listed under "Households that farm" be used for the rural household receptors.

#### 5.4.3.3 Exposure through Ingestion of Water

Intake of drinking water varies by age on a ml per kg body weight per day basis resulting in differences in exposure dose by age. The age-specific groupings to determine dose are needed in order to properly use the age sensitivity factors for

cancer risk assessment (see Chapter 8) and to calculate a time-weighted average dose for chronic noncancer assessment.

#### 5.4.3.3.1 Dose for Cancer Risk through Ingestion of Water

DOSE<sub>water</sub> is calculated for each age group (i.e., 3rd trimester, 0<2 yrs, 2<9 yrs, 2<16 yrs, 16<30 yrs and 16-70 yrs), then incorporated into EQ 8.2.5 in Chapter 8 to determine cancer risk through exposure in drinking water.

**A. Equation 5.4.3.3.1:** 
$$\text{DOSE}_{\text{water}} = C_w \times \text{WIR} \times \text{ABS}_{\text{swa}} \times \text{Fdw} \times \text{EF} \times 10^{-6}$$

1. DOSE<sub>water</sub> = Exposure dose through ingestion of water (mg/kg BW/d)
2. C<sub>w</sub> = Water concentration (µg/L)
3. WIR = Water ingestion rate (ml/kg BW-day)
4. ABS<sub>swa</sub> = Gastrointestinal relative absorption factor (unitless)
5. Fdw = Fraction of drinking water from contaminated source
6. EF = Exposure frequency (unitless, days/365 days)
7. 10<sup>-6</sup> = Conversion factors (mg/µg)(L/ml)

#### **a: Recommended default values for EQ 5.4.3.3.1:**

1. C<sub>w</sub> = Calculated above 5.3.3 A
2. WIR = See 5.18 (point estimates) and Table 5.19 (distributions)
3. ABS<sub>swa</sub> = Default set to 1
4. Fdw = Default set to 1, although a site-specific survey is recommended for this variate
5. EF = 0.96 (350 days/365 days in a year)

#### 5.4.3.3.2 Chronic Noncancer Dose through Ingestion of Water

Because water intake varies by age group, a time-weighted average intake approach is used to determine the daily water ingestion dose for chronic residential exposure. The contribution to the water ingestion dose is determined for each age group (i.e., 0<2, 2<16 and 16-70 yrs) in EQ 5.4.3.3.2.

**A. Equation 5.4.3.3.2:**

$$\text{DOSE}_{\text{water}} = C_w \times \text{WIR} \times \text{ABS}_{\text{wa}} \times \text{Fdw} \times 10^{-6} \times \text{ED}/\text{AT}$$

1.  $\text{DOSE}_{\text{water}}$  = Exposure dose through ingestion of water (mg/kg BW/d)
2.  $C_w$  = Water concentration ( $\mu\text{g}/\text{L}$ )
3. WIR = Water ingestion rate (ml/kg BW-day)
4.  $\text{ABS}_{\text{wa}}$  = Gastrointestinal absorption factor
5. Fdw = Fraction of drinking water from contaminated source (site-specific)
6.  $10^{-6}$  = Conversion factors (mg/ $\mu\text{g}$ )(L/ml)
7. ED = Exposure duration for a specified age group: 2 yrs for 0<2, 14 yrs for 2<16, 54 yrs for 16-70
8. AT = Averaging time for residential exposure: 70 yrs

**a: Recommended default values for EQ 5.4.3.3.2:**

1.  $C_w$  = Calculated above in 5.3.3 A
2. WIR = See 5.18 (point estimates)
3.  $\text{ABS}_{\text{wa}}$  = Default set to 1
4. Fdw = Default set to 1, although a site-specific survey is recommended for this variate

**b: Recommended nursing mother default modifications to EQ 5.4.3.3.2:**

1. For the dose to mother's milk through water ingestion, use the WIR for age 16-30 years in Table 5.18.
2. The ED and AT variates in EQ 5.4.3.3.2 are left out for ingested water dose in the mother's milk pathway.

The water intake dose contribution for each age group is summed together to obtain the time-weighted average daily residential water ingestion dose:

$$(\text{WIR for age } 0<2 \text{ yrs} \times C_w \times \text{ABS}_{\text{wa}} \times \text{Fdw} \times 10^{-6} \times 2 / 70) +$$

$$(\text{WIR for age } 2<16 \text{ yrs} \times C_w \times \text{ABS}_{\text{wa}} \times \text{Fdw} \times 10^{-6} \times 14 / 70) +$$

$$(\text{WIR for age } 16-70 \text{ yrs} \times C_w \times \text{ABS}_{\text{wa}} \times \text{Fdw} \times 10^{-6} \times 54 / 70) = \text{Chronic Dose}_{\text{water}}$$

**Table 5.18 Recommended Point Estimate  
Tap Water Intake Rates (ml/kg-day)**

Point Estimates				
Using Mean Values	For the Age Period	9-year scenario	30-year scenario	70-year scenario
	3 <sup>rd</sup> trimester	18	18	18
	0<2 years	113	113	113
	2<9 years	26	-	-
	2<16 years	-	24	24
	16-30 years	-	18	-
	16-70 years	-	-	18
Using 95 <sup>th</sup> -percentile values	For the Age Period	9-year scenario	30-year scenario	70-year scenario
	3 <sup>rd</sup> trimester	47	47	47
	0<2 years	196	196	196
	2<9 years	66	-	-
	2<16 years	-	61	61
	16-30 years	-	47	-
	16-70 years	-	-	45

**Table 5.19 Recommended Distributions of Tap Water Intake Rates  
(ml/kg-day) for Stochastic Risk Assessment**

	9-year scenario	30-year scenario	70-year scenario
0<2 years	<b>Max Extreme</b> Likeliest = 93 Scale = 35	<b>Max Extreme</b> Likeliest = 93 Scale = 35	<b>Max Extreme</b> Likeliest = 93 Scale = 35
2<9 years	<b>Weibull</b> Location = 0.02 Scale = 29 Shape = 1.3		
2<16 years		<b>Gamma</b> Location = 0.19 Scale = 15.0 Shape = 1.6	<b>Gamma</b> Location = 0.19 Scale = 15.0 Shape = 1.6
16-30 years		<b>Gamma</b> location=0.49 scale=13.6 shape=1.26	
16-70 years			<b>Beta</b> min=0.17 max=178 alpha=1.5 beta= 12.9

#### 5.4.3.4 Exposure through Ingestion of Angler-caught Fish

Exposure through ingestion of angler-caught fish ( $DOSE_{fish}$ ) is a function of the fraction of fish ingested that is caught in the exposed water body, which differs for each age grouping, and the gastrointestinal absorption factor. Ingestion of angler-caught fish on a mg/kg body weight per day basis varies by age resulting in differences in exposure dose by age. The age-specific groupings to determine dose is needed primarily to properly use the age sensitivity factors for cancer risk assessment (see Chapter 8) and to calculate a time-weighted average dose for chronic noncancer assessment.

##### 5.4.3.4.1 *Cancer Risk Dose via Ingestion of Angler-Caught Fish*

$DOSE_{fish}$  is calculated for each age group separately (i.e., 3rd trimester, 0<2 yrs, 2<9 yrs, 2<16 yrs, 16<30 yrs and 16-70 yrs), then incorporated into EQ 8.2.5 in Chapter 8 to determine cancer risk through exposure to angler-caught fish.

**A. Equation 5.4.3.4.1:**  $DOSE_{fish} = C_t \times I_{fish} \times Gf \times L \times EF \times 10^{-6}$

1.  $DOSE_{fish}$  = Dose via ingestion of angler-caught fish (mg/kg BW-day)
2.  $C_t$  = Concentration in fish muscle tissue ( $\mu\text{g}/\text{kg}$ )
3.  $I_{fish}$  = Angler-caught fish ingestion rate (g/kg BW per day)
4.  $Gf$  = Gastrointestinal absorption factor (unitless)
5.  $L$  = Fraction of fish caught at exposed site (unitless)
6.  $EF$  = Exposure frequency (days/365 days)
7.  $10^{-6}$  = Conversion factor (mg/ $\mu\text{g}$ , kg/g)

##### **a: Recommended default values for Equation 5.4.3.4.1:**

1.  $C_t$  = Calculated above in Equation 5.3.4.7
2.  $I_{fish}$  = See Table 5.20 (point estimates) and Table 5.21 (distributions)
3.  $Gf$  = Default set to 1
4.  $L$  = Default set to 1 for fraction of fish caught locally, although a site-specific survey is recommended for this variate
5.  $EF$  = 0.96 (350 days/365 days in a yr)

##### 5.4.3.4.2 *Chronic Noncancer Dose via Ingestion of Angler-Caught Fish*

Angler-caught fish consumption varies by age group. A time-weighted average intake for residential consumption over 70 years is used to determine dose for average and high-end exposure. The contribution to the angler-caught fish consumption dose is determined for each age group in EQ 5.4.3.4.2:

**A. Equation 5.4.3.4.2:**  $\text{DOSE}_{\text{fish}} = C_t \times I_{\text{fish}} \times Gf \times L \times 10^{-6} \times \text{ED}/\text{AT}$ 

1.  $\text{DOSE}_{\text{fish}}$  = Dose via ingestion of angler-caught fish (mg/kg BW-day)
2.  $C_t$  = Concentration in fish muscle tissue ( $\mu\text{g}/\text{kg}$ )
3.  $I_{\text{fish}}$  = Angler-caught fish ingestion rate (g/kg BW per day)
4.  $Gf$  = Gastrointestinal absorption factor (unitless)
5.  $L$  = Fraction of fish caught at exposed site (unitless)
6.  $10^{-6}$  = Conversion factor (mg/ $\mu\text{g}$ , kg/g)
7.  $\text{ED}$  = Exposure duration for a specified age group: 2 yrs for 0<2, 14 yrs for 2<16 and 54 yrs for 16-70
8.  $\text{AT}$  = Averaging time for chronic exposure – 70 yrs

**a: Recommended default values for Equation 5.4.3.4.2:**

1.  $C_t$  = Calculated above in Equation 5.3.4.7
2.  $I_{\text{fish}}$  = See Table 5.20 (point estimates)
3.  $Gf$  = Default set to 1
4.  $L$  = Default set to 1 for fraction of fish caught locally, although a site-specific survey is recommended for this variate

**b: Recommended nursing mother default modifications to EQ 5.4.3.4.2:**

1. For the dose to mother's milk through fish consumption, use the  $I_{\text{fish}}$  for age 16-30 years in Table 5.20.
2. The  $\text{ED}$  and  $\text{AT}$  variates in EQ 5.4.3.4.2 are left out for the dose via fish consumption in the mother's milk pathway.

Following calculation of the angler-caught fish consumption dose contribution for each age group, 0<2 yr, 2<16 yr and 16-70 yr fish consumption doses are summed together to obtain the residential chronic dose:

$$(\text{I}_{\text{fish}} \text{ for age } 0<2 \text{ yrs} \times C_t \times Gf \times L \times 10^{-6} \times 2 / 70) +$$

$$(\text{I}_{\text{fish}} \text{ for age } 2<16 \text{ yrs} \times C_t \times Gf \times L \times 10^{-6} \times 14 / 70) +$$

$$(\text{I}_{\text{fish}} \text{ for age } 16-70 \text{ yrs} \times C_t \times Gf \times L \times 10^{-6} \times 54 / 70) = \text{Chronic Dose}_{\text{fish}}$$

**Table 5.20 Point Estimate Values for Angler-Caught Fish Consumption (g/kg-day) by Age Group**

	Third Trimester	0 <2 Years	2<9 Years	2<16 Years	16<30 Years	16-70 Years
Mean	0.38	0.18	0.36	0.36	0.38	0.36
95 <sup>th</sup> Percentile	1.22	0.58	1.16	1.16	1.22	1.16

**Table 5.21 Empirical Distribution for Angler-Caught Fish Consumption (g/kg-day)**

Mean	Percentile									
	10 <sup>th</sup>	20 <sup>th</sup>	30 <sup>th</sup>	40 <sup>th</sup>	50 <sup>th</sup>	60 <sup>th</sup>	70 <sup>th</sup>	80 <sup>th</sup>	90 <sup>th</sup>	95 <sup>th</sup>
<b>Third trimester, 2&lt;9, 2&lt;16, 16&lt;30 and 16-70-year age groups</b>										
0.36	0.06	0.09	0.12	0.16	0.21	0.27	0.36	0.50	0.79	1.16
<b>0&lt;2-year age group</b>										
0.18	0.03	0.05	0.06	0.08	0.11	0.14	0.18	0.25	0.40	0.58

#### 5.4.3.5 Mother's Milk

Exposure through mother's milk ingestion (Dose-Im) is a function of the average concentration of the substance in mother's milk and the amount of mother's milk ingested. The minimum pathways that the nursing mother is exposed to include inhalation, soil ingestion, and dermal, since the chemicals evaluated by the mother's milk pathway are multipathway chemicals. Other pathways may be appropriate depending on site conditions (e.g., the presence of vegetable gardens or home grown chickens). The compounds currently considered for the mother's milk pathway are:

1. Dioxins and Furans (PCDDs and PCDFs)
2. Polychlorinated biphenyls (PCBs)
3. Polycyclic Aromatic Hydrocarbons (PAHs), including creosotes
4. Lead

These compound classes represent the chemicals of greatest concern for the mother's milk pathway under the Hot Spots program, and for which data are available to estimate transfer coefficients. It is expected that additional transfer coefficients will be developed for other multipathway chemicals in the Hot Spots Program as data becomes available and is reviewed. The nursing mother in the mother's milk pathway is not herself subject to the mother's milk pathway. The summed average daily dose (mg/kg BW-day) from all pathways is calculated for the nursing mother using the equations that follow.

5.4.3.5.1 *Cancer Risk Dose to Infant via Mother's Milk***A. Equation 5.4.3.5.1:**

$$\text{Dose-Im} = C_m \times \text{BMI}_{\text{bw}} \times \text{EF} \times 10^{-3}$$

1. Dose-Im = Dose to infant through ingestion of mother's milk (mg/kg BW per day)
2.  $C_m$  = Concentration of contaminant in mother's milk (mg/kg milk)
3.  $\text{BMI}_{\text{bw}}$  = Daily breast-milk ingestion rate (g/kg BW-day)
4. EF = Frequency of exposure (days / 365 days)
5.  $10^{-3}$  = Conversion factor (kg to g)

**a: Recommended default values for EQ 5.4.3.5.1:**

1.  $C_m$  = See EQ 5.3.4.8
2.  $\text{BMI}_{\text{bw}}$  = See Table 5.22 for point estimates. For distribution (parametric model) for Tier 3 stochastic risk assessments see Table 5.23.
3. EF = 1 (all 365 days of the first year of birth)

**b: Assumptions for EQ 5.4.3.5.1:**

1. For the MEIR, mother is exposed from birth up to 25 years of age when the infant is born. The exposed infant is then fully breastfed only during the first year of life.
2. For cancer risk assessment, exposure of breast-feeding infants to contaminants in breast milk applies only to the first year of the 0<2 yr age group for calculation of risk to this group, which then can be summed with the risk calculated for the other age groups (See Chapter 8).

5.4.3.5.2 *Chronic Noncancer Dose to Infant via Mother's Milk*

For oral noncancer hazard assessment, exposure of the infant through mother's milk ingestion occurs during the first year of life. After one year of age, the mother's milk pathway is not a factor for noncancer assessment.

**A. Equation 5.4.3.5.2:**

$$\text{Dose-Im} = C_m \times \text{BMI}_{\text{bw}} \times 10^{-3}$$

1. Dose-Im = Dose to infant through ingestion of mother's milk (mg/kg BW/d)
2.  $C_m$  = Concentration of contaminant in mother's milk (mg/kg milk)
3.  $\text{BMI}_{\text{bw}}$  = Daily breast-milk ingestion rate (g/kg BW-day)
4.  $10^{-3}$  = Conversion factor (kg to g)

**a: Recommended default values for EQ 5.4.3.5.2:**

1.  $C_m$  = See EQ 5.3.4.8
2.  $\text{BMI}_{\text{bw}}$  = See Table 5.22 for point estimates

**Table 5.22 Default Point Estimates for Breast Milk Intake ( $\text{BMI}_{\text{bw}}$ ) for Breastfed Infants**

Infant Group	Intake (g/kg-day)
<i>Fully breastfed over the first year (i.e., fed in accordance with AAP recommendations)</i>	
Mean	101
95 <sup>th</sup> percentile	139

**Table 5.23 Recommended Distribution of Breast Milk Intake Rates Among Breastfed Infants for Stochastic Assessment\* (Averaged Over an Individual's First Year of Life)**

	Mean (SD)	Percentile							
		5	10	25	50	75	90	95	99
Intake (g/kg-day)	101 (23)	62	71	85	101	116	130	139	154

\* For stochastic analysis, the mother's milk data are normally distributed.

## 5.5 References

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## 6 - Dose-Response Assessment for Noncarcinogenic Endpoints

### 6.1 Derivation of Toxicity Criteria for Noncancer Health Effects

Dose-response assessment describes the quantitative relationship between the amount of exposure to a substance (the dose) and the incidence or occurrence of an adverse health impact (the response). Dose-response information for noncancer health effects is used to determine Reference Exposure Levels (RELs). Inhalation RELs are air concentrations or doses at or below which adverse noncancer health effects are not expected even in sensitive members of the general population under specified exposure scenarios. The acute RELs are for infrequent 1 hour exposures that occur no more than once every two weeks in a given year, although this time frame of exposure does not necessarily apply to chemicals that can bioaccumulate (e.g., dioxins and furans, PCBs, and various metals). The chronic RELs are for 24 hour per day exposures for at least a significant fraction of a lifetime, defined as about 8 years ( $\geq 12$  percent of a 70-year lifespan). The 8-hour RELs are for repeated 8-hour exposures for a significant fraction of a lifetime such as the exposures that offsite workers might typically receive. Eight-hour RELs are only available for 10 chemicals at present, but OEHHA will develop 8-hour RELs as we re-evaluate our existing RELs to ensure they are protective of children's health, and as we develop RELs for new chemicals. There are oral chronic RELs for some chemicals in the Hot Spots program that are semivolatile or nonvolatile and thus subject to deposition and oral ingestion or dermal exposure. The methodology for developing RELs is similar to that used by U.S. EPA in developing the inhalation Reference Concentrations (RfCs) and oral Reference Doses (RfDs).

Review and revision of RELs to take into account new information and sensitive subpopulations including infants and children is an ongoing process. All draft RELs for individual chemicals revised under the current noncancer methodology will undergo public comment and peer review, as mandated by the Hot Spots Act.

The first step in determining an acute, 8-hour, or chronic REL is to determine a point of departure. The point of departure is preferably determined by the benchmark concentration procedure applied to human or animal studies, but if this method of calculation cannot be used with a particular data set, a no observed adverse effect level (NOAEL) or lowest observed adverse effect level (LOAEL) may be used as the point of departure. The benchmark concentration method (also referred to as the benchmark dose method for oral exposures) is a preferred method to estimate a point of departure because it takes all of the available dose-response data into account to statistically estimate, typically, a 5 percent response rate.

Dosimetric or toxicokinetic adjustments are often made to the point of departure to adjust for differences in dosimetry or kinetics across species or among humans. Time adjustments are generally applied to adjust experimental exposure to the exposure of

interest for the REL (e.g., 1 hour for acute, continuous for chronic). A modified Haber's equation is used where needed to adjust studies with different exposure times to the one-hour period needed for acute RELs. A simple Haber's law ( $C \times T$ ) adjustment for exposure period duration is used for most 8-hour and chronic RELs.

The time and dosimetry adjusted point of departure is divided by uncertainty factors that reflect the limitations in the current toxicology of the chemical. For example, an interspecies uncertainty factor is applied to account for the differences between humans and animals when an animal study is used. An intraspecies uncertainty factor is usually included to account for differences in susceptibility among the human population. In addition, where benchmark dose modeling is not suitable and a NOAEL is not available, a LOAEL to NOAEL uncertainty factor may be applied when the LOAEL serves as the point of departure. If a chronic study is not available to serve as a basis for a chronic REL, then a subchronic uncertainty factor (for chronic and 8-hour RELs only) may also be applied. Finally, if there are data deficiencies, for example, lack of a developmental toxicity study for a chemical, then a database deficiency factor may be applied. The individual uncertainty factors, which range from 2 to 10 depending on the limitations in the data, are multiplied together for a total uncertainty factor. The point of departure is then divided by the total UF to obtain the REL.

The most sensitive toxicological end point is selected as the basis for the REL when there are multiple adverse health effects. The selection of the most sensitive endpoint as the basis for a REL helps ensure that the REL is protective for all health effects. The use of uncertainty factors helps ensure that the REL is protective for nearly all individuals, including sensitive subpopulations, within the limitations of current scientific knowledge. For detailed information on the methodology and derivations for RELs, including guidance on selection of uncertainty factors, see the Air Toxics Hot Spots Risk Assessment Guidelines Technical Support Document for the Derivation of Noncancer Reference Exposure Levels (OEHHA, 2008).

It should be emphasized that exceeding the acute or chronic REL does not necessarily indicate that an adverse health impact will occur. The REL is not the threshold where population health effects would first be seen. However, levels of exposure above the REL have an increasing but undefined probability of resulting in an adverse health impact, particularly in sensitive individuals (e.g., depending on the toxicant, the very young, the elderly, pregnant women, and those with acute or chronic illnesses). The significance of exceeding the REL is dependent on the seriousness of the health endpoint, the strength and interpretation of the health studies, the magnitude of combined safety factors, and other considerations. In addition, there is a possibility that a REL may not be protective of certain small, unusually sensitive human subpopulations. Such subpopulations can be difficult to identify and study because of their small numbers, lack of knowledge about toxic mechanisms, and other factors. It may be useful to consult OEHHA staff when a REL is exceeded (hazard quotient or hazard index is greater than 1.0). Chapter 8 discusses the methods used for determining potential noncancer health impacts and Appendix I presents example calculations used to determine a hazard quotient (HQ) and hazard indices (HI).

Tables 6.1 through 6.3 list the currently adopted acute, 8-hour, and chronic inhalation RELs. Some substances that pose a long-term inhalation hazard may also present a chronic hazard via non-inhalation (oral, dermal) routes of exposure. The oral RELs for these substances are presented in Table 6.3. Appendix L provides a consolidated listing of all the acute, 8-hour, and chronic RELs with the respective target organs that are approved for use by OEHHA and ARB for the Hot Spots Program. Periodically, new or updated RELs are adopted by OEHHA and these guidelines will be updated to reflect those changes. See OEHHA's web site at [www.oehha.ca.gov](http://www.oehha.ca.gov) (look under "Air", then select "Hot Spots Guidelines") to determine if any new or updated RELs have been adopted since the last guideline update.

## 6.2 Acute Reference Exposure Levels

OEHHA developed acute RELs for assessing potential noncancer health impacts for short-term, one-hour peak exposures to facility emissions (OEHHA, 2008; <http://www.oehha.ca.gov/air/allrels.html>). By definition, an acute REL is an exposure that is not likely to cause adverse health effects in a human population, including sensitive subgroups, exposed to that concentration (in units of micrograms per cubic meter or  $\mu\text{g}/\text{m}^3$ ) for the specified exposure duration on an intermittent basis.

The target organ systems and the acute RELs for each substance are presented in Table 6.1. Many acute RELs are based on mild adverse effects, such as mild irritation of the eyes, nose, or throat, or may result in other mild adverse physiological changes. For most individuals, it is expected that the mild irritation and other adverse physiological changes will not persist after exposure ceases. For RELs that have been recently developed or revised, the notation "sensory irritation" has been added in parenthesis in Table 6.1 for those chemicals that have an acute REL based on sensory irritation of the respiratory system (i.e., nose, throat) and/or eyes.

Other acute RELs are based on reproductive/developmental endpoints, such as teratogenicity or fetotoxicity, which are considered severe adverse effects. The inhalation pathway is the only pathway to assess for acute exposure. Other non-inhalation pathways of exposure are evaluated for worker and residential scenarios where the exposures are chronic or repeated daily in nature. The oral RELs are used to evaluate the non-inhalation pathways of exposure. Noninhalation (oral) RELs are discussed in Section 6.5. Chapter 8 discusses the methods used for determining noncancer acute health impacts. Appendix I presents an example calculation used to determine an HQ and HI.

**Table 6.1 Acute Inhalation Reference Exposure Levels (RELs) and Acute Hazard Index Target Organ System(s)**

Substance	Chemical Abstract Service Number (CAS)	Acute Inhalation REL ( $\mu\text{g}/\text{m}^3$ )	Acute Hazard Index Target Organ Systems(s)
Acetaldehyde	75-07-0	$4.7 \times 10^{+2}$	Eyes; Respiratory System (sensory irritation)
Acrolein	107-02-8	$2.5 \times 10^{+0}$	Eyes; Respiratory System (sensory irritation)
Acrylic Acid	79-10-7	$6.0 \times 10^{+3}$	Eyes; Respiratory System
Ammonia	7664-41-7	$3.2 \times 10^{+3}$	Eyes; Respiratory System
Arsenic and Inorganic Arsenic Compounds (including arsine)	7440-38-2	$2.0 \times 10^{-1}$	Development; Cardiovascular System; Nervous System
Benzene	71-43-2	$2.7 \times 10^{+1}$	Reproductive/Developmental; Immune System; Hematologic System
Benzyl Chloride	100-44-7	$2.4 \times 10^{+2}$	Eyes; Respiratory System
1,3-Butadiene	106-99-0	$6.6 \times 10^{+2}$	Development
Caprolactam	105-60-2	$5.0 \times 10^{+1}$	Eyes (sensory irritation)
Carbon Disulfide	75-15-0	$6.2 \times 10^{+3}$	Nervous System; Reproductive/Developmental
Carbon Monoxide <sup>a</sup>	630-08-0	$2.3 \times 10^{+4}$	Cardiovascular System
Carbon Tetrachloride	56-23-5	$1.9 \times 10^{+3}$	Alimentary System (Liver); Nervous System Reproductive/Developmental
Chlorine	7782-50-5	$2.1 \times 10^{+2}$	Eyes; Respiratory System
Chloroform	67-66-3	$1.5 \times 10^{+2}$	Nervous System; Respiratory System; Reproductive/Developmental
Chloropicrin	76-06-2	$2.9 \times 10^{+1}$	Eyes; Respiratory System
Copper and Compounds	7440-50-8	$1.0 \times 10^{+2}$	Respiratory System
1,4-Dioxane	123-91-1	$3.0 \times 10^{+3}$	Eyes; Respiratory System
Epichlorohydrin	106-89-8	$1.3 \times 10^{+3}$	Eyes; Respiratory System
Ethylene Glycol Monobutyl Ether	111-76-2	$1.4 \times 10^{+4}$	Eyes; Respiratory System
Ethylene Glycol Monoethyl Ether	110-80-5	$3.7 \times 10^{+2}$	Reproductive/Developmental
Ethylene Glycol Monoethyl Ether Acetate	111-15-9	$1.4 \times 10^{+2}$	Nervous System; Reproductive/Developmental
Ethylene Glycol Monomethyl Ether	109-86-4	$9.3 \times 10^{+1}$	Reproductive/Developmental
Formaldehyde	50-00-0	$5.5 \times 10^{+1}$	Eyes (sensory irritation)
Hydrogen Chloride	7647-01-0	$2.1 \times 10^{+3}$	Eyes; Respiratory System
Hydrogen Cyanide	74-90-8	$3.4 \times 10^{+2}$	Nervous System
Hydrogen Fluoride	7664-39-3	$2.4 \times 10^{+2}$	Eyes; Respiratory System
Hydrogen Selenide	7783-07-5	$5.0 \times 10^{+0}$	Eyes; Respiratory System
Hydrogen Sulfide <sup>a</sup>	7783-06-4	$4.2 \times 10^{+1}$	Nervous System
Isopropanol	67-63-0	$3.2 \times 10^{+3}$	Eyes; Respiratory System
Mercury and Inorganic Mercury Compounds	7439-97-6	$6.0 \times 10^{-1}$	Nervous System; Development
Methanol	67-56-1	$2.8 \times 10^{+4}$	Nervous System
Methyl Bromide	74-83-9	$3.9 \times 10^{+3}$	Nervous System; Respiratory System; Reproductive/Developmental

Substance	Chemical Abstract Service Number (CAS)	Acute Inhalation REL ( $\mu\text{g}/\text{m}^3$ )	Acute Hazard Index Target Organ Systems(s)
Methyl Chloroform	71-55-6	$6.8 \times 10^{-4}$	Nervous System
Methyl Ethyl Ketone	78-93-3	$1.3 \times 10^{-4}$	Eyes; Respiratory System
Methylene Chloride	75-09-2	$1.4 \times 10^{-4}$	Nervous System; Cardiovascular System
Nickel and Nickel Compounds	7440-02-0	$2.0 \times 10^{-1}$	Immune System
Nitric Acid	7697-37-2	$8.6 \times 10^{-1}$	Respiratory System
Nitrogen Dioxide <sup>a</sup>	10102-44-0	$4.7 \times 10^{-2}$	Respiratory System
Ozone <sup>a</sup>	10028-15-6	$1.8 \times 10^{-2}$	Eyes; Respiratory System
Perchloroethylene (Tetrachloroethylene)	127-18-4	$2.0 \times 10^{-4}$	Eyes; Nervous System; Respiratory System
Phenol	108-95-2	$5.8 \times 10^{-3}$	Eyes; Respiratory System
Phosgene	75-44-5	$4.0 \times 10^{-0}$	Respiratory System
Propylene Oxide	75-56-9	$3.1 \times 10^{-3}$	Eyes; Respiratory System; Reproductive/Developmental
Sodium Hydroxide	1310-73-2	$8.0 \times 10^{-0}$	Eyes; Skin; Respiratory System
Styrene	100-42-5	$2.1 \times 10^{-4}$	Eyes; Respiratory System; Reproductive/Developmental
Sulfates <sup>a</sup>	N/A	$1.2 \times 10^{-2}$	Respiratory System
Sulfur Dioxide <sup>a</sup>	7446-09-5	$6.6 \times 10^{-2}$	Respiratory System
Sulfuric Acid and Oleum	7664-93-9 8014-95-7	$1.2 \times 10^{-2}$	Respiratory System
Tetrachloroethylene (Perchloroethylene)	127-18-4	$2.0 \times 10^{-4}$	Eyes; Nervous System; Respiratory System
Toluene	108-88-3	$3.7 \times 10^{-4}$	Nervous System; Respiratory System; Eyes; Reproductive/Developmental
Triethylamine	121-44-8	$2.8 \times 10^{-3}$	Nervous System; Eyes
Vanadium Pentoxide	1314-62-1	$3.0 \times 10^{-1}$	Eyes; Respiratory System
Vinyl Chloride	75-01-4	$1.8 \times 10^{-5}$	Nervous System; Eyes; Respiratory System
Xylenes (m,o,p-isomers)	1330-20-7	$2.2 \times 10^{-4}$	Eyes; Respiratory System; Nervous System

<sup>a</sup> California Ambient Air Quality Standard

### 6.3 8-hour Reference Exposure Levels

OEHHA has developed 8-hour RELs for assessing potential noncancer health impacts for exposures to the general public that occur on a recurrent basis, but only during a portion of each day (OEHHA, 2008; <http://www.oehha.ca.gov/air/allrels.html>). Eight-hour RELs are compared to air concentrations that represent an average (daily) 8-hour exposure. They were designed to address off-site worker exposure at the MEIW, but may also be used at the Districts' discretion to characterize 8-hour residential noncancer exposures, particularly for non-continuous facility operations where exposure is based on air concentrations during facility operation (i.e., the zero emission hours are not included) rather than averaged over 24-hours/day, 7 days/week as assessed for chronic exposure. The 8-hour RELs can also be used to assess exposure of students and teachers while at school (OEHHA, 2008). These RELs were developed because of concerns that applying the chronic REL in some scenarios was

overly conservative. By definition, an 8-hour REL is an exposure that is not likely to cause adverse health effects in a human population, including sensitive subgroups, exposed to that concentration (in units of micrograms per cubic meter or  $\mu\text{g}/\text{m}^3$ ) for an 8-hour exposure duration on a regular (including daily) basis.

The RELs, target organ systems, and the averaging time for substances that can present a potential hazard from inhalation for 8 hours on a daily basis are presented in Table 6.2. Chapter 8 discusses the methods used for determining noncancer 8-hour health impacts. Appendix I presents an example calculation used to determine an HQ and HI.

Any substances in Table 6.2 with Development or Reproductive System as a target organ system are represented in HARP and in the Appendix L REL tables under the single endpoint "Reproductive/Development".

**Table 6.2 Eight-Hour Inhalation Reference Exposure Levels (RELs) and 8-Hour Hazard Index Target Organ System(s)**

Substance	Chemical Abstract Service Number (CAS)	Chronic Inhalation REL ( $\mu\text{g}/\text{m}^3$ )	Chronic Inhalation Hazard Index Target Organ System(s)
Acetaldehyde	75-07-0	$3.0 \times 10^{-2}$	Respiratory System
Acrolein	107-02-8	$7.0 \times 10^{-1}$	Respiratory System
Arsenic & Inorganic Arsenic Compounds	7440-38-2	$1.5 \times 10^{-2}$	Cardiovascular System; Development; Nervous System; Respiratory System; Skin
Benzene	71-43-2	$3.0 \times 10^{+0}$	Hematologic System
1,3-Butadiene	106-99-0	$9.0 \times 10^{+0}$	Reproductive System
Caprolactam	105-60-2	$7.0 \times 10^{+0}$	Respiratory System
Formaldehyde	50-0-0	$9.0 \times 10^{+0}$	Respiratory System
Manganese & Manganese Compounds	7439-96-5	$1.7 \times 10^{-1}$	Nervous System
Mercury & Inorganic Mercury Compounds	7439-97-6	$6.0 \times 10^{-2}$	Nervous System; Development; Kidney
Nickel & Nickel Compounds	7440-02-0	$6.0 \times 10^{-2}$	Respiratory System; Immune System

#### 6.4 Chronic Reference Exposure Levels

OEHHA has developed chronic RELs for assessing noncancer health impacts from long-term exposure. (OEHHA, 2008; see also <http://www.oehha.ca.gov/air/allrels.html>) A chronic REL is a concentration level (expressed in units of micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) for inhalation exposure and in a dose expressed in units of milligrams per kilogram-day (mg/kg-day) for oral exposures) at or below which no adverse health effects are anticipated following long-term exposure. Long-term exposure for these purposes has been defined by U.S. EPA as at least 12% of a lifetime, or about eight years for humans. Table 6.3 lists the chronic noncancer RELs that should be used in

the assessment of chronic health effects from inhalation exposure. Appendix L provides a consolidated listing of all the acute, 8-hour and chronic RELs and target organs that are approved for use by OEHHA and ARB for the Hot Spots Program. Periodically, new or updated RELs are adopted by OEHHA. See OEHHA's web site <http://www.oehha.ca.gov/air/allrels.html> to determine if any new or updated RELs have been adopted since the last guideline update.

The organ system(s) associated with each chronic REL are also presented in Table 6.3. Any substances in Table 6.3 with Development or Reproductive System as a target organ system are represented in HARP and in the Appendix L REL tables under the single endpoint "Reproductive/Development". Chapter 8 discusses the methods used for determining potential noncancer health impacts and Appendix I presents example calculations used to determine a HQ and HI.

**Table 6.3 Chronic Inhalation Reference Exposure Levels (RELs) and Chronic Hazard Index Target Organ System(s)**

Substance	Chemical Abstract Service Number (CAS)	Chronic Inhalation REL ( $\mu\text{g}/\text{m}^3$ )	Chronic Inhalation Hazard Index Target Organ System(s)
Acetaldehyde <sup>a</sup>	75-07-0	$1.4 \times 10^{+2}$	Respiratory System
Acrolein	107-02-8	$3.5 \times 10^{-1}$	Respiratory System
Acrylonitrile	107-13-1	$5.0 \times 10^{+0}$	Respiratory System
Ammonia	7664-41-7	$2.0 \times 10^{+2}$	Respiratory System
Arsenic & Inorganic Arsenic Compounds	7440-38-2	$1.5 \times 10^{-2}$	Cardiovascular System; Development; Nervous System; Respiratory System; Skin
Benzene	71-43-2	$3.0 \times 10^{+0}$	Hematologic System
Beryllium and Beryllium Compounds	7440-41-7	$7.0 \times 10^{-3}$	Immune System; Respiratory System
1,3-Butadiene	106-99-0	$2.0 \times 10^{+0}$	Reproductive System
Cadmium and Cadmium Compounds	7440-43-9	$2.0 \times 10^{-2}$	Kidney; Respiratory System
Caprolactam	105-60-2	$2.2 \times 10^{+0}$	Respiratory System
Carbon Disulfide	75-15-0	$8.0 \times 10^{+2}$	Nervous System; Reproductive System
Carbon Tetrachloride	56-23-5	$4.0 \times 10^{+1}$	Alimentary System (Liver); Development; Nervous System
Chlorine	7782-50-5	$2.0 \times 10^{-1}$	Respiratory System
Chlorine Dioxide	10049-04-4	$6.0 \times 10^{-1}$	Respiratory System
<b>Chlorinated Dibenzo-<i>p</i>-dioxins<sup>b</sup></b>			
2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin <sup>b</sup>	1746-01-6	$4.0 \times 10^{-5}$	Alimentary System (Liver); Development; Endocrine System; Hematologic System; Reproductive System; Respiratory System
1,2,3,7,8-Pentachlorodibenzo- <i>p</i> -dioxin <sup>b</sup>	40321-76-4	$4.0 \times 10^{-5}$	
1,2,3,4,7,8-Hexachlorodibenzo- <i>p</i> -dioxin <sup>b</sup>	39227-28-6	$4.0 \times 10^{-4}$	
1,2,3,6,7,8-Hexachlorodibenzo- <i>p</i> -dioxin <sup>b</sup>	57653-85-7	$4.0 \times 10^{-4}$	
1,2,3,7,8,9-Hexachlorodibenzo- <i>p</i> -dioxin <sup>b</sup>	19408-74-3	$4.0 \times 10^{-4}$	
1,2,3,4,6,7,8-Heptachlorodibenzo- <i>p</i> -dioxin <sup>b</sup>	35822-46-9	$4.0 \times 10^{-3}$	
1,2,3,4,6,7,8,9-Octachlorodibenzo- <i>p</i> -dioxin <sup>b</sup>	3268-87-9	$1.3 \times 10^{-1}$	

**Table 6.3 Chronic Inhalation Reference Exposure Levels (RELs) and Chronic Hazard Index Target Organ System(s)**

Substance	Chemical Abstract Service Number (CAS)	Chronic Inhalation REL ( $\mu\text{g}/\text{m}^3$ )	Chronic Inhalation Hazard Index Target Organ System(s)
<b>Chlorinated Dibenzofurans<sup>b</sup></b>			
2,3,7,8-Tetrachlorodibenzofuran <sup>b</sup>	5120-73-19	$4.0 \times 10^{-4}$	Alimentary System (Liver); Development; Endocrine System; Hematologic System; Reproductive System; Respiratory System
1,2,3,7,8-Pentachlorodibenzofuran <sup>b</sup>	57117-41-6	$1.3 \times 10^{-3}$	
2,3,4,7,8-Pentachlorodibenzofuran <sup>b</sup>	57117-31-4	$1.3 \times 10^{-4}$	
1,2,3,4,7,8-Hexachlorodibenzofuran <sup>b</sup>	70648-26-9	$4.0 \times 10^{-4}$	
1,2,3,6,7,8-Hexachlorodibenzofuran <sup>b</sup>	57117-44-9	$4.0 \times 10^{-4}$	
1,2,3,7,8,9-Hexachlorodibenzofuran <sup>b</sup>	72918-21-9	$4.0 \times 10^{-4}$	
2,3,4,6,7,8-Hexachlorodibenzofuran <sup>b</sup>	60851-34-5	$4.0 \times 10^{-4}$	
1,2,3,4,6,7,8-Heptachlorodibenzofuran <sup>b</sup>	67562-39-4	$4.0 \times 10^{-3}$	
1,2,3,4,7,8,9-Heptachlorodibenzofuran <sup>b</sup>	55673-89-7	$4.0 \times 10^{-3}$	
1,2,3,4,6,7,8,9-Octachlorodibenzofuran <sup>b</sup>	39001-02-0	$1.3 \times 10^{-1}$	
Chlorobenzene	108-90-7	$1.0 \times 10^{+3}$	Alimentary System (Liver); Kidney; Reproductive System
Chloroform	67-66-3	$3.0 \times 10^{+2}$	Alimentary System (Liver); Development; Kidney
Chloropicrin	76-06-2	$4.0 \times 10^{-1}$	Respiratory System
Chromium VI & Soluble Chromium VI Compounds (except chromic trioxide)	18540-29-9	$2.0 \times 10^{-1}$	Respiratory System
Chromic Trioxide (as chromic acid mist)	1333-82-0	$2.0 \times 10^{-3}$	Respiratory System
Cresol Mixtures	1319-77-3	$6.0 \times 10^{+2}$	Nervous System
1,4-Dichlorobenzene	106-46-7	$8.0 \times 10^{+2}$	Alimentary System (Liver); Kidney; Nervous System; Respiratory System
1,1-Dichloroethylene (Vinylidene Chloride)	75-35-4	$7.0 \times 10^{+1}$	Alimentary System (Liver)
Diesel Exhaust <sup>a</sup>	N/A	$5.0 \times 10^{+0}$	Respiratory System
Diethanolamine	111-42-2	$3.0 \times 10^{+0}$	Hematologic System; Respiratory System
N,N-Dimethylformamide	68-12-2	$8.0 \times 10^{+1}$	Alimentary System (Liver); Respiratory System
1,4-Dioxane	123-91-1	$3.0 \times 10^{+3}$	Alimentary System (Liver); Cardiovascular System; Kidney
Epichlorohydrin	106-89-8	$3.0 \times 10^{+0}$	Eyes; Respiratory System
1,2-Epoxybutane	106-88-7	$2.0 \times 10^{+1}$	Cardiovascular System; Respiratory System
Ethylbenzene	100-41-4	$2.0 \times 10^{+3}$	Alimentary System (Liver); Kidney; Development; Endocrine System
Ethyl Chloride	75-00-3	$3.0 \times 10^{+4}$	Alimentary System (Liver); Development
Ethylene Dibromide	106-93-4	$8.0 \times 10^{-1}$	Reproductive System
Ethylene Dichloride	107-06-2	$4.0 \times 10^{+2}$	Alimentary System (Liver)
Ethylene Glycol	107-21-1	$4.0 \times 10^{+2}$	Development; Kidney; Respiratory System
Ethylene Glycol Monoethyl Ether	110-80-5	$7.0 \times 10^{+1}$	Hematologic System; Reproductive System
Ethylene Glycol Monoethyl Ether Acetate	111-15-9	$3.0 \times 10^{+2}$	Development

**Table 6.3 Chronic Inhalation Reference Exposure Levels (RELs) and Chronic Hazard Index Target Organ System(s)**

Substance	Chemical Abstract Service Number (CAS)	Chronic Inhalation REL ( $\mu\text{g}/\text{m}^3$ )	Chronic Inhalation Hazard Index Target Organ System(s)
Ethylene Glycol Monomethyl Ether	109-86-4	$6.0 \times 10^{+1}$	Reproductive System
Ethylene Glycol Monomethyl Ether Acetate	110-49-6	$9.0 \times 10^{+1}$	Reproductive System
Ethylene Oxide	75-21-8	$3.0 \times 10^{+1}$	Nervous System
Fluorides (except hydrogen fluoride)	N/A	$1.3 \times 10^{+1}$	Bone and Teeth; Respiratory System
Formaldehyde	50-00-0	$9.0 \times 10^{+0}$	Respiratory System
Glutaraldehyde	111-30-8	$8.0 \times 10^{-2}$	Respiratory System
Hexane (n-)	110-54-3	$7.0 \times 10^{+3}$	Nervous System
Hydrazine	302-01-2	$2.0 \times 10^{-1}$	Alimentary System (Liver); Endocrine System
Hydrogen Chloride	7647-01-0	$9.0 \times 10^{+0}$	Respiratory System
Hydrogen Cyanide	74-90-8	$9.0 \times 10^{+0}$	Cardiovascular System; Endocrine System; Nervous System
Hydrogen Fluoride	7664-39-3	$1.4 \times 10^{+1}$	Bone and Teeth; Respiratory System
Hydrogen Sulfide	7783-06-4	$1.0 \times 10^{+1}$	Respiratory System
Isophorone	78-59-1	$2.0 \times 10^{+3}$	Alimentary System (Liver); Development
Isopropanol	67-63-0	$7.0 \times 10^{+3}$	Development; Kidney
Maleic Anhydride	108-31-6	$7.0 \times 10^{-1}$	Respiratory System
Manganese & Manganese Compounds	7439-96-5	$9.0 \times 10^{-2}$	Nervous System
Mercury & Inorganic Mercury Compounds	7439-97-6	$3.0 \times 10^{-2}$	Nervous System; Development; Kidney
Methanol	67-56-1	$4.0 \times 10^{+3}$	Development
Methyl Bromide	74-83-9	$5.0 \times 10^{+0}$	Development; Nervous System; Respiratory System
Methyl Chloroform	71-55-6	$1.0 \times 10^{+3}$	Nervous System
Methyl Isocyanate	624-83-9	$1.0 \times 10^{+0}$	Reproductive System; Respiratory System
Methyl tertiary-Butyl Ether	1634-04-4	$8.0 \times 10^{+3}$	Alimentary System (Liver); Eyes; Kidney
Methylene Chloride	75-09-2	$4.0 \times 10^{+2}$	Cardiovascular System; Nervous System
4,4'-Methylene Dianiline (& its dichloride)	101-77-9	$2.0 \times 10^{+1}$	Alimentary System (Liver); Eyes
Methylene Diphenyl Isocyanate	101-68-8	$7.0 \times 10^{-1}$	Respiratory System
Naphthalene	91-20-3	$9.0 \times 10^{+0}$	Respiratory System
Nickel & Nickel Compounds (except nickel oxide)	7440-02-0	$1.4 \times 10^{-2}$	Hematologic System; Respiratory System
Nickel Oxide	1313-99-1	$2.0 \times 10^{-2}$	Respiratory System
Perchloroethylene (Tetrachloroethylene) <sup>a</sup>	127-18-4	$3.5 \times 10^{+1}$	Alimentary System (Liver); Kidney
Phenol	108-95-2	$2.0 \times 10^{+2}$	Alimentary System (Liver); Cardiovascular System; Kidney; Nervous System
Phosphine	7803-51-2	$8.0 \times 10^{-1}$	Alimentary System (Liver); Hematologic System; Kidney; Nervous System; Respiratory System

**Table 6.3 Chronic Inhalation Reference Exposure Levels (RELs) and Chronic Hazard Index Target Organ System(s)**

Substance	Chemical Abstract Service Number (CAS)	Chronic Inhalation REL ( $\mu\text{g}/\text{m}^3$ )	Chronic Inhalation Hazard Index Target Organ System(s)
Phosphoric Acid	7664-38-2	$7.0 \times 10^{+0}$	Respiratory System
Phthalic Anhydride	85-44-9	$2.0 \times 10^{+1}$	Respiratory System
<b>Polychlorinated biphenyls (PCBs)<sup>b</sup></b>			
3,3',4,4'-Tetrachlorobiphenyl (77) <sup>b</sup>	35298-13-3	$4.0 \times 10^{-1}$	Alimentary System (Liver); Developmental; Endocrine System; Hematologic System; Reproductive System; Respiratory System
3,4,4',5-Tetrachlorobiphenyl (81) <sup>b</sup>	70362-50-4	$1.3 \times 10^{-1}$	
2,3,3',4,4'-Pentachlorobiphenyl (105) <sup>b</sup>	32598-14-4	$1.3 \times 10^{+0}$	
2,3,4,4',5-Pentachlorobiphenyl (114) <sup>b</sup>	74472-37-0	$1.3 \times 10^{+0}$	
2,3',4,4',5-Pentachlorobiphenyl (118) <sup>b</sup>	31508-00-6	$1.3 \times 10^{+0}$	
2',3,4,4',5-Pentachlorobiphenyl (123) <sup>b</sup>	65510-44-3	$1.3 \times 10^{+0}$	
3,3',4,4',5-Pentachlorobiphenyl (126) <sup>b</sup>	57465-28-8	$4.0 \times 10^{-4}$	
2,3,3',4,4',5-Hexachlorobiphenyl (156) <sup>b</sup>	38380-08-4	$1.3 \times 10^{+0}$	
2,3,3',4,4',5'-Hexachlorobiphenyl (157) <sup>b</sup>	69782-90-7	$1.3 \times 10^{+0}$	
2,3',4,4',5,5'-Hexachlorobiphenyl (167) <sup>b</sup>	52663-72-6	$1.3 \times 10^{+0}$	
3,3',4,4',5,5'-Hexachlorobiphenyl (169) <sup>b</sup>	32774-16-6	$1.3 \times 10^{-3}$	
2,3,3',4,4',5,5'-Heptachlorobiphenyl (189) <sup>b</sup>	39635-31-9	$1.3 \times 10^{+0}$	
Propylene	115-07-1	$3.0 \times 10^{+3}$	Respiratory System
Propylene Glycol Monomethyl Ether	107-98-2	$7.0 \times 10^{+3}$	Alimentary System (Liver)
Propylene Oxide	75-56-9	$3.0 \times 10^{+1}$	Respiratory System
Selenium and Selenium compounds (other than Hydrogen Selenide)	7782-49-2	$2.0 \times 10^{+1}$	Alimentary System (Liver); Cardiovascular System; Nervous System
Silica (crystalline, respirable)	N/A	$3.0 \times 10^{+0}$	Respiratory System
Styrene	100-42-5	$9.0 \times 10^{+2}$	Nervous System
Sulfuric Acid	7664-93-9	$1.0 \times 10^{+0}$	Respiratory System
Toluene	108-88-3	$3.0 \times 10^{+2}$	Development; Nervous System; Respiratory System
2,4-Toluene Diisocyanate	584-84-9	$7.0 \times 10^{-2}$	Respiratory System
2,6-Toluene Diisocyanate	91-08-7	$7.0 \times 10^{-2}$	Respiratory System
Trichloroethylene <sup>a</sup>	79-01-6	$6.0 \times 10^{+2}$	Eyes; Nervous System
Triethylamine	121-44-8	$2.0 \times 10^{+2}$	Eyes
Vinyl Acetate	108-05-4	$2.0 \times 10^{+2}$	Respiratory System
Xylenes (m, o, p-isomers)	1330-20-7	$7.0 \times 10^{+2}$	Nervous System; Respiratory System; Eyes

<sup>a</sup> These peer-reviewed values were developed under the Toxic Air Contaminant (TAC) Program mandated by AB1807 (California Health and Safety Code Sec. 39650 *et seq.*).

<sup>b</sup> The OEHHA has adopted the World Health Organization Toxicity Equivalency Factor (TEF) scheme for evaluating the cancer risk and noncancer hazard due to exposure to samples containing mixtures of polychlorinated dibenzo-*p*-dioxins (PCDD) (also referred to as chlorinated dioxins and dibenzofurans), polychlorinated dibenzofurans (PCDF) and polychlorinated biphenyls (PCBs). The TEF values are revised from time to time to reflect new data and increased scientific knowledge. Currently OEHHA recommends use of the 2005 revision to the WHO TEF values (WHO<sub>05</sub>-TEF). See Appendix E for more information about the scheme and for the methodology for calculating 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD) equivalents for PCDD and PCDFs. For

convenience, OEHHA has calculated chronic REL values for speciated PCDDs, PCDFs and PCBs based on the WHO<sub>05</sub> TEF values and the chronic REL for 2,3,7,8-TCDD using the procedure discussed in Appendix E. The chronic REL values can be used to calculate a hazard index when the mixtures are speciated from individual congener ground level concentrations. In those cases where speciation of dioxins and furans has not been performed, then 2,3,7,8-TCDD serves as the surrogate for dioxin and furan emissions.

N/A Not Applicable

## 6.5 Chronic Oral (Noninhalation) Reference Exposure Levels

As specified throughout the guidelines, estimates of long-term exposure resulting from facility air emissions of specific compounds must be analyzed for both inhalation and noninhalation (multipathway) pathways of exposure for humans. Facilities often emit substances under high temperature and pressure in the presence of particulate matter. While some of these substances are expected to remain in the vapor phase, other substances such as metals and semi-volatile organics can be either emitted as particles, form particles after emission from the facility, or adhere to existing particles. Some substances will partition between vapor and particulate phases. Substances in the particulate phase can be removed from the atmosphere by settling and, thus, potentially present a significant hazard via noninhalation pathways.

Particulate-associated chemicals can be deposited directly onto soil, onto the leaves or fruits of crops, or onto surface waters. Exposure via the oral route is the predominant noninhalation pathway, resulting in the noninhalation RELs being referred to as 'oral RELs' in this document. The oral RELs are used for both ingestion and dermal exposures, and are applied using the chronic non-inhalation exposures in the residential scenario and the worker scenarios. The oral RELs are expressed as doses in milligrams of substance (consumed and dermally absorbed) per kilogram body weight per day (mg/kg-day).

Table 6.4 lists the chronic noncancer RELs to be used in the assessment of chronic health effects from noninhalation pathways of exposure. Any substances in Table 6.4 with Development or Reproductive System as a target organ system are represented in HARP and in the Appendix L REL tables under the single endpoint "Reproductive/Development". Appendix L provides a consolidated listing of all chronic RELs and target organs that are approved for use by OEHHA and ARB for the Hot Spots Program. Periodically, new or updated RELs are adopted by OEHHA and these guidelines will be updated to reflect those changes. See OEHHA's web page at <http://www.oehha.ca.gov/air/allrels.html> to determine if any new or updated RELs have been adopted since the last guideline update. Chapter 8 discusses the methods used for determining potential noncancer health impacts and Appendix I presents example calculations used to determine a HQ and HI.

**Table 6.4 Chronic Noninhalation ‘Oral’ Reference Exposure Levels (RELs) and Chronic Hazard Index Target Organ System(s)**

Substance	Chemical Abstract Service No. (CAS)	Chronic Oral REL (mg/kg-day)	Chronic Oral Hazard Index Target Organ System(s)
Arsenic & Inorganic Arsenic Compounds	7440-38-2	$3.5 \times 10^{-6}$	Development; Nervous System; Respiratory System; Cardiovascular System; Skin
Beryllium and Beryllium Compounds	7440-41-7	$2.0 \times 10^{-3}$	Alimentary System (Gastrointestinal Tract)
Cadmium and Cadmium Compounds	7440-43-9	$5.0 \times 10^{-4}$	Kidney
<b>Chlorinated Dibenzo-<i>p</i>-dioxins<sup>a</sup></b>			
2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin <sup>a</sup>	1746-01-6	$1.0 \times 10^{-8}$	Alimentary System (Liver); Developmental; Endocrine System; Hematologic System; Reproductive System; Respiratory System
1,2,3,7,8-Pentachlorodibenzo- <i>p</i> -dioxin <sup>a</sup>	40321-76-4	$1.0 \times 10^{-8}$	
1,2,3,4,7,8-Hexachlorodibenzo- <i>p</i> -dioxin <sup>a</sup>	39227-28-6	$1.0 \times 10^{-7}$	
1,2,3,6,7,8-Hexachlorodibenzo- <i>p</i> -dioxin <sup>a</sup>	57653-85-7	$1.0 \times 10^{-7}$	
1,2,3,7,8,9-Hexachlorodibenzo- <i>p</i> -dioxin <sup>a</sup>	19408-74-3	$1.0 \times 10^{-7}$	
1,2,3,4,6,7,8-Heptachlorodibenzo- <i>p</i> -dioxin <sup>a</sup>	35822-46-9	$1.0 \times 10^{-6}$	
1,2,3,4,6,7,8,9-Octachlorodibenzo- <i>p</i> -dioxin <sup>a</sup>	3268-87-9	$3.3 \times 10^{-5}$	
<b>Chlorinated Dibenzofurans<sup>a</sup></b>			
2,3,7,8-Tetrachlorodibenzofuran <sup>a</sup>	5120-73-19	$1.0 \times 10^{-7}$	Alimentary System (Liver); Developmental; Endocrine System; Hematologic System; Reproductive System; Respiratory System
1,2,3,7,8-Pentachlorodibenzofuran <sup>a</sup>	57117-41-6	$3.3 \times 10^{-7}$	
2,3,4,7,8-Pentachlorodibenzofuran <sup>a</sup>	57117-31-4	$3.3 \times 10^{-8}$	
1,2,3,4,7,8-Hexachlorodibenzofuran <sup>a</sup>	70648-26-9	$1.0 \times 10^{-7}$	
1,2,3,6,7,8-Hexachlorodibenzofuran <sup>a</sup>	57117-44-9	$1.0 \times 10^{-7}$	
1,2,3,7,8,9-Hexachlorodibenzofuran <sup>a</sup>	72918-21-9	$1.0 \times 10^{-7}$	
2,3,4,6,7,8-Hexachlorodibenzofuran <sup>a</sup>	60851-34-5	$1.0 \times 10^{-7}$	
1,2,3,4,6,7,8-Heptachlorodibenzofuran <sup>a</sup>	67562-39-4	$1.0 \times 10^{-6}$	
1,2,3,4,7,8,9-Heptachlorodibenzofuran <sup>a</sup>	55673-89-7	$1.0 \times 10^{-6}$	
1,2,3,4,6,7,8,9-Octachlorodibenzofuran <sup>a</sup>	39001-02-0	$3.3 \times 10^{-5}$	
Chromium VI & Soluble Chromium VI Compounds (including chromic trioxide)	18540-29-9	$2.0 \times 10^{-2}$	Hematologic System
Fluorides (including hydrogen fluoride)	7664-39-3	$4.0 \times 10^{-2}$	Bone and Teeth
Mercury & Mercury Inorganic Compounds	7439-97-6	$1.6 \times 10^{-4}$	Kidney; Nervous System; Development
Nickel & Nickel Compounds (including nickel oxide)	7440-02-0	$1.1 \times 10^{-2}$	Development
<b>Polychlorinated biphenyls (PCBs) (speciated)<sup>a</sup></b>			
3,3',4,4'-Tetrachlorobiphenyl (77) <sup>a</sup>	35298-13-3	$1.0 \times 10^{-4}$	Alimentary System (Liver); Developmental; Endocrine System; Hematologic System; Reproductive System; Respiratory System
3,4,4',5-Tetrachlorobiphenyl (81) <sup>a</sup>	70362-50-4	$3.3 \times 10^{-5}$	
2,3,3',4,4'- Pentachlorobiphenyl (105) <sup>a</sup>	32598-14-4	$3.3 \times 10^{-4}$	
2,3,4,4',5- Pentachlorobiphenyl (114) <sup>a</sup>	74472-37-0	$3.3 \times 10^{-4}$	
2,3,4,4',5- Pentachlorobiphenyl (118) <sup>a</sup>	31508-00-6	$3.3 \times 10^{-4}$	
2',3,4,4',5- Pentachlorobiphenyl (123) <sup>a</sup>	65510-44-3	$3.3 \times 10^{-4}$	
3,3',4,4',5- Pentachlorobiphenyl (126) <sup>a</sup>	57465-28-8	$1.0 \times 10^{-7}$	
2,3,3',4,4',5-Hexachlorobiphenyl (156) <sup>a</sup>	38380-08-4	$3.3 \times 10^{-4}$	
2,3,3',4,4',5'-Hexachlorobiphenyl (157) <sup>a</sup>	69782-90-7	$3.3 \times 10^{-4}$	
2,3',4,4',5,5'-Hexachlorobiphenyl (167) <sup>a</sup>	52663-72-6	$3.3 \times 10^{-4}$	
3,3',4,4',5,5'- Hexachlorobiphenyl (169) <sup>a</sup>	32774-16-6	$3.3 \times 10^{-7}$	
2,3,3',4,4',5,5'- Heptachlorobiphenyl (189) <sup>a</sup>	39635-31-9	$3.3 \times 10^{-4}$	

**Table 6.4 Chronic Noninhalation ‘Oral’ Reference Exposure Levels (RELs) and Chronic Hazard Index Target Organ System(s)**

Substance	Chemical Abstract Service No. (CAS)	Chronic Oral REL (mg/kg-day)	Chronic Oral Hazard Index Target Organ System(s)
Selenium and Selenium Compounds (other than hydrogen selenide)	7782-49-2	$5.0 \times 10^{-3}$	Alimentary System (Liver); Cardiovascular System; Nervous System

<sup>a</sup> The OEHHA has adopted the World Health Organization Toxicity Equivalency Factor (TEF) scheme for evaluating the cancer risk and noncancer risk due to exposure to samples containing mixtures of polychlorinated dibenzo-*p*-dioxins (PCDD) (also referred to as chlorinated dioxins and dibenzofurans), polychlorinated dibenzofurans (PCDF), and polychlorinated biphenyls (PCBs). The TEF values are revised from time to time to reflect new data and increased scientific knowledge. Currently OEHHA recommends use of the 2005 revision to the WHO TEF values (WHO<sub>05</sub>-TEF). See Appendix E for more information about the scheme and for the methodology for calculating 2,3,7,8-equivalents for PCDD and PCDFs. For convenience, OEHHA has calculated chronic ‘oral’ REL values for speciated PCDDs, PCDFs, and PCBs based on the WHO<sub>05</sub> TEF values and the chronic ‘oral’ REL for 2,3,7,8-tetrachlorodibenzo-*p*-dioxin using the procedure discussed in Appendix E. The chronic ‘oral’ REL values can be used to calculate a hazard index when the mixtures are speciated from individual congener ground level concentrations. In those cases where speciation of dioxins and furans has not been performed, then 2,3,7,8-TCDD serves as the surrogate for dioxin and furan emissions.

## 6.6 References

OEHHA, 2008. Air Toxics Hot Spots Risk Assessment Guidelines Technical Support Document for the Derivation of Noncancer Reference Exposure Levels. Available online at: <http://www.oehha.ca.gov>

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## 7 - Dose-Response Assessment for Carcinogens

### 7.1 Introduction

Dose-response assessment characterizes the quantitative relationship between the amount of exposure to a substance (the dose) and the incidence or occurrence of injury (the response). The process often involves establishing a toxicity value or criterion to use in assessing potential health risk. The toxicity criterion, or health guidance value, for carcinogens is the cancer potency slope (potency factor), which describes the potential risk of developing cancer per unit of average daily dose over a 70-year lifetime. Cancer inhalation and oral potency factors have been derived by the Office of Environmental Health Hazard Assessment (OEHHA) or by the United States Environmental Protection Agency (U.S. EPA) and approved by the State's Scientific Review Panel on Toxic Air Contaminants. They are available for many of the substances listed in Appendix A (List of Substances) as carcinogens. Table 7.1 and Appendix L list the inhalation and oral cancer potency factors that should be used in multipathway health risk assessments (HRAs) for the Hot Spots Program.

The details on the methodology of dose-response assessment for carcinogens and the approved cancer potency factors are provided in the Air Toxics Hot Spots Risk Assessment Guidelines. Part II. Technical Support Document for Cancer Potency Factors: Methodologies for derivation, listing of available values, and adjustments to allow for early life stage exposures. May, 2009. (OEHHA, 2009; see [http://www.oehha.ca.gov/air/hot\\_spots/tsd052909.html](http://www.oehha.ca.gov/air/hot_spots/tsd052909.html)).

### 7.2 Carcinogenic Potency

Cancer potency factors used for both the inhalation and oral routes in the Hot Spots program are generally the 95% upper confidence limits (UCL) on the modeled dose-response slope at the low dose range. The cancer slope factor assumes continuous lifetime exposure to a substance, and is expressed in units of inverse dose [i.e.,  $(\text{mg}/\text{kg}/\text{day})^{-1}$ ]. Another common potency expression is in units of inverse concentration [ $(\mu\text{g}/\text{m}^3)^{-1}$ ] when the slope is based on exposure concentration rather than dose; this is termed the unit risk factor. To accommodate the use of age-specific exposure variates, the Hot Spots program has translated the unit risk factors based on concentration to units of inverse dose. This allows calculation of risk for age groupings, as exposure varies with age. It also allows for application of Age Sensitivity Factors for early life exposures.

It is assumed in cancer risk assessments that risk is directly proportional to dose and that, for most carcinogens, there is no threshold for carcinogenesis. The derivation of inhalation and oral cancer potency factors takes into account information on pharmacokinetics, when available, and on the mechanism of carcinogenic action.

Table 7.1 and Appendix L list inhalation and oral cancer potency factors that should be used in risk assessments for the Hot Spots Program. Chapter 8 describes procedures for use of potency factors in estimating potential cancer risk.

### **7.2.1 Inhalation Cancer Potency Factors**

The risk assessment methodology and algorithms presented in Chapter 8 express the inhalation cancer slope factors in units of inverse dose (i.e.,  $(\text{mg}/\text{kg}/\text{day})^{-1}$ ). Breathing rates, expressed in units of liters per kilogram of body weight-day ( $\text{L}/\text{kg}\text{-day}$ ), are multiplied with the air concentrations, coupled with the appropriate unit conversion factor, to estimate dose in  $\text{mg}/\text{kg}\text{-day}$ . This allows estimation of average and high-end cancer risk point estimates. Estimation of a distribution of cancer risk based on variability in breathing rate can be obtained by Monte Carlo methods using the distributions of breathing rates in  $\text{L}/\text{kg}\text{-day}$ , which can then be converted to a dose distribution in  $\text{mg}/\text{kg}$  BW based on the intake rate. Unit risk factors [in the units of inverse concentration (i.e.,  $(\mu\text{g}/\text{m}^3)^{-1}$ ), which were used in previous guidelines for the Hot Spots program, are still listed in the TSD (OEHHA, 2009) and may prove useful in other risk assessment applications.

The average daily inhalation dose ( $\text{mg}/\text{kg}\text{-day}$ ) multiplied by the cancer potency factor ( $\text{mg}/\text{kg}\text{-day}$ )<sup>-1</sup> will give the inhalation cancer risk (unitless), which is an expression of the chemical's cancer risk during a 70-year lifespan of exposure. For example, an inhalation cancer risk of  $5 \times 10^{-6}$  is the same as stating that an individual has an estimated probability of developing cancer from their exposure of 5 chances per million people exposed. A more complete description of how potential cancer risk is calculated from the exposure dose and cancer potency factors is provided in Chapter 8. Appendix I presents an example calculation for determining cancer risk.

A list of current inhalation potency factors is provided in Table 7.1. Periodically, new or revised cancer potency factors will be peer reviewed by the State's Scientific Review Panel on Toxic Air Contaminants (SRP) and adopted by the Director of OEHHA. For new or updated numbers, consult the OEHHA web site at ([http://www.oehha.ca.gov/air/hot\\_spots/tsd052909.html](http://www.oehha.ca.gov/air/hot_spots/tsd052909.html)) to determine if any new or updated cancer potency factors have been adopted since this guideline update. New cancer potency factors that have been approved by the SRP and adopted by the Director of OEHHA should be incorporated into Hot Spots risk assessment for facilities that emit those chemicals.

### **7.2.2 Oral Cancer Potency Factors**

Under the Hot Spots Program, a few substances are evaluated for exposure and risk from non-inhalation pathways – these are referred to as multipathway substances. Multipathway substances have the potential to impact a receptor through inhalation and noninhalation (oral and dermal) exposure routes. These substances include heavy metals and semi-volatile organic substances such as dioxins, furans, and polycyclic aromatic hydrocarbons (PAHs). These substances commonly exist in the particle

phase or partially in the particle phase when emitted into the air. They can therefore be deposited onto soil, vegetation, and water. Noninhalation exposure pathways considered under the Hot Spots Program include the ingestion of soil, homegrown produce, meat, milk, surface water, breast milk, and fish as well as dermal exposure to contaminants deposited in the soil. See Table 5.1 for a list of the multipathway substances.

Table 7.1 and Appendix L list oral cancer potency factors in units of  $(\text{mg}/\text{kg}\text{-day})^{-1}$  that should be used for assessing the potential cancer risk for these substances through noninhalation exposure pathways. The cancer risk from these individual pathways is calculated by multiplying the dose  $(\text{mg}/\text{kg}\text{-day})$  times the oral cancer potency factor  $(\text{mg}/\text{kg}\text{-day})^{-1}$  to yield the potential cancer risk (unitless) from non-inhalation exposures. Chapter 5 provides all of the algorithms to calculate exposure dose through all of the individual exposure pathways. Appendix I provides a sample calculation for dose and cancer risk using the inhalation exposure pathway.

Three carcinogens (cadmium, beryllium, and nickel), although subject to deposition, are only treated as carcinogenic by the inhalation route and not by the oral route. Therefore, there are no oral cancer potency factors for these substances. However, the oral doses of these substances need to be estimated because of their noncancer toxicity. See Chapters 6 and 8, and Appendices I and L for dose-response factors, and calculations to address these substances.

Table 7.1 Inhalation and Oral Cancer Potency Factors

Substance	Chemical Abstract Service Number (CAS)	Inhalation Potency Factor (mg/kg-day) <sup>-1</sup>	Oral Slope Factor (mg/kg-day) <sup>-1</sup>
Acetaldehyde	75-07-0	1.0 x 10 <sup>-2</sup>	
Acetamide	60-35-5	7.0 x 10 <sup>-2</sup>	
Acrylamide	79-06-1	4.5 x 10 <sup>+0</sup>	
Acrylonitrile	107-13-1	1.0 x 10 <sup>+0</sup>	
Allyl chloride	107-05-1	2.1 x 10 <sup>-2</sup>	
2-Aminoanthraquinone	117-79-3	3.3 x 10 <sup>-2</sup>	
Aniline	62-53-3	5.7 x 10 <sup>-3</sup>	
Arsenic (inorganic)	7440-38-2	1.2 x 10 <sup>+1</sup>	1.5 x 10 <sup>+0</sup>
Asbestos #	1332-21-4	2.2 x 10 <sup>+2#</sup>	
Benz[a]anthracene <sup>BaP</sup>	56-55-3	3.9 x 10 <sup>-1</sup>	1.2 x 10 <sup>+0</sup>
Benzene	71-43-2	1.0 x 10 <sup>-1</sup>	
Benzydine	92-87-5	5.0 x 10 <sup>+2</sup>	
Benzo[a]pyrene	50-32-8	3.9 x 10 <sup>+0</sup>	1.2 x 10 <sup>+1</sup>
Benzo[b]fluoranthrene <sup>BaP</sup>	205-99-2	3.9 x 10 <sup>-1</sup>	1.2 x 10 <sup>+0</sup>
Benzo[j]fluoranthrene <sup>BaP</sup>	205-82-3	3.9 x 10 <sup>-1</sup>	1.2 x 10 <sup>+0</sup>
Benzo[k]fluoranthrene <sup>BaP</sup>	207-08-9	3.9 x 10 <sup>-1</sup>	1.2 x 10 <sup>+0</sup>
Benzyl chloride	100-44-7	1.7 x 10 <sup>-1</sup>	
Beryllium	7440-41-7	8.4 x 10 <sup>+0</sup>	
Bis(2-chloroethyl) ether	111-44-4	2.5 x 10 <sup>+0</sup>	
Bis(chloromethyl)ether	542-88-1	4.6 x 10 <sup>+1</sup>	
1,3-Butadiene	106-99-0	6.0 x 10 <sup>-1</sup>	
Cadmium (and compounds)	7440-43-9	1.5 x 10 <sup>+1</sup>	
Carbon tetrachloride	56-23-5	1.5 x 10 <sup>-1</sup>	
<b>Chlorinated Dibenzo-p-dioxins <sup>A</sup></b>			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	1.3 x 10 <sup>+5</sup>	1.3 x 10 <sup>+5</sup>
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	1.3 x 10 <sup>+5</sup>	1.3 x 10 <sup>+5</sup>
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	1.3 x 10 <sup>+4</sup>	1.3 x 10 <sup>+4</sup>
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	1.3 x 10 <sup>+4</sup>	1.3 x 10 <sup>+4</sup>
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	1.3 x 10 <sup>+4</sup>	1.3 x 10 <sup>+4</sup>
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	1.3 x 10 <sup>+3</sup>	1.3 x 10 <sup>+3</sup>
1,2,3,4,,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	3.9 x 10 <sup>+1</sup>	3.9 x 10 <sup>+1</sup>
<b>Chlorinated Dibenzofurans <sup>A</sup></b>			
2,3,7,8-Tetrachlorodibenzofuran	5120-73-19	1.3 x 10 <sup>+4</sup>	1.3 x 10 <sup>+4</sup>
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	3.9 x 10 <sup>+3</sup>	3.9 x 10 <sup>+3</sup>
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	3.9 x 10 <sup>+4</sup>	3.9 x 10 <sup>+4</sup>
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	1.3 x 10 <sup>+4</sup>	1.3 x 10 <sup>+4</sup>
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	1.3 x 10 <sup>+4</sup>	1.3 x 10 <sup>+4</sup>
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	1.3 x 10 <sup>+4</sup>	1.3 x 10 <sup>+4</sup>
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	1.3 x 10 <sup>+4</sup>	1.3 x 10 <sup>+4</sup>

Table 7.1 Inhalation and Oral Cancer Potency Factors

Substance	Chemical Abstract Service Number (CAS)	Inhalation Potency Factor (mg/kg-day) <sup>-1</sup>	Oral Slope Factor (mg/kg-day) <sup>-1</sup>
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	1.3 x 10 <sup>+3</sup>	1.3 x 10 <sup>+3</sup>
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	1.3 x 10 <sup>+3</sup>	1.3 x 10 <sup>+3</sup>
1,2,3,4,,6,7,8,9-Octachlorodibenzofuran	39001-02-0	3.9 x 10 <sup>+1</sup>	3.9 x 10 <sup>+1</sup>
Chlorinated paraffins	108171-26-2	8.9 x 10 <sup>-2</sup>	
Chloroform	67-66-3	1.9 x 10 <sup>-2</sup>	
4-Chloro- <i>o</i> -phenylenediamine	95-83-0	1.6 x 10 <sup>-2</sup>	
<i>p</i> -Chloro- <i>o</i> -toluidine	95-69-2	2.7 x 10 <sup>-1</sup>	
Chromium (hexavalent)	18540-29-9	5.1 x 10 <sup>+2</sup>	5 x 10 <sup>-1</sup>
Chrysene <sup>BaP</sup>	218-01-9	3.9 x 10 <sup>-2</sup>	1.2 x 10 <sup>-1</sup>
Creosote	8001-58-9	*	
<i>p</i> -Cresidine	120-71-8	1.5 x 10 <sup>-1</sup>	
Cupferron	135-20-6	2.2 x 10 <sup>-1</sup>	
2,4-Diaminoanisole	615-05-4	2.3 x 10 <sup>-2</sup>	
2,4-Diaminotoluene	95-80-7	4.0 x 10 <sup>+0</sup>	
Dibenz[ <i>a,h</i> ]acridine <sup>BaP</sup>	226-36-8	3.9 x 10 <sup>-1</sup>	1.2 x 10 <sup>+0</sup>
Dibenz[ <i>a,l</i> ]acridine <sup>BaP</sup>	224-42-0	3.9 x 10 <sup>-1</sup>	1.2 x 10 <sup>+0</sup>
Dibenz[ <i>a,h</i> ]anthracene <sup>BaP</sup>	53-70-3	4.1 x 10 <sup>+0</sup>	4.1 x 10 <sup>+0</sup>
Dibenzo[ <i>a,e</i> ]pyrene <sup>BaP</sup>	192-65-4	3.9 x 10 <sup>+0</sup>	1.2 x 10 <sup>+1</sup>
Dibenzo[ <i>a,h</i> ]pyrene <sup>BaP</sup>	189-64-0	3.9 x 10 <sup>+1</sup>	1.2 x 10 <sup>+2</sup>
Dibenzo[ <i>a,l</i> ]pyrene <sup>BaP</sup>	189-55-9	3.9 x 10 <sup>+1</sup>	1.2 x 10 <sup>+2</sup>
Dibenzo[ <i>a,l</i> ]pyrene <sup>BaP</sup>	191-30-0	3.9 x 10 <sup>+1</sup>	1.2 x 10 <sup>+2</sup>
7H-Dibenzo[ <i>c,g</i> ]carbazole <sup>BaP</sup>	194-59-2	3.9 x 10 <sup>+0</sup>	1.2 x 10 <sup>+1</sup>
1,2-Dibromo-3-chloropropane	96-12-8	7.0 x 10 <sup>+0</sup>	
1,4-Dichlorobenzene	106-46-7	4.0 x 10 <sup>-2</sup>	
3,3'-Dichlorobenzidine	91-94-1	1.2 x 10 <sup>+0</sup>	
1,1-Dichloroethane	75-34-3	5.7 x 10 <sup>-3</sup>	
Diesel exhaust <sup>B</sup>	NA	1.1 x 10 <sup>+0</sup>	
Diethylhexylphthalate	117-81-7	8.4 x 10 <sup>-3</sup>	8.4 x 10 <sup>-3</sup>
<i>p</i> -Dimethylaminoazobenzene	60-11-7	4.6 x 10 <sup>+0</sup>	
7,12-Dimethylbenz[ <i>a</i> ]anthracene <sup>BaP</sup>	57-97-6	2.5 x 10 <sup>+2</sup>	2.5 x 10 <sup>+2</sup>
1,6-Dinitropyrene <sup>BaP</sup>	42397-64-8	3.9 x 10 <sup>+1</sup>	1.2 x 10 <sup>+2</sup>
1,8-Dinitropyrene <sup>BaP</sup>	42397-65-9	3.9 x 10 <sup>+0</sup>	1.2 x 10 <sup>+1</sup>
2,4-Dinitrotoluene	121-14-2	3.1 x 10 <sup>-1</sup>	
1,4-Dioxane	123-91-1	2.7 x 10 <sup>-2</sup>	
Epichlorohydrin	106-89-8	8.0 x 10 <sup>-2</sup>	
Ethyl benzene	100-41-4	8.7 x 10 <sup>-3</sup>	1.1 x 10 <sup>-2</sup>
Ethylene dibromide	106-93-4	2.5 x 10 <sup>-1</sup>	
Ethylene dichloride	107-06-2	7.2 x 10 <sup>-2</sup>	
Ethylene oxide	75-21-8	3.1 x 10 <sup>-1</sup>	

Table 7.1 Inhalation and Oral Cancer Potency Factors

Substance	Chemical Abstract Service Number (CAS)	Inhalation Potency Factor (mg/kg-day) <sup>-1</sup>	Oral Slope Factor (mg/kg-day) <sup>-1</sup>
Ethylene thiourea	96-45-7	4.5 x 10 <sup>-2</sup>	
Formaldehyde	50-00-0	2.1 x 10 <sup>-2</sup>	
Hexachlorobenzene	118-74-1	1.8 x 10 <sup>+0</sup>	
Hexachlorocyclohexanes (technical grade)	608-73-1	4.0 x 10 <sup>+0</sup>	4.0 x 10 <sup>+0</sup>
Hydrazine	302-01-2	1.7 x 10 <sup>+1</sup>	3.0 x 10 <sup>+0</sup>
Indeno[1,2,3- <i>cd</i> ]pyrene <sup>BaP</sup>	193-39-5	3.9 x 10 <sup>-1</sup>	1.2 x 10 <sup>+0</sup>
Lead and lead compounds	7439-92-1	4.2 x 10 <sup>-2</sup>	8.5 x 10 <sup>-3</sup>
Lindane	58-89-9	1.1 x 10 <sup>+0</sup>	1.1 x 10 <sup>+0</sup>
Methyl tertiary-butyl ether	1634-04-4	1.8 x 10 <sup>-3</sup>	
3-Methylcholanthrene <sup>BaP</sup>	56-49-5	2.2 x 10 <sup>+1</sup>	2.2 x 10 <sup>+1</sup>
5-Methylchrysene <sup>BaP</sup>	3697-24-3	3.9 x 10 <sup>+0</sup>	1.2 x 10 <sup>+1</sup>
4, 4'-Methylene bis(2-chloroaniline) (MOCA)	101-14-4	1.5 x 10 <sup>+0</sup>	
Methylene chloride	75-09-2	3.5 x 10 <sup>-3</sup>	
4,4'-Methylenedianiline	101-77-9	1.6 x 10 <sup>+0</sup>	1.6 x 10 <sup>+0</sup>
Michler's ketone	90-94-8	8.6 x 10 <sup>-1</sup>	
Naphthalene	91-20-3	1.2 x 10 <sup>-1</sup>	
Nickel (and compounds)	7440-02-0	9.1 x 10 <sup>-1</sup>	
5-Nitroacenaphthene <sup>BaP</sup>	602-87-9	1.3 x 10 <sup>-1</sup>	1.3 x 10 <sup>-1</sup>
6-Nitrochrysene <sup>BaP</sup>	7496-02-8	3.9 x 10 <sup>+1</sup>	1.2 x 10 <sup>+2</sup>
2-Nitrofluorene <sup>BaP</sup>	607-57-8	3.9 x 10 <sup>-2</sup>	1.2 x 10 <sup>-1</sup>
1-Nitropyrene <sup>BaP</sup>	5522-43-0	3.9 x 10 <sup>-1</sup>	1.2 x 10 <sup>+0</sup>
4-Nitropyrene <sup>BaP</sup>	57835-92-4	3.9 x 10 <sup>-1</sup>	1.2 x 10 <sup>+0</sup>
N-Nitroso- <i>n</i> -butylamine	924-16-3	1.1 x 10 <sup>+1</sup>	
N-Nitroso- <i>N</i> -methylethylamine	10595-95-6	2.2 x 10 <sup>+1</sup>	
N-Nitrosodi- <i>n</i> -propylamine	621-64-7	7.0 x 10 <sup>+0</sup>	
N-Nitrosodiethylamine	55-18-5	3.6 x 10 <sup>+1</sup>	
N-Nitrosodimethylamine	62-75-9	1.6 x 10 <sup>+1</sup>	
N-Nitrosodiphenylamine	86-30-6	9.0 x 10 <sup>-3</sup>	
<i>p</i> -Nitrosodiphenylamine	156-10-5	2.2 x 10 <sup>-2</sup>	
N-Nitrosomorpholine	59-89-2	6.7 x 10 <sup>+0</sup>	
N-Nitrosopiperidine	100-75-4	9.4 x 10 <sup>+0</sup>	
N-Nitrosopyrrolidine	930-55-2	2.1 x 10 <sup>+0</sup>	
Pentachlorophenol	87-86-5	1.8 x 10 <sup>-2</sup>	
Perchloroethylene	127-18-4	2.1 x 10 <sup>-2</sup>	5.1 x 10 <sup>-2</sup>
<b>Polychlorinated biphenyls (PCBs) (unspeciated mixture)</b>	1336-36-3		
(high risk) <sup>P1</sup>		2.0 x 10 <sup>+0</sup>	2.0 x 10 <sup>+0</sup>
(low risk) <sup>P2</sup>		4.0 x 10 <sup>-1</sup>	4.0 x 10 <sup>-1</sup>
(lowest risk) <sup>P3</sup>		7.0 x 10 <sup>-2</sup>	7.0 x 10 <sup>-2</sup>

Table 7.1 Inhalation and Oral Cancer Potency Factors

Substance	Chemical Abstract Service Number (CAS)	Inhalation Potency Factor (mg/kg-day) <sup>-1</sup>	Oral Slope Factor (mg/kg-day) <sup>-1</sup>
<b>Polychlorinated biphenyls<sup>P4</sup> (PCBs) (speciated)</b>			
3,3',4,4'-Tetrachlorobiphenyl (77)	35298-13-3	1.3 x 10 <sup>+1</sup>	1.3 x 10 <sup>+1</sup>
3,4,4',5-Tetrachlorobiphenyl (81)	70362-50-4	3.9 x 10 <sup>+1</sup>	3.9 x 10 <sup>+1</sup>
2,3,3',4,4'- Pentachlorobiphenyl (105)	32598-14-4	3.9 x 10 <sup>+0</sup>	3.9 x 10 <sup>+0</sup>
2,3,4,4',5- Pentachlorobiphenyl (114)	74472-37-0	3.9 x 10 <sup>+0</sup>	3.9 x 10 <sup>+0</sup>
2,3',4,4',5- Pentachlorobiphenyl (118)	31508-00-6	3.9 x 10 <sup>+0</sup>	3.9 x 10 <sup>+0</sup>
2',3,4,4',5- Pentachlorobiphenyl (123)	65510-44-3	3.9 x 10 <sup>+0</sup>	3.9 x 10 <sup>+0</sup>
3,3',4,4',5- Pentachlorobiphenyl (126)	57465-28-8	1.3 x 10 <sup>+4</sup>	1.3 x 10 <sup>+4</sup>
2,3,3',4,4',5-Hexachlorobiphenyl (156)	38380-08-4	3.9 x 10 <sup>+0</sup>	3.9 x 10 <sup>+0</sup>
2,3,3',4,4',5'-Hexachlorobiphenyl (157)	69782-90-7	3.9 x 10 <sup>+0</sup>	3.9 x 10 <sup>+0</sup>
2,3',4,4',5,5'-Hexachlorobiphenyl (167)	52663-72-6	3.9 x 10 <sup>+0</sup>	3.9 x 10 <sup>+0</sup>
3,3',4,4',5,5'- Hexachlorobiphenyl (169)	32774-16-6	3.9 x 10 <sup>+3</sup>	3.9 x 10 <sup>+3</sup>
2,3,3',4,4',5,5'- Heptachlorobiphenyl (189)	39635-31-9	3.9 x 10 <sup>+0</sup>	3.9 x 10 <sup>+0</sup>
Potassium bromate	7758-01-2	4.9 x 10 <sup>-1</sup>	
1,3-Propane sultone	1120-71-4	2.4 x 10 <sup>+0</sup>	
Propylene oxide	75-56-9	1.3 x 10 <sup>-2</sup>	2.4 x 10 <sup>-1</sup>
1,1,2,2-Tetrachloroethane	79-34-5	2.0 x 10 <sup>-1</sup>	
Thioacetamide	62-55-5	6.1 x 10 <sup>+0</sup>	
2,4-Toluene diisocyanate	584-84-9	3.9 x 10 <sup>-2</sup>	
2,6-Toluene diisocyanate	91-08-7	3.9 x 10 <sup>-2</sup>	
1,1,2-Trichloroethane (vinyl trichloride)	79-00-5	5.7 x 10 <sup>-2</sup>	
Trichloroethylene	79-01-6	7.0 x 10 <sup>-3</sup>	1.5 x 10 <sup>-2</sup>
2,4,6-Trichlorophenol	88-06-2	7.0 x 10 <sup>-2</sup>	
Urethane	51-79-6	1.0 x 10 <sup>+0</sup>	
Vinyl chloride	75-01-4	2.7 x 10 <sup>-1</sup>	

**Notes for Table 7.1**

- # Asbestos:  $[100 \text{ PCM fibers/m}^3]^{-1}$  A unit risk factor of  $2.7 \times 10^{-6} (\mu\text{g/m}^3)^{-1}$  and an inhalation cancer potency factor of  $2.2 \times 10^{+2} (\text{mg/kg BW}\cdot\text{day})^{-1}$  are available (see Appendix C for explanation).
- BaP PAHs and PAH Derivatives: Many have potency equivalency factors relative to benzo[a]pyrene (see Appendix G). For multipathway chemicals, including PAHs, the oral slope factor is considered the same as the inhalation potency factor unless otherwise noted in the Table.
- A Polychlorinated Dibenzo-*p*-dioxins, Polychlorinated Dibenzofurans and speciated polychlorinated biphenyls: (see Appendix E). For convenience, OEHHA has calculated cancer potency factors for speciated polychlorinated dibenzo-*p*-dioxin, polychlorinated dibenzofuran and polychlorinated biphenyl congeners using the procedure in Appendix E.
- B Diesel Exhaust is listed as a Toxic Air Contaminant by the Air Resources Board as "Particulate Matter from Diesel-Fueled Engines". (See Appendix D)
- \* Creosote: Can be calculated using Potency Equivalency Factors contained in the benzo[a]pyrene Toxic Air Contaminant document and in Appendix G of these guidelines.
- P1 Polychlorinated Biphenyls (PCBs): High Risk is for use in cases where congeners with more than four chlorines do not comprise less (are greater) than one-half percent of total PCBs. The high risk number is the default for unspciated PCB mixtures.
- P2 The low risk number is generally not applicable to the Hot Spots program. The Hot Spots program addresses PCBs emitted by stationary facilities. It cannot be assumed that such emissions would occur by simple evaporation. There is a dermal absorption factor applied in evaluation of the dermal pathway for PCBs so the medium risk would not apply to dermal exposure (OEHHA, 2009). The water pathway does not include an assumption that PCB isomers are water soluble, so the medium number would not apply to the water pathway.
- P3 Polychlorinated Biphenyls (PCBs): Lowest Risk is for use in cases where congeners with more than four chlorines comprise less than one-half percent of total PCBs. In order for the low number to be used, scientific justification needs to be presented.
- P4 Number in parentheses is the IUPAC #, the PCB nomenclature is IUPAC. For multipathway chemicals, including PCBs, the oral slope factor is considered the same as the inhalation potency factor unless otherwise noted in the Table.

**7.3 References**

OEHHA, 2009. Air Toxics Hot Spots Risk Assessment Guidelines. Part II. Technical Support Document for Cancer Potency Factors: Methodologies for derivation, listing of available values, and adjustments to allow for early life stage exposures. May, 2009. Available online at: [http://www.oehha.ca.gov/air/hot\\_spots/tsd052909.html](http://www.oehha.ca.gov/air/hot_spots/tsd052909.html)

## 8 - Risk Characterization for Carcinogens and Noncarcinogens and the Requirements for Hot Spots Risk Assessments

### 8.1 Introduction

Risk characterization is the final step of the health risk assessment (HRA). In this step, information developed through the exposure assessment is combined with information from the dose-response assessment to characterize risks to the general public from emissions. In the Hot Spots program, OEHHA conducts the dose-response assessment during the development of cancer potency factors and Reference Exposure Levels. These are used in conjunction with the exposure estimates to estimate cancer risk and evaluate hazard from noncancer toxicity of emitted chemicals. Under the Air Toxics Hot Spots (Hot Spots) Act, risk characterizations should present both individual and population-wide health risks (Health and Safety Code Section (HSC) 44306). Persons preparing HRAs for the Hot Spots Program should consult the local Air Pollution Control or Air Quality Management District (District) to determine if the District has special guidelines to assist with HRA format or other requirements of the Hot Spots Program.

OEHHA is recommending that a 30-year exposure duration be used as the basis for estimating cancer risk at the maximum exposed individual resident (MEIR) in the Hot Spots Program. This exposure duration represents the time of residency for 90 to 95% of Californians at a single location and should provide adequate public health protection against individual risk. We also recommend including the 9 and 70-year cancer risk at the MEIR as supplemental information. Note that a 70-year exposure duration is required to estimate cancer burden or provide an estimate of population-wide risk.

This chapter provides guidance on how to evaluate the risk characterization component of risk assessments required by the Hot Spots Program. A general summary of the risk characterization components includes the following items and information.

- The locations of the point of maximum impact (PMI), the MEIR, and the maximum exposed individual worker (MEIW) are to be identified. The PMI, MEIW, and MEIR for cancer risk and for noncancer hazard indices (averaging times for acute 1-hour, repeated 8-hour, and chronic hazard indices) may not be the same location; all should be identified.

- The location of any specified sensitive receptors (e.g., schools, hospitals, daycare, or eldercare facilities - contact the District or reviewing authority for more information) should be identified
- Estimates of population-wide cancer risk and noncancer hazard

This information must be clearly presented in cross-referenced text, tables, figures, and maps. Chapter 9 provides an outline that specifies the content and recommended format of HRA results. The HARP software is the recommended model for calculating HRA results for the Hot Spots Program. Information on obtaining the HARP software can be found under the Air Toxics Program on the ARB's web site at [www.arb.ca.gov](http://www.arb.ca.gov).

### 8.1.1 Tiered Approach to Risk Assessment

The tiered approach for risk assessment that is presented in detail in the TSD (OEHHA, 2012) and summarized here should be reviewed prior to conducting the health risk assessment. The tiered approach to risk assessment and the health impacts evaluation described here are included in the HARP software.

The tiered approach provides a risk assessor with flexibility and allows consideration of site-specific differences (Table 8.1). The four-tiered approach to risk assessment is intended to primarily apply to residential cancer risk assessment, both for inhalation and noninhalation pathways. Risk assessors can tailor the level of effort and refinement of an HRA by using either the point estimate exposure assumptions as the basis of the exposure and risk assessment, or both the point estimate and a stochastic treatment of exposure factor distributions.

**Table 8.1 The Tiered Approach to Risk Assessment**

<b>Tier</b>	<b>Description</b>	<b>When Applied</b>
Tier 1	Utilizes OEHHA default point estimates of exposure variates	All risk assessments must include a Tier 1 assessment
Tier 2	Utilizes site-specific point estimates for exposure variates (justified, and approved by OEHHA)	A Tier 2 approach may be presented in addition to Tier 1
Tier 3	Utilizes OEHHA distributions of exposure variates	A Tier 3 approach may be presented in addition to Tier 1
Tier 4	Utilizes site-specific distributions of exposure variates (justified, and approved by OEHHA)	A Tier 4 approach may be presented in addition to Tier 1

Tier 1 is a standard point estimate approach that uses the recommended exposure variate (e.g., breathing or water ingestion rate) point estimates presented in this document. Derivations of these values are described in detail in OEHHA (2012). The results of the Tier 1 evaluations are required to be presented in the risk characterization section for all HRAs prepared for the Hot Spots Program. Thus, persons preparing an HRA using Tier 2 through Tier 4 evaluations must also include the risk characterization results of a Tier 1 evaluation in the HRA.

As discussed in OEHHA (2012), if the risk characterization results from a Tier 1 assessment are above a regulatory level of concern, the risk assessor may want to proceed with more site-specific analysis as described in Tier 2, or use a more resource-intensive stochastic modeling effort described in Tier 3 and Tier 4 (for cancer risk). While further evaluation may provide more information to the risk manager on which to base decisions, the Tier 1 evaluation is useful in comparing risks among a large number of facilities and must be included in all HRAs.

Tier 2 analysis allows the use of available and justifiable site-specific exposure variates (e.g., fish consumption), when presenting the potential health impacts. The site-specific information applied in a Tier 2 assessment must be adequately justified and approved by OEHHA and the District. In Tier 3, a stochastic approach to exposure assessment is taken using the distributions for the exposure pathways presented in the TSD (OEHHA, 2012) and in Chapter 5 of this Guidance Manual. The exposure distributions apply only to a residential receptor and are used only for the determination of cancer risk. OEHHA has not developed exposure intake distributions for workers to use in the offsite worker exposure scenario. Tier 4 is also a stochastic approach for the residential exposure scenario but allows for utilization of site-specific exposure variate distributions if they are justifiable and more appropriate for the site under evaluation than those derived in OEHHA (2012). Alternative site-specific distributions must be approved by OEHHA and the District. For an off-site worker cancer risk evaluation, Tiers 3 and 4 do not apply. Tier 3 and Tier 4 analyses show what a distribution of potential cancer risk may be to an individual or population based on a distribution of exposure inputs (e.g., water ingestion rate) rather than specific point estimates of exposure.

Table 8.2 summarizes OEHHA's recommendations for use of the four Tiers in cancer and noncancer risk assessment.

**Table 8.2 Tiers for Residential and Offsite Worker Cancer and Noncancer Hot Spots Risk Assessments**

Tier	Cancer		Non Cancer Chronic and 8-Hour	
	Inhalation	Noninhalation	Inhalation	Noninhalation
Tier-1	X	X	X	X
Tier-2	X	X		X <sup>b</sup>
Tier-3	X <sup>a</sup>	X <sup>a</sup>		
Tier-4	X <sup>a</sup>	X <sup>a</sup>		

<sup>a</sup> Applies to residential exposure scenario only

<sup>b</sup> Applies to chronic noncancer exposure only

OEHHA has not developed a stochastic approach (Tier 3 or 4) for estimating noncancer health impacts using acute, 8-hour, and chronic Reference Exposure Levels (RELs). Tier 1 is the only option for determining noncancer health impacts from inhalation exposure since calculating the hazard quotient involves dividing the ground level air concentrations for the specified exposure duration by the appropriate RELs. However, chronic noninhalation noncancer risks involve a calculation of dose from oral or dermal pathways to which site-specific evaluations could be considered under a Tier 2 approach.

#### Small foot-print facilities – Tier 2 or Tier 4

Some facilities subject to the Air Toxics Hot Spots Act (e.g., some in the industry-wide categories such as gas stations or dry cleaners) have very small zones of impact. In some of these instances, there will be very few receptors within the zone of impact. It isn't possible to develop special recommendations for exposure variates for all possible exposure scenarios. Alternative breathing rates (point estimates or distributions) may be used as part of Tier 2 or Tier 4 risk assessments with appropriate supporting justification in the case of a very small zone of impact. OEHHA is willing to work with risk managers at ARB and the Districts on this issue.

## **8.2 Risk Characterization for Carcinogens**

Cancer risk is calculated by multiplying the daily inhalation or oral dose (calculated in Chapter 5), by a cancer potency factor, the age sensitivity factor, the frequency of time spent at home (for residents only), and the exposure duration divided by averaging time, to yield the excess cancer risk (see section 8.2.4). As described below, the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk at the receptor location. A brief description of the age sensitivity factors, exposure duration, and frequency of time spent at home are included in Sections 8.2.1 to 8.2.3 below. These factors are discussed in detail in OEHHA (2009) and OEHHA (2012).

### **8.2.1 Adjustment for Early Life Stage Exposures to Carcinogens**

Studies have shown that young animals are more sensitive than adult animals to exposure to many carcinogens (OEHHA, 2009). Therefore, OEHHA developed age sensitivity factors (ASFs) to take into account the increased sensitivity to carcinogens during early-in-life exposure (Table 8.3). These factors were developed and described in detail in OEHHA (2009). In the absence of chemical-specific data, OEHHA recommends a default ASF of 10 for the third trimester to age 2 years, and an ASF of 3 for ages 2 through 15 years to account for potential increased sensitivity to carcinogens during childhood.

**Table 8.3 Age Sensitivity Factors by Age Group for Cancer Risk Assessment**

Age Group	Age Sensitivity Factor (unitless)
3 <sup>rd</sup> Trimester	10
0<2 years	10
2<9 years	3
2<16 years	3
16<30 years	1
16-70 years	1

For specific carcinogens where data indicate enhanced sensitivity during life stages other than the immediate postnatal and juvenile periods, or for which data demonstrate ASFs different from the default ASFs, the chemical-specific data should be used in order to adequately protect public health.

The risk assessments generated under the Air Toxics Hot Spots Act are reviewed by OEHHA. If a risk assessor had data indicating there are no windows of susceptibility early in life or that a different ASF should be used for a specific carcinogen and wanted to use these data, OEHHA would review the material as part of the review of the risk assessment.

### 8.2.2 Fraction of Time Spent at Home for Cancer Risk Assessment

OEHHA and ARB evaluated information from activity patterns databases to estimate the fraction of time at home (FAH) during the day (OEHHA, 2012). This information can be used to adjust exposure duration and cancer risk from a specific facility's emissions, based on the assumption that exposure to the facility's emissions are not occurring away from home. From the third trimester to age <2 years, 85% of time is spent at home (Table 8.4). From age 2 through <16 years, 72% of time is spent at home. From age 16 years and greater, 73% of time is spent at home. Facilities with any school within the  $1 \times 10^{-6}$  (or greater) isopleth should use FAH = 1 for the child age groups (3<sup>rd</sup> Trimester, 0<2 years, and 2<16 years). See Appendix I for an example calculation using the FAH.

**Table 8.4 Recommendations for Fraction of Time at Home (FAH) for Evaluating Residential Cancer Risk**

Age Range	Fraction of Time at Residence
3 <sup>rd</sup> Trimester, and 0<2 years	0.85 <sup>1</sup>
2<16 years <sup>2</sup>	0.72 <sup>1</sup>
16-70 years <sup>3</sup>	0.73

<sup>1</sup> Use FAH = 1 if a school is within the  $1 \times 10^{-6}$  (or greater) cancer risk isopleth

<sup>2</sup> Also use FAH = 0.72 for 2<9 yr age group.

<sup>3</sup> Also use FAH = 0.73 for 16<30 yr age group.

The FAH is calculated based on a diary of trips taken over a 24-hour period on the survey day. Ninety-five percent of the diary days were on weekdays. Participants can select “vacation” as one of their trips. However, vacation time represented only a fraction (0.68%) of the over 175,000 trips recorded in the survey. Because much of these vacation trips were presumed to be within-day trips and were only a small fraction of total trips, there is likely little overlap with the Exposure Frequency (EF) variate used in the dose equations in Chapter 5.

### 8.2.3 *Exposure Duration for Estimating Cancer Risk to Residents and Off-Site Workers*

OEHHA recommends that an exposure duration (residency time) of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident (MEIR) (Table 8.5). OEHHA also recommends that the 30-year exposure duration be used as the basis for public notification and risk reduction audits and plans. The Districts, however, may opt to use the 70 year cancer risk for notification and risk reduction audits and plans.

Note that the 30-year exposure duration starts in the third trimester to accommodate the increased susceptibility of exposures in early life (OEHHA, 2009), and would apply to both the point estimate and stochastic approaches.

**Table 8.5 Summary of Recommendations for Exposure Duration for Individual Cancer Risk at the MEIR and MEIW**

<b><i>Receptor</i></b>	<b><i>Recommendation</i></b>
Resident (MEIR)	30 years
Resident (supplemental Information)	9 years for central tendency; 70 years for maximum (lifetime)
Worker (MEIW)	25 years

Exposure durations of 9-years and 70-years are also recommended to be evaluated for the MEIR to show the range of cancer risk based on residency periods. If a facility is notifying the public regarding cancer risk, the 9- and 70-year cancer risk estimates are useful for people who have resided in their current residence for periods shorter and longer than 30 years.

The 9-, 30-, and 70-year exposures are chosen to coincide with U.S. EPA’s estimates of the average (9 years), high-end estimates (30-years) of residence time, and a lifetime residency (70 years). These estimates are also consistent with what is known about residence time in California. Together, the 9-, 30-, and 70-year cancer risk calculations provide a useful presentation of cancer risk and the relationship to duration of residency and, thus, exposure to a facility’s emissions.

For the maximally exposed individual worker (MEIW), OEHHA recommends using an exposure duration of 25 years to estimate individual cancer risk for the off-site worker scenario (Table 8.5). This duration represents approximately the 95th percentile of job tenure with the same employer in the U.S.

### 8.2.4 Calculating Residential and Offsite Worker Inhalation Cancer Risk

#### Residential Receptors

For residential inhalation exposure, cancer risk must be separately calculated for specified age groups (Eq. 8.2.4A, see Section 8.2.1), because of age differences in sensitivity to carcinogens and age differences in intake rates (per kg body weight). Separate risk estimates for these age groups provide a health-protective estimate of cancer risk by accounting for greater susceptibility in early life, including both age-related sensitivity and amount of exposure. The following equation illustrates the formula for calculating residential inhalation cancer risk. See Appendix I for a detailed example calculation.

**A. Equation 8.2.4 A:** 
$$\text{RISK}_{\text{inh-res}} = \text{DOSE}_{\text{air}} \times \text{CPF} \times \text{ASF} \times \text{ED/AT} \times \text{FAH}$$

- 7.  $\text{RISK}_{\text{inh-res}}$  = Residential inhalation cancer risk
- 8.  $\text{DOSE}_{\text{air}}$  = Daily inhalation dose (mg/kg-day)
- 9. CPF = Inhalation cancer potency factor (mg/kg-day<sup>-1</sup>)
- 10. ASF = Age sensitivity factor for a specified age group (unitless)
- 11. ED = Exposure duration (in years) for a specified age group
- 12. AT = Averaging time for lifetime cancer risk (years)
- 13. FAH = Fraction of time spent at home (unitless)

#### **a: Recommended default values for EQ 8.2.4 A:**

- 5.  $\text{DOSE}_{\text{air}}$  = Calculated for each age group from Eq. 5.4.1
- 6. CPF = Substance-specific (see Table 7.1)
- 7. ASF = See Section 8.2.1
- 8. ED = 0.25 years for 3<sup>rd</sup> trimester, 2 years for 0<2, 7 years for 2<9, 14 years for 2<16, 14 years for 16<30, 54 years for 16-70
- 9. AT = 70 years\*
- 10. FAH = See Table 8.4

\*Although AT actually sums to 70.25 years when the 3<sup>rd</sup> trimester (0.25 years) is included, OEHHA recommends rounding AT = 70 years (and rounding residential exposure durations at 9- and 30-years rather than 9.25- and 30.25-years) to simplify the calculation without causing a significant adjustment. Note that the dose for the 3<sup>rd</sup> trimester is based on the breathing rate of pregnant women using the assumption that the dose to the fetus during the 3<sup>rd</sup> trimester is the same as that to the mother.

Cancer risks calculated above for individual age groups are summed to estimate cancer risk for 9-, 30- and 70-year exposures as shown below. Note that this example includes the Fraction of Time Spent at Home (FAH) for each age grouping.

**Calculation of Inhalation Cancer Risk from the Third Trimester to Age Nine:**

$$\text{RISK}_{\text{inh-res}} = (\text{DOSE}_{\text{air third trimester}} \times \text{CPF} \times 10 \times 0.25/70 \text{ years} \times \text{FAH}_{3\text{rd tri } <2}) \\ + (\text{DOSE}_{\text{air age } 0<2} \times \text{CPF} \times 10 \times 2/70 \times \text{FAH}_{3\text{rd tri } <2}) + (\text{DOSE}_{\text{air age } 2<9} \times \\ \text{CPF} \times 3 \times 7/70 \text{ years} \times \text{FAH}_{2<9})$$

**Calculation of Inhalation Cancer Risk from Third Trimester to Age 30:**

$$\text{RISK}_{\text{inh-res}} = (\text{DOSE}_{\text{air third trimester}} \times \text{CPF} \times 10 \times 0.25/70 \text{ years} \times \text{FAH}_{3\text{rd tri } <2}) \\ + (\text{DOSE}_{\text{air age } 0<2} \times \text{CPF} \times 10 \times 2/70 \times \text{FAH}_{3\text{rd tri } <2}) + (\text{DOSE}_{\text{air age } 2<16} \times \\ \text{CPF} \times 3 \times 14/70 \times \text{FAH}_{2<16}) + (\text{DOSE}_{\text{air age } 16<30} \times \text{CPF} \times 1 \times 14/70 \text{ years} \times \\ \text{FAH}_{16-30})$$

**Calculation of Inhalation Cancer Risk from Third Trimester to Age 70:**

$$\text{RISK}_{\text{inh-res}} = (\text{DOSE}_{\text{air third trimester}} \times \text{CPF} \times 10 \times 0.25/70 \text{ years} \times \text{FAH}_{3\text{rd tri } <2}) \\ + (\text{DOSE}_{\text{air age } 0<2} \times \text{CPF} \times 10 \times 2/70 \times \text{FAH}_{3\text{rd tri } <2}) + (\text{DOSE}_{\text{air age } 2<16} \times \\ \text{CPF} \times 3 \times 14/70 \times \text{FAH}_{2<16}) + (\text{DOSE}_{\text{air age } 16<70} \times \text{CPF} \times 1 \times 54/70 \text{ years} \times \\ \text{FAH}_{16-70})$$

Expressing cancer risk in “chances per million” is useful as a risk communication tool for the public, but cancer risk can also be expressed in other ways, such as “chances per 100,000” (cancer risk  $\times 10^5$ ) or “chances per 10 million” (cancer risk  $\times 10^7$ ). To convert the resulting cancer risk estimate to chances of developing cancer per million individuals exposed, multiply the cancer risk by  $10^6$ :

$$\text{Cancer risk} \times 10^6 = \text{chances per million}$$

For exposure to multiple carcinogenic substances, Table 8.7 and Table I.5 in Appendix I are examples of how cancer risks of individual substances are summed to determine the total cancer risk.

**Worker Receptors**

For assessment of off-site worker cancer risk at the MEIW, the default assumes working age begins at 16 years. Note that the residential FAH factor in Eq. 8.2.4.A above does not apply for workers. The daily inhalation dose ( $\text{DOSE}_{\text{air}}$ ) (as calculated in Chapter 5, EQ 5.4.1.2) is based on the adjusted 8-hour concentration at the MEIW (for non-continuous sources) and amount of time the offsite worker’s schedule overlaps with the facility’s emission schedule. The duration of exposure at the MEIW receptor is 25 years, as discussed in the TSD (OEHHA, 2012).

**B. Equation 8.2.4 B:** 
$$\text{RISK}_{\text{inh-work}} = \text{DOSE}_{\text{air}} \times \text{CPF} \times \text{ASF} \times \text{ED/AT}$$

1.  $\text{RISK}_{\text{inh-work}}$  = Worker inhalation cancer risk

**a: Recommended default values for EQ 8.2.4 B:**

1.  $\text{DOSE}_{\text{air}}$  = Calculated for workers in Eq. 5.4.1.2
2. CPF = Substance specific (see Table 7.1)
3. ASF = 1 for working age 16-70 yrs (See Section 8.2.1)
4. ED = 25 years
5. AT = 70 yrs for lifetime cancer risk

**Work Locations with Daycare Facilities:**

An additional risk management consideration for offsite worker cancer risk assessment of a Hot Spots facility is whether there are women of child bearing age at the MEIW location and whether the MEIW has a daycare center. In the case of women of child-bearing age at the MEIW, the Districts may wish to treat the off-site MEIW in the same way as the residential scenario to account for the higher susceptibility during the third trimester of pregnancy (i.e., use of an ASF=10 for third trimester exposure). If there is onsite daycare at the MEIW, then the risks to the children will be underestimated using the offsite adult worker scenario. In this case, the Districts may wish to include a cancer risk assessment for the children in the onsite daycare, assuming they could be there from 0 to age 6 years (ED = 6 years) and using the appropriate exposure factors to calculate  $\text{DOSE}_{\text{air}}$ , fraction of time at worksite (e.g., hrs at daycare per 24 hrs), and ASFs in EQ 8.2.4 B to account for the higher susceptibility of infants and children to carcinogens.

Children at a MEIW daycare may also be assessed for noninhalation exposures. Typically, soil ingestion and dermal exposure will be the most common noninhalation pathways. However, all pathways that are present at the daycare should be included. See section 8.2.6 for more discussion of multipathway risk assessment methods.

**8.2.5 Calculation of Noninhalation Cancer Risk**

A small subset of Hot Spots substances is subject to deposition onto the soil, plants, and water bodies (see Table 5.1). These substances need to be evaluated by the appropriate noninhalation pathways, as well as by the inhalation pathway, and the risk characterization results must be presented in all HRAs. These substances include semi-volatile organic chemicals and heavy metals.

For all multipathway substances, the exposure pathways that must be evaluated at every residential and worker site (in addition to inhalation) are soil ingestion and dermal exposure. If PAHs (and creosotes), lead, dioxins, furans, or PCBs are emitted, then the breast-milk consumption pathway becomes mandatory for residential receptors. OEHHA has developed transfer coefficients for these chemicals from the mother to breast milk (see OEHHA, 2012 for details). The other exposure pathways (e.g.,

ingestion of homegrown produce or fish) are only evaluated for residential receptors if the facility impacts that exposure medium and the receptor under evaluation can be exposed to that medium or pathway. For example, if the facility does not impact a fishable body of water within the isopleth of the facility, or the impacted water body does not sustain fish that are consumed by fishers, then the fish pathway will not be considered for that facility or receptor.

Table 8.6 identifies the residential receptor exposure pathways that are mandatory and those that are dependent on the available routes of exposure. Table 8.6 also identifies the three exposure pathways that are relevant for a worker receptor. The cancer risk estimates should be presented in the risk characterization section of the risk assessment for all the appropriate pathways.

**Table 8.6 Mandatory and Site/Route Dependent Exposure Pathways**

Mandatory Exposure Pathways	Site/Route Dependent Exposure Pathways
<ul style="list-style-type: none"> <li>• Inhalation<sup>w</sup></li> <li>• Soil Ingestion<sup>w</sup></li> <li>• Dermal Exposure to Contaminated Soil<sup>w</sup></li> <li>• Breast Milk Consumption<sup>*</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Homegrown Produce Ingestion</li> <li>• Angler-Caught Fish Ingestion</li> <li>• Drinking Water Ingestion</li> <li>• Home-Raised Animal Product Ingestion (Dairy (Cow's) Milk, Meat (Beef, Pork, Chicken) and Egg).</li> </ul>

(w) Identifies the appropriate exposure pathways that should be evaluated for a worker. These pathways are inhalation, dermal exposure, and the soil ingestion pathway.

(\*) If PAHs (including creosotes), lead, dioxins, furans, or PCBs are emitted, then the breast-milk consumption pathway becomes mandatory.

The noninhalation residential cancer risk is calculated using the same steps as inhalation cancer risk described in Section 8.2.4. A dose (see Chapters 4 and 5) from the pathway under evaluation (e.g., soil ingestion) is multiplied by the substance-specific oral slope factor, expressed in units of inverse dose (i.e.,  $(\text{mg}/\text{kg}/\text{day})^{-1}$ ) (Table 7.1), the appropriate age sensitivity factor (ASF), and exposure duration divided by averaging time to yield the cancer risk for a specified age grouping. Cancer risk for each age group is summed as appropriate for the exposure duration. The FAH factor is relevant only to the inhalation pathway and is not appropriate to use in the noninhalation pathways.

Equation 8.2.5 illustrates the formula for calculating noninhalation cancer risk. Details (data, algorithms, and guidance) for each exposure pathway are presented in Chapter 5 and in OEHHA (2012).

**A. Equation 8.2.5:**  $RISK_{noninh} = DOSE_{noninh} \times CPF_{oral} \times ASF \times ED/AT$

1.  $RISK_{noninh}$  = Noninhalation pathway cancer risk
2.  $DOSE_{noninh}$  = Daily dose (mg/kg-day) for a specified non-inhalation pathway for each age group
3.  $CPF_{oral}$  = Oral cancer potency (slope) factor (mg/kg-day<sup>-1</sup>)
4. ASF = Age sensitivity factor for a specified age group (unitless)
5. ED = Exposure duration (in years) for a specified age group
6. AT = Averaging time for lifetime cancer risk

**a: Recommended default values for EQ 8.2.5:**

1.  $DOSE_{noninh}$  = Calculated in Chapter 5 dose algorithms for each age group and for each noninhalation route in Table 8.6 the receptor is exposed to
2.  $CPF_{oral}$  = Substance-specific (see Table 7.1)
3. ASF = See Section 8.2.1
4. ED = Residents: 0.25 years for 3<sup>rd</sup> trimester, 2 years for 0<2, 7 years for 2<9, 14 years for 2<16, 14 years for 16<30, 54 years for 16-70  
= Offsite worker: 25 yrs
5. AT = 70 years

Estimating cancer risk for 9-, 30- and 70-years by summing the individual age-group cancer risks is the same as that shown for the inhalation route in Section 8.2.4. The exception is that the FAH variate is only appropriate for the residential inhalation pathway and is not a factor for oral and dermal exposure pathways.

**Calculation of Noninhalation Cancer Risk from Third Trimester to Age 30:**

$$RISK_{noninh-res} = (DOSE_{noninh} \text{ third trimester} \times CPF \times 10 \times 0.25/70 \text{ years}) + (DOSE_{noninh} \text{ age } 0<2 \times CPF \times 10 \times 2/70) + (DOSE_{noninh} \text{ age } 2<16 \times CPF \times 3 \times 14/70) + (DOSE_{noninh} \text{ age } 16<30 \times CPF \times 1 \times 14/70 \text{ years})$$

To convert this estimated probability of risk to chances per million of developing cancer, multiply the estimated cancer risk for each noninhalation exposure route by 10<sup>6</sup>. This result is useful communication tool to compare risks for each pathway of exposure.

$$\text{Cancer risk} \times 10^6 = \text{cancer risk expressed as chances per million}$$

For assessment of the offsite worker the typical noninhalation pathways that apply for worker cancer risk are the dermal exposure pathway and the soil ingestion pathway.

Children at a MEIW daycare may also be assessed for noninhalation exposures. Typically, soil ingestion and dermal exposure will be the most common noninhalation pathways. However, all pathways that are present at the daycare should be included.

### 8.2.6 *Multipathway Cancer Risk Methodology*

Under a Tier 1 assessment, it is necessary to calculate the total cancer risk from both inhalation and noninhalation exposures if multipathway substances are emitted from the facility. The calculation of cancer risk that includes exposure to a multipathway substance or substances has three steps:

- 1) Calculate cancer risk for the inhalation pathway (EQ 8.2.4 A for residents, EQ 8.2.4 B for off-site workers) for all substances, and the noninhalation pathways that apply (EQ 8.2.5) for all multipathway substances, using high-end point estimates of intake rates.
- 2) For each multipathway substance, identify the two exposure pathways with the highest risk. These are the dominant pathways that are to be assessed using high-end point estimates of intake rates for the total cancer risk. For all other pathways, the average point estimate of intake rates may be used to calculate the pathway cancer risk (See OEHHA (2012) for more information).
- 3) To calculate total cancer risk, all inhalation and noninhalation pathways are summed together for all substances.

The final cancer risk calculation using a combination of high-end and average exposure parameters is referred to as the derived risk in the HARP software. This is described in Chapter 1, Section 1.4.1 of OEHHA (2012). The inhalation route is almost always one of the two dominant pathways in a multipathway cancer risk assessment. Therefore, in most cases only one noninhalation pathway would be calculated using a high-end dose point estimate. For all other pathways, the average point estimate may be used to calculate the pathway cancer risk.

For example, if dermal exposure and soil ingestion risks are calculated, then the cancer risks from these pathways would be summed along with the inhalation cancer risks to give the total cancer risk for the single multipathway substance:

$$\text{Cancer Risk (inhalation)} + \text{Cancer Risk (dermal)} + \text{Cancer Risk (soil)} = \text{Total Risk}$$

The mother's milk pathway also becomes a mandatory pathway to assess risk in nursing infants if the mother is exposed to specific substances (see Table 5.1).

Many facilities will emit multiple carcinogenic substances. If multiple substances are emitted, the substance-specific cancer risks for all exposure pathways are summed to give the (total) multipathway cancer risk at the receptor location. The HARP software will display not only the multipathway risk for each carcinogenic substance, but also show a breakdown of the cancer risk from each exposure pathway. Table 8.7 shows the results of a multipathway risk assessment for a hypothetical facility. While not presented in the following table, it is critical to identify the driving exposure pathways and the driving substances in a multipathway cancer risk assessment when summarizing and presenting the HRA results. See Chapter 9 for more information.

**Table 8.7 Multipathway Assessment of a Hypothetical Facility 30-Year Cancer Risk**

Substance	Cancer Risk <sup>a</sup>	Cancer risk <sup>b</sup> (chances per million)
Arsenic	$1.1 \times 10^{-5}$ (i)	11 (i)
	$3 \times 10^{-7}$ (ni)	0.3 (ni)
Benzene	$2.92 \times 10^{-4}$ (i)	292 (i)
2,3,7,8-TCDD (dioxin)	$1.06 \times 10^{-4}$ (i)	106 (i)
	$5.7 \times 10^{-5}$ (ni)	57 (ni)
1,3-Butadiene	$6.0 \times 10^{-6}$ (i)	6 (i)
<b>Total Facility Cancer Risk</b>	<b><math>4.723 \times 10^{-4}</math></b>	<b>472</b>

<sup>a</sup> As calculated in EQ 8.2.4 A or EQ 8.2.5

<sup>b</sup> Calculated as: cancer risk  $\times 10^6$  = chances per million

i = inhalation pathway contribution

ni = noninhalation pathway contribution

Cancer risk in Table 8.7 for the multipathway substances, arsenic and 2,3,7,8-TCDD, is arranged by the inhalation pathway risk and the sum of all noninhalation pathway risks. The total facility multipathway cancer risk is the sum of all inhalation and noninhalation pathways.

Cancer risks from different substances are treated additively in risk assessment generally, and in the Hot Spots Program in part because many carcinogens act through the common mechanism of DNA damage. The additive assumption is reasonable from a public health point of view. Other possible interactions of multiple carcinogens include synergism (effects are greater than additive) or antagonism (effects are less than additive). The type of interaction is both chemical and dose dependent and in most cases the data are not available to adequately characterize these interactions.

### **8.2.7 Multipathway Cancer Risk for Infant Exposure to Mother's Milk**

The mother's milk pathway becomes mandatory if the nursing mother is exposed to one or more of the following multipathway substances: dioxins and furans, PCBs, PAHs including creosotes, and lead. The default assumption inherent in the intake rate is that the infant's only source of food is breast for the first year (e.g., is fully breastfed, see OEHHA, 2012, for details), which is one-half of the 0-2 year age group used in the Hot Spots program. Thus, the cancer risk by the mother's milk pathway will need to be calculated with a modified cancer risk equation using a different exposure duration:

**A. Equation 8.2.7:**  $RISK_{mm} = Dose-lm \times CPF_{oral} \times ASF \times ED/AT$

1.  $RISK_{mm}$  = Infant cancer risk via mother's milk pathway
2.  $Dose-lm$  = Daily dose (mg/kg-day) to infant from mother's milk
3.  $CPF_{oral}$  = Oral cancer slope factor (mg/kg-day<sup>-1</sup>)
4.  $ASF$  = Age sensitivity factor for infant (unitless)
5.  $ED$  = Exposure duration (in years) for infant
6.  $AT$  = Averaging time for lifetime cancer risk

**a: Recommended default values for EQ 8.2.7:**

6.  $Dose-lm$  = Calculated from EQ 5.4.3.5.2, dose to infant via mother's milk
7.  $CPF_{oral}$  = Substance-specific (see Table 7.1)
8.  $ASF$  = 10 (See Section 8.2.1)
9.  $ED$  = 1 yr (1<sup>st</sup> yr of 0<2 yr age group)
10.  $AT$  = 70 years

Once the cancer risk is determined for the mother's milk pathway for each applicable substance, the pathway risk is summed with other pathway risks.

For Tier 1, the derived approach for cancer risk assessment should be used if the mother's milk pathway applies. As outlined in Section 8.2.6, the two dominant pathways will be calculated using high-end point estimates of intake rates; all additional pathways may be calculated using average point estimates of intake rates. There will be four mandatory pathways to assess (inhalation, mother's milk, soil ingestion and dermal exposure) for cancer risk when exposure to dioxins/furans, PCBs, PAHs including creosotes, and/or lead occurs. Therefore, if the infant is exposed to no other additional site-specific noninhalation pathway(s), only the two dominant pathways among the four will be assessed for cancer risk using high-end point estimates of intake rates; and the others would be assessed using the average point estimate of intake rate.

In short, multipathway cancer risk for a substance is estimated by summing the potential inhalation and noninhalation cancer risks for the receptor location of interest. See the discussion of Tier 1 in Section 8.2.6 or the TSD for more information on the method used to determine the multipathway cancer risk.

### **8.2.8 Cancer Risk Characterization for Stochastic Risk Assessment**

Risk characterization for a stochastic risk assessment is similar to that described for the point-estimate approach. However, the stochastic risk assessment produces a distribution of risk that accounts for some of the natural variability in exposure-related factors, such as breathing rates or water intake. The cancer risk distribution for inhalation cancer risk, for example, is generated by multiplying randomly selected values from the breathing rate distribution by the ground level air concentration, and the cancer potency factor. A variation of the Monte Carlo method called Latin hypercube sampling is the method by which the values from the breathing rate distribution are

selected. If noninhalation pathways need to be evaluated, the same process is followed for each pathway and the risk is summed to give an overall inhalation and noninhalation cancer risk distribution. Further, the specification of Age Sensitivity Factors and the need to separately calculate risks require that a Monte Carlo sampling be conducted for each age group and the cancer risk distributions are then summed across age groups.

The HARP software will perform an HRA using a Monte Carlo analysis with either OEHHA-provided or user-provided data distributions and will include the statistics for the distributions. In risk assessments that have chosen to use the distribution of exposure variates, the cancer risk distribution for a 30-year residential exposure duration (MEIR) should be presented in the risk characterization section. We also recommend including the 9 and 70-year cancer risk at the MEIR as supplemental information. Note that a 70-year exposure duration is required to estimate cancer burden or provide an estimate of population-wide risk. A stochastic approach has not been developed for acute, 8-hour, and chronic noncancer health impacts or worker (MEIW) exposures.

### **8.2.9 Use of Individual Cancer Risk and Population-wide Cancer Risk**

Cancer risk for an individual receptor and a representation of population-wide cancer risk are both important components of a risk assessment. The individual receptor approach reflects the exposures that may occur to an individual receptor over a period of time at a specific location. The individual cancer risk approach has some inherent limitations in terms of illustrating and potentially protecting population-based public health. For example, a facility with a small emissions footprint may impact a few individuals with a high individual potential cancer risk; whereas, a facility with a larger emission footprint may have a lower potential cancer risk for an individual receptor but expose many more people to those levels. Since this larger emitting facility can impact many more people, the population-wide health impacts are magnified due to the larger number of people exposed to the facility's emissions. This potential for higher population impacts is not captured by the individual receptor risk methodology. Therefore, the individual and population-wide health impacts should be presented for all facilities to provide a more complete illustration of the facility's health impacts.

#### **8.2.9.1 Population Risk**

For facilities with large emission footprints (e.g., refineries, ports, or rail yards, etc.), population-based health impacts are critical to provide a better illustration of the potential impacts of emissions since large numbers of people may be exposed to the emissions. The individual cancer risk approach has some inherent limitations in terms of protecting public health. A small facility with a single stack can impact a few individuals with an individual cancer risk that is unacceptable, whereas a large facility may have an individual cancer risk that is below the acceptable limit for individual risk but exposes many more people. Thus, the population-wide impacts are larger for the large facility. Population-wide risk is independent of individual risk, and assumes that a population (not necessarily the same individuals) will live in the impacted zone over a

70-year period. Thus, a 70-year exposure duration is required for estimates of population-wide risks.

To evaluate population risk, one method that regulatory agencies have used is the cancer burden method to account for the number of excess cancer cases that could occur in a population.

### Cancer Burden

The cancer burden can be calculated by multiplying the cancer risk at a census block centroid by the number of people who live in the census block, and adding up the estimated number of potential cancer cases across the zone of impact. The result of this calculation is a single number that is intended to estimate of the number of potential cancer cases within the population that was exposed to the emissions for a lifetime (70 years).

The cancer burden is calculated on the basis of lifetime (70-year) risks (whereas individual cancer risk at the MEIR is based on 30-year residential exposure). Cancer burden is independent of how many people move in or out of the vicinity of an individual facility. For example, if 10,000 people are exposed to a carcinogen at a concentration with a  $1 \times 10^{-5}$  cancer risk for a lifetime the cancer burden is 0.1, and if 100,000 people are exposed to a  $1 \times 10^{-5}$  risk the cancer burden is 1.

### Estimate of Population Wide Risk

An estimate of the number of people exposed at various cancer risk levels can provide perspective on the magnitude of the potential public health threat posed by a facility. This approach is intended as a replacement for or addition to the cancer burden calculation used by some Districts in the past. The new approach provides a much easier way for the general public to interpret results when compared to cancer burden estimates. A facility in a sparsely populated area can have a public health impact different from the same facility in a highly populated area; however, under the cancer burden method, those differences may not be seen. Some suggested approaches and methods for performance of a screening or refined population exposure analyses are provided in Section 4.6.

The District or reviewing authority should be consulted before beginning the population exposure estimates and, as results are generated, further consultation may be necessary. Note that a 70-year exposure duration is required to estimate cancer burden or provide an estimate of population-wide risk.

The zone of impact for estimating the number of persons exposed to a cancer risk from facility emissions should be set at a minimum of a  $10^{-6}$  cancer risk level (see Section 4.6.1). Some Districts may prefer to use a cancer risk of  $10^{-7}$  to define the carcinogenic zone of impact. The total number of persons exposed to a series of potential risk levels can be presented to aid risk managers in understanding the magnitude of the potential public health impacts.

The HARP software can provide population-level risk estimates as cancer burden or as the number of persons exposed to a selected (user-identified) cancer risk level at block level centroids.

#### 8.2.9.2 Population Estimates for Noncancer Health Impacts

A noncancer chronic, 8-hour, and acute population estimate of the number of people exposed to acute, 8-hour, and chronic HQs or HIs exceeding 0.5 or 1.0, in increments of 1.0, should also be presented. For example, a facility with a maximum chronic HI of 4.0 would present the number of people exposed to a chronic HI of 0.5, 1.0, 2.0, 3.0, and 4.0. The isopleths used in this determination should be drawn using the smallest feasible grid size. The same methods that are described in Chapter 4 and Section 8.2.9 (for the population exposure estimate for cancer risk) should be used in the chronic, 8-hour and acute population estimates. Population estimates for acute, 8-hour, and chronic health impacts should be presented separately.

#### 8.2.9.3 Factors That Can Impact Population Risk – Cumulative Impacts

Although the Hot Spots program is designed to address the impacts of single facilities and not aggregate or cumulative impacts, there are a number of known factors that influence the susceptibility of the exposed population and thus may influence population risk. Socioeconomic status influences access to health care, nutrition, and outcome after cancer diagnosis. Community unemployment can affect exposure and residency time near a facility. Factors that affect the vulnerability of the population are discussed in the report *Cumulative Impacts: Building a Scientific Foundation* (OEHHA, 2010). Information on many of these factors is relatively easy to obtain at the census tract level. The OEHHA recommends that these types of factors be considered by the risk manager, along with the quantitative measures of population risk. OEHHA is in the process of developing guidance on quantification of the impact of these factors.

#### **8.2.10 Cancer Risk Evaluation of Short Term Projects**

The local air pollution control districts sometimes use the risk assessment guidelines for the Hot Spots program in permitting decisions for short-term projects such as construction or waste site remediation. Frequently, the issue of how to address cancer risks from short-term projects arises.

Cancer potency factors are based on animal lifetime studies or worker studies where there is long-term exposure to the carcinogenic agent. There is considerable uncertainty in trying to evaluate the cancer risk from projects that will only last a small fraction of a lifetime. There are some studies indicating that dose rate changes the potency of a given dose of a carcinogenic chemical. In others words, a dose delivered over a short time period may have a different potency than the same dose delivered over a lifetime.

The OEHHA's evaluation of the impact of early-in-life exposure has reduced some of the uncertainty in evaluating the cancer risk to the general population for shorter-term exposures, as it helps account for susceptibility to carcinogens by age at exposure (OEHHA, 2009).

Due to the uncertainty in assessing cancer risk from very short-term exposures, we do not recommend assessing cancer risk for projects lasting less than two months at the MEIR. We recommend that exposure from projects longer than 2 months but less than 6 months be assumed to last 6 months (e.g., a 2-month project would be evaluated as if it lasted 6 months). Exposure from projects lasting more than 6 months should be evaluated for the duration of the project. In all cases, for assessing risk to residential receptors, the exposure should be assumed to start in the third trimester to allow for the use of the ASFs (OEHHA, 2009). Thus, for example, if the District is evaluating a proposed 5-year mitigation project at a hazardous waste site, the cancer risks for the residents would be calculated based on exposures starting in the third trimester through the first five years of life.

For the MEIW, we recommend using the same minimum exposure requirements used for the residential receptor (i.e., no evaluation for projects less than 2 months; projects longer than 2 months but less than 6 months are assumed to last 6 months; projects longer than 6 months would be evaluated for the duration of the project). Although the off-site worker scenario assumes that the workers are 16 years of age or older with an Age-Sensitivity Factor of 1, another risk management consideration for short-term project cancer assessment is whether there are women of child bearing age at the worksite and whether the MEIW receptor has a daycare center. In this case, the Districts may wish to treat the off-site MEIW in the same way as the residential scenario to account for the higher susceptibility during the third trimester of pregnancy, and for higher susceptibility of infants and children.

Finally, the risk manager may want to consider a lower cancer risk threshold for risk management for very short-term projects. Typical District guidelines for evaluating risk management of Hot Spots facilities range around a cancer risk of 1 per 100,000 exposed persons as a trigger for risk management. Permitting thresholds also vary for each District. There is valid scientific concern that the rate of exposure may influence the risk – in other words, a higher exposure to a carcinogen over a short period of time may be a greater risk than the same total exposure spread over a much longer time period. In addition, it is inappropriate from a public health perspective to allow a lifetime acceptable risk to accrue in a short period of time (e.g., a very high exposure to a carcinogen over a short period of time resulting in a  $1 \times 10^{-5}$  cancer risk). Thus, consideration should be given for very short term projects to using a lower cancer risk trigger for permitting decisions.

### 8.3 Noncancer Acute, 8-Hour, and Chronic Inhalation Health Impacts – the Hazard Index Approach

All substances in the Hot Spots Program that have noncancer health impacts at a receptor must be evaluated through the inhalation pathway. Estimates of noncancer inhalation health impacts are determined by dividing an airborne concentration at the receptor by the appropriate Reference Exposure Level (REL). This is termed the Hazard Index Approach. A REL is used as an indicator of potential noncancer health impacts and is defined as the concentration at which no adverse noncancer health effects are anticipated. When a health impact calculation is performed for a single substance, then it is called the hazard quotient (HQ). Each REL for a substance will have one or more target organ systems (e.g., respiratory system, nervous system, etc.) where the substance can have a noncancer health impact. Thus, all HQs have specified target organ systems associated with them. The sum of the Hazard Quotients of all chemicals emitted that impact the same target organ is termed the Hazard Index. Inhalation RELs for noncancer health impacts have been developed for acute, 8-hour, and chronic exposures to a number of Hot Spots substances. Acute RELs are designed to protect against the maximum 1-hour ground level concentration at the receptor. Eight-hour RELs are designed to protect people with daily 8-hour schedules, such as offsite workers, in an impacted zone. The 8-hour RELs should be used for typical daily work shifts of 8-9 hours. For further questions, assessors should contact OEHHA, the District, or reviewing authority to determine if the 8-hour RELs should be used in your HRA. Any discussions or directions to exclude the 8-hour REL evaluation should be documented in the HRA. Chronic RELs protect against long-term exposure to the annual average air concentration spread over 24 hours/day, 7 days/week.

OEHHA has added 8-hour RELs to the set of noncancer RELs that were previously comprised of acute and chronic RELs (OEHHA, 2008). Specifically, 8-hour RELs are air concentrations at or below which health impacts would not be expected even for sensitive subpopulations in the general population with repeated daily 8-hour exposures over a significant fraction of a lifetime. The 8-hour RELs can be used to evaluate the potential for health impacts (including effects of repeated exposures) in offsite workers, and to children and teachers exposed during school hours. Although not required in the HRA, they could also be applied by the Districts to a residential scenario where a facility operates only a portion of the day and exposure to residences is not adequately reflected by averaging concentrations over a 24 hour day. The number of chemicals with 8-hour RELs will increase as OEHHA re-evaluates RELs for chemicals under SB-25 to ensure that they are protective of children's health.

Acute, 8-hour, and chronic RELs are needed because the dose metrics and even the health impact endpoints may be different with the different exposure durations of acute, daily 8-hour, and chronic exposures. Also, although chronic REL values are lower or set the same as 8-hour RELs, there are some cases such as special meteorological situations (e.g., significant diurnal-nocturnal meteorological differences) or intermittent exposures where the 8-hour REL may be more protective than the chronic REL.

Chapter 4 describes air dispersion modeling and both Chapter 6 and Appendix L list the needed dose-response information to evaluate non-cancer hazards. Appendix I presents sample calculations for determining acute HQs and HIs, 8-hour HQs and HIs, and chronic multipathway HQs and HIs. Chapter 9 provides an outline of information required for risk characterization. The HARP software will calculate the HQ and HI for Hot Spots risk assessments.

### 8.3.1 Calculation of Noncancer Inhalation Hazard Quotient and Hazard Index

To calculate the acute HQ, the maximum 1-hour ground level concentration (in  $\mu\text{g}/\text{m}^3$ ) of a substance at a receptor is divided by the acute 1-hour REL (in  $\mu\text{g}/\text{m}^3$ ) for the substance:

$$\text{Acute Hazard Quotient} = \frac{\text{1-Hour Max Concentration } (\mu\text{g}/\text{m}^3)}{\text{Acute REL } (\mu\text{g}/\text{m}^3)}$$

To calculate the chronic HQ, the annual average ground level concentration of a substance is divided by the chronic REL for the substance:

$$\text{Chronic Hazard Quotient} = \frac{\text{Annual Average Concentration } (\mu\text{g}/\text{m}^3)}{\text{Chronic REL } (\mu\text{g}/\text{m}^3)}$$

To calculate the 8-hour HQ, the adjusted annual average ground level concentration of a substance (represented as “Adjusted  $C_{\text{air}}$ ” in EQ 5.4.1.4 A) is divided by the 8-hour REL for the substance:

$$\text{8-hour Hazard Quotient} = \frac{\text{Adjusted Annual Average Concentration } (\mu\text{g}/\text{m}^3)}{\text{8-hour REL } (\mu\text{g}/\text{m}^3)}$$

The daily 8-hour average ground level concentrations used for calculating the 8-hour HQs are derived as described in Chapter 4.

An HQ of 1.0 or less indicates that adverse health effects are not expected to result from exposure to emissions of that substance. As the HQ increases above one, the probability of human health effects increases by an undefined amount. However, it should be noted that a HQ above one is not necessarily indicative of health impacts due to the application of uncertainty factors in deriving the RELs.

If a receptor is exposed to multiple substances that target the same organ system, then the HQs for the individual substances are summed to obtain a Hazard Index (HI) for that target organ.

Table 8.8 is an example of an HRA spreadsheet showing acute inhalation HQs arranged by target organ system for several substances. The bottom row shows the summed HQs by target organ system to derive the HIs.

**Table 8.8 Individual Hazard Quotients and Total Hazard Index for Acute Inhalation Exposure**

Substance	Reproductive/ Developmental	Nervous System	Cardiovascular System	Respiratory System	Eye
Ammonia				0.6	0.6
Arsenic	0.2	0.2	0.2		
Benzene	0.02				
Chlorine				0.7	0.7
<b>Total Hazard Index</b>	<b>0.22</b>	<b>0.2</b>	<b>0.2</b>	<b>1.3</b>	<b>1.3</b>

A more detailed example of calculating HQs and HIs and of determining noncancer health impacts is shown in Appendix I.

Hazard quotients or HIs for different target organs are not summed together (e.g., do not add the impacts for the eye to the cardiovascular system). Chapter 6 and Appendix L have lists of the organ systems affected by each substance. Unlike the cancer risk algorithms, no exposure duration adjustment (e.g., 9 yrs / 70 yrs) should be made for noncancer assessments.

There are limitations to this method of assessing cumulative noncancer health impacts. The impact on organ systems may not be additive if health effects occur by different mechanisms. However, the impact on organ systems could also be synergistic. An analysis by a trained health professional familiar with the substance's toxicological literature is usually needed to determine the public health significance of an HQ or HI above one. It is recommended that the Air District contact OEHHA if this situation presents itself. For assessing the noncancer health impacts of lead, different procedures are used; please see Appendix F.

### **8.3.2 Calculating Noninhalation (oral) Noncancer Hazard Quotient and Hazard Index**

Similar to the situation with multipathway carcinogenic substances, multipathway substances that present a noncancer hazard are assessed by noninhalation routes of exposure (see Table 8.6). Noninhalation routes of exposure are assessed only for chronic exposure. There are no oral acute RELs since it is generally anticipated that health effects from a single exposure via the oral route at typical environmental levels resulting from deposition of facility emissions would be insignificant relative to the inhalation route. The multipathway substances with noninhalation RELs, called chronic oral RELs, are shown in Table 6.4. Similar to inhalation exposure, the hazard quotient

for a noninhalation pathway is obtained by dividing the dose in milligrams per kilogram-day (mg/kg-day) by the oral REL also expressed in units of mg/kg-day:

$$\text{Chronic Non-inhalation HQ} = \frac{\text{Chronic Noninhalation Dose (mg/kg-day)}}{\text{Chronic Oral REL (mg/kg-day)}}$$

The calculated chronic oral HQs are combined with the chronic inhalation HQs for determining the chronic HIs for each affected target organ (see Section 8.3.4). The point estimates and algorithms for calculating the oral dose for all applicable exposure pathways and receptors (e.g., workers or residents) are explained in Chapter 5.

The chronic oral dose calculated in mg/kg-day is based on a time-weighted average 70-year residential exposure combining the 0<2, 2<16 and 16-70 year age groups. Unlike the assessment of cancer risk, no exposure duration adjustment should be made when estimating HQs. In other words, the variates ED and AT in the cancer risk EQ 8.2.5 in Section 8.2.5 are not used for estimating the noncancer HQs. See Appendix I for an example calculation.

### 8.3.3 *Multipathway Noncancer Risk Methodology*

To determine multipathway chronic noncancer health impacts, it is necessary to calculate the total hazard index from both inhalation and noninhalation exposures. The calculation of HIs has several steps:

- 1) First, the inhalation HQ is calculated for each substance emitted (Section 8.3.1).
- 2) Second, if the substance has an oral REL, then the non-inhalation HQ is calculated as shown above using high-end point-estimates for intake rates for each noninhalation pathway that applies.
- 3) Third, if there are more than two noninhalation pathways to consider for a multipathway substance, then the oral HQ is calculated using high-end point estimates in the dose equation for the two dominant pathways. For any additional noninhalation pathways, the HQs are calculated using average point estimates in the dose equation. This step applies only to residential receptors.
- 4) Fourth, all noninhalation pathway HQs for a multipathway substance are then summed together by target organ to obtain the total noninhalation HQ for a multipathway substance.
- 5) The final step is to sum the inhalation and noninhalation HQs together by target organ to determine the HIs. This step is displayed in Table 8.9. If there is only one substance, then the multipathway HQ is the same as the HI.

**Table 8.9 Substance-Specific Chronic Inhalation and Noninhalation Hazard Quotients and the Hazard Index by Target Organ System**

Substance	Respiratory System	Hematologic System	Alimentary System	Endocrine System	Development	Reproductive System	Nervous System	Cardiovascular System	Skin
Ammonia	0.8								
Arsenic					0.04(i) 0.1(ni)		0.04(i) 0.1(ni)	0.04(i) 0.1(ni)	0.04(i) 0.1(ni)
Benzene		0.08			0.08		0.08		
2,3,7,8-TCDD (dioxin)	0.1(i) 0.2(ni)	0.1(i) 0.2(ni)	0.1(i) 0.2(ni)	0.1(i) 0.2(ni)	0.1(i) 0.2(ni)	0.1(i) 0.2(ni)			
Nickel	0.4(i)	0.4(i)	0.1(ni)						
<b>Hazard Index</b>	<b>1.50</b>	<b>0.78</b>	<b>0.40</b>	<b>0.3</b>	<b>0.52</b>	<b>0.30</b>	<b>0.22</b>	<b>0.14</b>	<b>0.14</b>

i = inhalation pathway contribution

ni = noninhalation pathway contribution

Table 8.9 shows the calculated chronic HIs by combining the chronic inhalation HQs and chronic oral HQs. The HQs or HIs for different target organs are not added together (e.g., do not add the impacts for the respiratory system to the nervous system). The noninhalation pathways for TCDD and arsenic in Table 8.9 have all the noninhalation pathways that apply incorporated into their HQ values. For example, the noninhalation value for arsenic (HQs = 0.1) includes at least the soil ingestion and dermal soil pathways in the HQs because these are the mandatory noninhalation pathways to take into account with exposure to a multipathway substance. For TCDD, the mother's milk pathway is an additional mandatory noninhalation pathway to take into account (See Table 5.1). If there are exposures to any of the site-specific pathways, then these would be included too. A more detailed example calculation of HIs is shown in Appendix I.

When exposure to more than two noninhalation pathways occur, using the high-end point estimates of intake rates for only the two dominant noninhalation pathways will lessen the issue of compounding high-end exposure estimates, while retaining a health-protective approach for the more important exposure pathways. It is unlikely that an individual receptor would be on the high-end of exposure for all the non-inhalation intake parameters (exposure pathways).

### **8.3.4 Summary - Acute, 8-Hour and Chronic Hazard Index Calculation at the MEIR and MEIW**

Eight-hour RELs were developed principally for exposure of individuals during 8-hour work schedules. The 8-hour RELs should be used for typical daily work shifts of 8-9 hours. For further questions, assessors should contact OEHHA, the District, or reviewing authority to determine if the 8-hour RELs should be used in your HRA. Any discussions or directions to exclude the 8-hour REL evaluation should be documented in the HRA. There are currently only a limited number of substances with an 8-hour inhalation REL. Over time as the science supporting REL values for individual substances is reviewed and the RELs are revised by OEHHA, more 8-hour RELs will be developed.

Therefore, for the MEIR, we recommend:

- Estimating the acute Hazard Index based on the maximum 1-hour air concentration and 1-hour RELs
- Estimating the chronic Hazard Index based on the annual average air concentration and the chronic RELs, and the oral RELs for multipathway substances

An 8-hour hazard index based on the daily average 8-hour exposure is not required for the MEIR, but can be performed at the discretion of the District for exposure to non-continuously operating facilities using the adjusted annual average air concentration (See EQ 5.4.1.4 A and B or method in App. M). Eight-hour hazard assessments are not recommended for exposure to continuously operating facilities.

For the MEIW, we recommend:

- Estimating the acute Hazard Index based on the maximum 1-hour air concentration and 1-hour RELs
- Estimating the 8-hour Hazard Index based on daily average 8-hour exposure for those chemicals with 8-hour RELs
- Estimating the chronic Hazard Index based on the annual average air concentration and chronic RELs, and oral RELs for multipathway substances

Until there are 8-hour RELs for many of the Hot Spots substances that have a chronic REL value, we recommend determining the chronic HI for the MEIW to adequately protect the offsite worker.

### **8.3.5 Evaluation of Background Criteria Pollutants**

The District should be contacted to determine if the contribution of background criteria pollutants to respiratory health effects is required to be included in an HRA for the Hot Spots Program. If inclusion is required, the methods for calculating the health impact from acute and chronic exposure (respiratory endpoint) is the standard HI approach (see Sections 8.3.1 and 8.3.4). There are currently no 8-hour RELs for criteria

pollutants, so 8-hour health impacts from criteria pollutants are not assessed in HRAs. The background criteria pollutant contribution should be calculated if the HI from the facility's emissions exceeds 0.5 in either the acute or chronic assessment for the respiratory endpoint.

The most recent criteria pollutant concentration data should be obtained from the ARB's ambient air monitoring network and can be found in the *California Almanac of Emissions and Air Quality* on their web site at [www.arb.ca.gov](http://www.arb.ca.gov). For determining the criteria pollutant contribution in HI calculations, the annual average concentration data should be taken from a monitoring site near the facility. If background contributions are unavailable, the District may direct the risk assessor to make an alternative assumption. The criteria pollutants that should be included in acute and chronic assessments for the respiratory endpoint are ozone, nitrogen dioxide, sulfur dioxide, sulfates, and hydrogen sulfide.

#### **8.4 Uses of Exposure Duration Adjustments for Onsite Receptors**

Onsite workers are protected by CAL OSHA and typically are not evaluated under the Hot Spots program. Exceptions may include a worker who also lives on the facility property such as at prisons, military bases, and universities that have worker housing within the facility. Another scenario where the District may require assessment of on-site worker exposure and risk is when a facility (e.g., airport) has multiple businesses owned by different entities within the facility/property (e.g., rental car agencies, restaurants, etc.). In these situations the evaluation of onsite cancer risks, and/or acute, 8-hour, and chronic noncancer hazard indices is appropriate under the Hot Spots program. If the onsite receptor under evaluation can be exposed through a noninhalation exposure pathway, then that exposure pathway must also be included. When a receptor lives and works on the facility, site, or property, then these receptors should be evaluated and reported under both residential and worker scenarios and the one that is most health-protective should be used for risk management decisions.

The cancer risk estimates for the on-site residents may use a 30-year exposure duration while the 25-year exposure duration is used for a worker. Under a Tier 2 analysis, alternate exposure durations may be evaluated and presented with all assumptions supported. See section 8.2.10 for more discussion of short-term exposures.

Other situations that may require on-site receptor assessment include the presence of locations where the public may have regular access for the appropriate exposure period (e.g., a lunchtime café, store, or museum for acute exposures). The District or reviewing authority should be consulted on the appropriate evaluations for the risk for all onsite receptors.

## 8.5 References

ERG, 2008. Summary Report of the Peer Review Meeting: EPA's Draft Framework for Determining a Mutagenic Mode of Action for Carcinogenicity. Final Report. Submitted to Risk Assessment Forum, Office of the Science Advisor, U.S. Environmental Protection Agency, Washington, DC., by Eastern Research Group. May 23, 2008.

OEHHA, 2010. *Cumulative Impacts: Building a Scientific Foundation*. Available online at: <http://www.oehha.ca.gov>

OEHHA, 2008. *Air Toxics Hot Spots Program Risk Assessment Guidelines*. Technical Support Document for Deriving Noncancer Reference Exposure Levels. Office of Environmental Health Hazard Assessment, California Environmental Protection Agency. Available online at: <http://www.oehha.ca.gov>

OEHHA, 2009. *Air Toxics Hot Spots Program Risk Assessment Guidelines. Technical Support Document for Cancer Potency Factors: Methodologies for derivation, listing of available values, and adjustments to allow for early life stage exposures*. Office of Environmental Health Hazard Assessment, California Environmental Protection Agency. May 2009. Available online at: <http://www.oehha.ca.gov>

OEHHA, 2012. *Air Toxics Hot Spots Program Risk Assessment Guidelines; Technical Support Document for Exposure Assessment and Stochastic Analysis*. Office of Environmental Health Hazard Assessment, California Environmental Protection Agency. Available online at <http://www.oehha.ca.gov>

U.S. EPA, 2005a. Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens EPA/630/R-03/003F March 2005.

U.S.EPA, 2005b. Guidelines for Carcinogen Risk Assessment. Risk Assessment Forum, Washington, DC. EPA/630/P-03/001F.

## 9 - Summary of the Requirements for a Modeling Protocol and a Health Risk Assessment Report

The AB 2588 program is a community right-to-know act. Although risk assessment is a technical field, AB 2588 risk assessments need to be clear and understandable to the educated lay person. An Executive Summary that explains the process and the results of the risk assessment in lay terms is necessary. Clear risk communication is imperative in situations where the facility is required to notify the surrounding community. In addition, the risk assessment is by law reviewed by the local Air Pollution Control or Air Quality Management District (District) and OEHHA in order to ensure that AB 2588 risk assessment procedures have been followed. This chapter clarifies the type of information that is needed for District and OEHHA review of modeling protocols and health risk assessments (HRAs).

The material presented here is intended to promote transparent, consistent presentation and efficient review of the modeling protocol and the health risk assessment report (products). We recommend that persons preparing these products consult with the local District to determine if the District has modeling or HRA guidelines that supersede these products. If the District does not have guidelines for these products, then we recommend Section 9.1 be used for modeling protocols and Section 9.2 be used for the presentation of HRAs. Persons preparing modeling protocols and HRAs should specify the guidelines that were used to prepare their products.

### 9.1 Submittal of a Modeling Protocol

It is strongly recommended that a modeling protocol be submitted to the District for review and approval prior to extensive analysis with an air dispersion model. The modeling protocol is a plan of the steps to be taken during the air dispersion modeling and risk assessment process. We encourage people who are preparing protocols to take advantage of the protocol step and fully discuss anticipated methodologies for any portion of your project that may need special consideration. Below, we have provided an example of the format that may be followed in the preparation of the modeling protocol. **Consult with the District to confirm format and content requirements or to determine the availability of District modeling guidelines before submitting the protocol.**

### 9.1.1 *Outline for a Modeling Protocol*

#### *I. Introduction*

Include the facility name, address, and a brief overview describing the facility's operations.

- Provide a description of the terrain and topography surrounding the facility and potential receptors.
- Indicate the format in which data will be provided. Ideally, the report and summary of data will be on paper and all data and model input and output files will be provided electronically (e.g., compact disk or CD).
- Identify the guidelines used to prepare the protocol (e.g., District Guidelines).

#### *II. Emissions*

***For each pollutant and process whose emissions are required to be quantified in the HRA, list the annual average emissions (pounds/year and grams/second) and the maximum one-hour emissions (pounds/hour and grams/second)<sup>1</sup>. Maximum 1-hour emissions are used for acute noncancer health impacts while annual emissions are used for chronic exposures (i.e., chronic and 8-hour noncancer health impacts or cancer risk assessment).***

- Identify the reference and method(s) used to determine emissions (e.g., source tests, emission factors, etc.). Clearly indicate any emission data that are not reflected in the previously submitted emission inventory report. In this event, a revised emission inventory report will need to be submitted to the District.
- Identify if this will be a multipathway assessment based on emitted substances.

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<sup>1</sup> Except radionuclides, for which annual and hourly emissions are reported in Curies/year and millicuries/hour, respectively.

**III. Models / Modeling Assumptions*****Specify the model and modeling assumptions***

- Identify the model(s) to be used, including the version number.
- Identify the model options that will be used in the analysis.
- Identify the modeling domain(s) and the spacing of receptor grid(s). Grid spacing should be sufficient in number and detail to capture the concentration at all of the receptors of interest.
- Indicate complex terrain options that may be used, if applicable.
- Identify the source type(s) that will be used to represent the facility's operations (e.g., point, area, or volume sources, flare options or other).
- Indicate the preliminary source characteristics (e.g., stack height, gas temperature, exit velocity, dimensions of volume source, etc.).
- Identify and support the use of urban or rural dispersion coefficients for those models that require dispersion coefficients. For other models, identify and support the parameters required to characterize the atmospheric dispersion due to land characteristics (e.g., surface roughness, Monin-Obukhov length).

**IV. Meteorological Data*****Specify the type, source, and year(s) of hourly meteorological data (e.g., hourly surface data, upper air mixing height information).***

- State how the data are representative for the facility site.
- Describe QA/QC procedures.
- Identify any gaps in the data; if gaps exist, describe how the data gaps are filled.

**V. Deposition**

- Specify the method to calculate deposition (if applicable).

## VI. *Receptors*

***Specify the type and location of receptors. Include all relevant information describing how the individual and population-related receptors will be evaluated.***

- Identify and describe the location(s) of known or anticipated potential sensitive receptors, the point of maximum impact (PMI), the maximum exposed individual residential (MEIR), and worker (MEIW) receptors. Identify any special considerations or grids that will be used to model these receptors. This information should correspond with information provided in Section III (e.g., fine receptor spacing of 20 meters at the fence line and centered on the maximum impacts; coarse receptor spacing of 100 meters out to 2,000 meters; extra coarse spacing of 1,000 meters out to 20,000 meters).
- Identify if spatial averaging will be used. Include necessary background information on each receptor including how the domain and spacing will be determined for each receptor or exposure pathway.
- Describe how the cancer burden or population impact estimates are calculated. Clarify the same information for the presentation of noncancer population impacts (e.g., centroids of the census tracts in the area within the zone of impact).
- Specify that actual UTM coordinates and the block/street locations (i.e., north side of 3,000 block of Smith Street), where possible, will be provided for specified receptor locations.
- Identify and support the use of any exposure adjustments (e.g., time at location, diurnal).
- Include the list of anticipated exposure pathways that will be included and indicate which substance will be evaluated in the multipathway assessment. Identify if sensitive receptors are present and which receptors will be evaluated in the HRA.

## VII. *Maps*

***Identify how the information will be graphically presented.***

- Indicate which cancer risk isopleths will be plotted for the cancer zone of impact (e.g.,  $10^{-7}$ ,  $10^{-6}$  see Section 4.6.1).
- Indicate the hazard quotients or hazard indices to be plotted for the noncancer acute, 8 hour, and chronic zones of impact (e.g., 0.5, 1.0, etc.).

## 9.2 Health Risk Assessment Report

The purpose of this section is to provide an outline to assist with the preparation and review of HRAs. This outline specifies the key components that should be included in HRAs. All information used for the report must be presented in the HRA. Ideally, the HRA report and a summary of data used in the HRA will be on paper and all data and model input and output files will be provided electronically (e.g., CD). Persons preparing HRAs for the Hot Spots Program should consult the District to determine if HRA guidelines or special formats are to be followed when preparing and presenting the HRA's results.

If District guidelines or formats do not exist that supersede this outline, then the HRA should follow the format presented here. If the HRA is prepared for other programs, the reviewing authority should be consulted for clarification of format and content. We recommend that those persons preparing HRAs specify the guidelines that were used to prepare their product. **The HRA may be considered deficient by the reviewing authority if components that are listed here are not included.**

### 9.2.1 Outline for the Health Risk Assessment Report

#### I. Table of Contents

- Section headings with page numbers indicated.
- Tables of tables and Table of figures with page numbers indicated.
- Appendices with page numbers indicated.

#### II. Executive Summary

##### **Overview of all relevant information regarding the project or facility.**

- Facility identifier number (consult the District).
- Description of facility operations and a list identifying emitted substances including table of maximum 1-hour emissions, and annual average emissions.
- Provide a brief description of acute, 8-hour, chronic, and cancer health impacts of the emitted substances, based on OEHHA's descriptions in the appropriate Technical Support Documents.
- Text presenting overview of dispersion modeling and exposure assessment.
- Text describing estimated cancer risk for carcinogens, noncancer Hazard Quotients and Hazard Indices and a table showing target organ systems by substance for noncancer impacts.

- Summarize the individual and population-wide health impacts including the driving substance(s) and the driving exposure pathways:
  - Location (block/street location; e.g., north side of 3,000 block of Smith Street) and description of the off-site point of maximum impact (PMI), maximum exposed individual resident (MEIR), and maximum exposed individual worker (MEIW).
  - Location (block/street location; e.g., north side of 3,000 block of Smith Street) and description of any on-site receptors that were evaluated at the facility (consult District or agency).
  - Location (block/street location; e.g., north side of 3,000 block of Smith Street) and description of any sensitive receptors that are required by the district or reviewing authorities (consult District or agency).

**NOTE: When presenting information described in the following bullets, cancer risk should be presented separately for a residential 30-year, Tier-1 analysis. Results of other exposure assumptions (e.g., 9 or 70-year) or other tier evaluations should also be presented, and must be clearly labeled. For the Hot Spots Program, while the 30-year exposure duration is recommended as the basis for public notification and risk reduction audits and plans, the District has discretion to use the 70 year exposure scenario for its decisions. In addition, the 70 year cancer risk must be calculated to estimate population-wide impacts.**

- Text presenting an overview of the total cancer risk (including multipathway substances, if present) at the PMI, MEIR, MEIW, and sensitive receptors. Provide a table of cancer risk by substance for the MEIR and MEIW (if applicable). Include a statement indicating which of the substances appear to contribute most to (drive) the potential health impacts. In addition, identify the exposure pathways evaluated in the HRA.
- Provide a map of the facility and surroundings and identify the location of the MEIR, MEIW, PMI, and other locations or receptors of interest.
- Provide a map of 30-year and 70-year cancer risk zone of impact(s), if applicable.
- Text presenting an overview of the acute and chronic noncancer hazard quotients and the (total) hazard indices for the PMI, MEIR, MEIW, and sensitive receptors. Additionally, include 8-hour hazard quotients and hazard indices for the MEIW. Include separate statements (for acute, 8-hour, and chronic exposures) indicating which

of the substances appear to drive the potential health impacts. In addition, clearly identify the primary target organ(s) that are impacted from acute, 8-hour, and chronic exposures.

- Identify any sensitive subpopulations (e.g., child daycare facilities, schools, nursing homes) of concern.
- Table and text presenting an overview of estimates of population exposure (e.g., cancer burden or population estimates from HARP) (consult District or agency) (see Section 8.4).
- Version of the Risk Assessment Guidelines and computer program(s) used to prepare the risk assessment (e.g., HARP).

### **III. Risk Assessment Procedures**

#### **A. Hazard identification**

- Table and text identifying all substances emitted from the facility, plus any other substances required by the District or reviewing authority. Include the CAS number of the substance and the physical form of the substance if possible. [The Hot Spots substances are listed in Appendix A, and also in the ARB's Emission Inventory Criteria and Guidelines Regulations (Title 17, California Code of Regulations, Sections 93300-93300.5), and the Emission Inventory Criteria and Guidelines Report (EICG Report), which is incorporated by reference therein (ARB, 1997)].
- Table and text identifying all substances that are evaluated for cancer risk and/or noncancer acute, 8-hour, and chronic health impacts. In addition, identify any multipathway substances that present a cancer risk or chronic noncancer hazard via noninhalation routes of exposure.
- Describe the types and amounts of continuous or intermittent predictable emissions from the facility that occurred during the reporting year. As required by statute, releases from a facility include spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping (fugitive), leaching, dumping, or disposing of a substance into ambient air. Include the substance(s) released and a description of the processes that resulted in long-term and continuous releases.

#### **B. Exposure Assessment**

This section describes the information related to the air dispersion modeling process that needs to be reported in the risk assessment; the information is also presented in Chapter 4 (see Section 4.15). The District may have specific requirements regarding format and content (see Section 4.14). Sample calculations should be provided at each step to indicate how reported emissions

data were used. Reviewing agencies must receive input, output, and supporting files of various model analyses on computer-readable media (e.g., CD).

### **1. Information on the Facility and its Surroundings**

Report the following information regarding the facility and its surroundings:

- Facility Name
- Location (UTM coordinates and street address)
- Land use type (see Section 2.4)
- Local topography
- Facility plot plan identifying:
  - source locations
  - property line
  - horizontal scale
  - building heights
  - emission sources

### **2. Source and Emission Inventory Information**

#### **a. Release Parameters**

Report the following information for each release location in table format:

- Release location identification number
- Release name
- Release type (e.g., point, volume, area, line, pit, etc.)
- Source identification number(s) used by the facility for sources that emit out of this release location
- Release location using UTM coordinates
- Release parameters by release type (e.g., shown for point source):
- Stack height (m), stack diameter (building dimensions for downwash, exhaust gas exit velocity (m/s), exhaust gas volumetric flow rate (ACFM), exhaust gas exit temperature (K), etc.

#### **b. Source Description and Operating Schedule**

The description and operating schedule for each source should be reported in table form including the following information:

- Source identification number used by the facility
- Source name
- Number of operating hours per day and per year (e.g., 0800-1700, 2700 hr/yr)
- Number of operating days per week (e.g., Mon-Sat)

- Number of operating days or weeks per year (e.g., 52 wk/yr excluding major holidays)
- Release point identification number(s) for where source emissions are released
- Fraction of source emissions emitted at each release point by release point ID number

c. Emission Control Equipment and Efficiency

- Report emission control equipment and efficiency by source and by substance

d. Emissions Data Grouped By Source

Report emission rates for each toxic substance, grouped by source (i.e., emitting device or process identified in Inventory Report), in table form including the following information:

- Source name
- Source identification number
- Substance name and CAS number (from Inventory Guidelines)
- Annual average emissions for each substance (lb/yr)
- Hourly maximum emissions for each substance (lb/hr)

e. Emissions Data Grouped by Substance

Report facility total emission rate by substance for all emitted substances listed in the Air Toxics “Hot Spots” Program including the following information:

- Substance name and CAS number (from Inventory Guidelines)
- Annual average emissions for each substance (lb/yr)
- Hourly maximum emissions for each substance (lb/hr)

f. Emission Estimation Methods

Report the methods used in obtaining the emissions data indicating whether emissions were measured or estimated. Clearly indicate any emission data that are not reflected in the previously submitted emission inventory report and submit a revised emission inventory report to the district. A reader should be able to reproduce the risk assessment without the need for clarification.

g. List of Substances

Include tables listing all "Hot Spots" Program substances which are emitted, plus any other substances required by the District. Indicate substances to be evaluated for cancer risks and noncancer effects.

h. Exposed Population and Receptor Location

Report the following information regarding exposed population and receptor locations:

- Description of zone of impact including map showing the location of the facility, boundaries of zone of impact, census tracts, emission sources, sites of maximum exposure, and the location of all appropriate receptors. This should be a true map (one that shows roads, structures, etc.), drawn to scale, and not just a schematic drawing. USGS 7.5 minute maps or GIS based maps are usually the most appropriate choices. (If significant development has occurred since the user's survey, this should be indicated.)
- Separate maps for the cancer risk zone of impact and the hazard index (noncancer) zone of impact(s). The cancer zone of impact should include isopleths down to at least the 1/1,000,000 risk level. Because some districts use a level below 1/1,000,000 to define the zone of impact, the District should be consulted. For the noncancer zone of impact, three separate isopleths (to represent chronic, 8-hour, and acute HI) should be created to define the zone of impact for the hazard index from both inhalation and noninhalation pathways greater than or equal to 0.5. The point of maximum impact (PMI), maximum exposed individual at a residential receptor (MEIR), and maximum exposed individual worker (MEIW) for both cancer and noncancer risks should be located on the maps.
- Tables identifying population units and sensitive receptors (UTM coordinates, receptor IDs or index from the modeling, and street addresses of specified receptors)
- Heights or elevations of the receptor points.
- **Spatial averaging:** For each receptor type (e.g., PMI, MEIR, and MEIW, or other location of interest) that will utilize spatial averaging, the domain size and grid resolution must be clearly identified. If another domain or grid resolution other than 20 meters by 20 meters with 5-meter grid spacing will be used for a receptor, then care should be taken to determine the proper domain size and grid resolution that should be used. For a worker, the HRA shall support all assumptions used, including, but not limited to, documentation for all workers

showing the area where each worker routinely performs their duties. The final domain size should not be greater than the smallest area of worker movement. Other considerations for determining domain size and grid spacing resolution may include an evaluation of the concentration gradients across the worker area. The grid spacing used within the domain should be sufficient in number and detail to obtain a representative concentration across the area of interest. When spatial averaging over the deposition area of a pasture, garden, or water body, care should be taken to determine the proper domain size to make sure it includes all reasonable areas of potential deposition. The size and shape of the pasture, garden, or water body of interest should be identified and used for the modeling domain. The grid spacing or resolution used within the domain should be sufficient in detail to obtain a representative deposition concentration across the area of interest. One way to determine the grid resolution is to include an evaluation of the concentration gradients across the deposition area. The HRA shall support all assumptions used, including, but not limited to, documentation of the deposition area (e.g., size and shape of the pasture or water body, maps, representative coordinates, grid resolution, concentration gradients, etc.). The use of spatial averaging is subject to approval by the reviewing authority. This includes the size of the domain and grid resolution that is used for spatial averaging of a worksite or multipathway deposition area.

### **3. Meteorological Data**

If meteorological data were not obtained directly from the District, then the report must clearly indicate the data source and time period used. Meteorological data not obtained from the District must be submitted in electronic form along with justification for their use including information regarding representativeness and quality assurance.

The risk assessment should indicate if the District required the use of a specified meteorological data set. All memos indicating the District's approval of meteorological data should be attached in an appendix.

### **4. Model Selection and Modeling Rationale**

The report should include an explanation of the model chosen to perform the analysis and any other decisions made during the modeling process. The report should clearly indicate the name of the models that were used, the level of detail (screening or refined analysis) and the rationale behind the selection.

Also report the following information for each air dispersion model used:

- Version number
- Selected options and parameters in table form

- Identify the modeling domain(s) and the spacing of receptor grid(s). Grid spacing should be sufficient in number and detail to capture the concentration at all receptors of interest.

## 5. Air Dispersion Modeling Results

The report should include tables, text, and appendices that clearly present all of the following information

- Maximum hourly and annual average concentrations of chemicals at appropriate receptors such as the residential and worker MEI receptors
- Annual average and maximum one-hour (and 30-day average for lead only) concentrations of chemicals at appropriate receptors listed and referenced to computer printouts of model outputs
- Model printouts (numbered), annual concentrations, maximum hourly concentrations
- Disk with input/output files for air dispersion program (e.g., the AERMOD input file containing the regulatory options and emission parameters, receptor locations, meteorology, etc.)
- Include tables that summarize the annual average concentrations that are calculated for all the substances at each site. The use of tables that present the relative contribution of each emission point to the receptor concentration is recommended. (These tables should have clear reference to the computer model which generated the data. It should be made clear to any reader how data from the computer output were transferred to these tables.) [As an alternative, the above two tables could contain just the values for sites of maximum impact (i.e., PMI, MEIR and MEIW), and sensitive receptors, if required. All the values would be found in the Appendices.]

### C. Health Values Used in Dose-Response and Dose Estimates

- Provide tables of the acute, 8-hour and chronic inhalation RELs, chronic oral RELs (if applicable), and cancer potency factors for each substance that is quantified in the HRA.
- Identify the guidelines (title and date) that were used to obtain these factors, or indicate whether newly approved values obtained from the OEHHA website were used.
- Provide a table of target organ systems for each noncancer substance, including acute (1 hour), 8-hour, and chronic inhalation, and chronic oral (if applicable).

- Include tables of the estimated dose for each substance by each exposure pathway at the PMI, MEIR, MEIW, and at any sensitive receptor locations (required by the District).

#### **D. Risk Characterization**

The Hot Spots Analysis and Reporting Program (HARP) will generate the risk characterization data needed for the outline below. Any data needed to support the risk characterization findings should be clearly presented and referenced in the text and appendices. A listing of HARP output files that meet these HRA requirements is provided in this outline under the section entitled "Appendices". All HARP files should be included in the HRA. Ideally, the HRA report and a summary of data used in the HRA will be on paper and all data and model input and output files will be provided electronically (e.g., CD). Information on obtaining copies of HARP is available on the California Air Resources Board's Internet web site under the Air Toxics Program at [www.arb.ca.gov](http://www.arb.ca.gov).

**NOTE:** The cancer risk for the PMI, MEIR, and sensitive receptors of interest must be presented in the HRA's text, tables, and maps. OEHHA recommends that cancer risk for a 30-year exposure duration be presented for the MEIR, and that cancer risk for 9-year and 70-year exposure durations for the MEIR be presented to provide the risk managers with supplemental information. Note that the assessment of population impacts must be based on a 70-year exposure duration; thus all risk assessments need to estimate cancer risk for a 70-year exposure duration in order to report the number of individuals residing in the risk isopleths, or to calculate cancer burden if the District so requires. In addition, some Districts may opt to make risk management decisions based on a 70-year exposure duration. The MEIW location should use a 25-year exposure period.

All HRAs must include the results of a Tier-1 exposure assessment (see Chapter 2 and 8, or the 2012 TSD). If the reviewing authority specifies that additional exposure periods should be presented, or if persons preparing the HRA would like to present additional information (i.e., exposure duration adjustments or the inclusions of risk characterizations using Tier-2 through Tier-4 exposure data), then this information should be presented in separate, clearly titled, sections, tables, and text.

***The following information should be presented in this section of the HRA. If not fully presented here, then by topic, clearly identify the section(s) and pages within the HRA where this information is presented.***

- Description of receptors to be quantified.
- Table and text providing the location [UTM coordinates, receptor ID number or index from the modeling, and the block/street address

(e.g., north side of 3,000 block of Smith Street)] and description of the PMI, MEIR, and MEIW for both cancer and noncancer risks.

- Separate tables and text providing description of the PMI and MEIR for 30-year cancer risk, and 9- or 70-year cancer risk.
- Tables and text describing MEIW 25-year cancer risk.
- Table and text providing the location [UTM coordinates, receptor ID number or index from the modeling, and the block/street address (e.g., north side of 3,000 block of Smith Street)] and description of any sensitive receptor that is of interest to the District or reviewing authorities (consult District or agency).
- Provide any exposure information that is used for risk characterization (e.g., concentrations at receptors, emissions information, census information, figures, zone of impact maps, etc.). If multipathway substances are emitted, identify the site/route dependent exposure pathways (e.g., water ingestion) for the receptor(s), where appropriate (e.g., MEIR).
- Provide a summary of the site-specific inputs used for each exposure pathway (e.g., water or grazing intake assumptions). This information may be presented in an appendix with the information clearly presented and cross-referenced to the text. In addition, provide reference to the appendix (section and page number) that contains the modeling (i.e., HARP/dispersion modeling) files that show the same information.
- If any exposure parameters were used other than those provided in the Air Toxics Risk Assessment Guidelines: Technical Support Document for Exposure Assessment and Stochastic Analysis (2012), they must be presented in detail. The derivation and data used must be presented so that it is clear to the reviewer. The justification for using site-specific exposure parameters must be clearly presented.
- Table and text presenting the potential multipathway cancer risk by substance, by pathway, and total, at the PMI, MEIR, MEIW, and sensitive receptor locations (required by the District).
- Table and text presenting the acute (inhalation only) and chronic noncancer (inhalation and oral) hazard quotients (by substance, exposure pathways, and target organs) and the (total) hazard indices by substance and target organs for the PMI, MEIR, MEIW, and sensitive receptors. For 8-hour exposure at the MEIW (inhalation only), table and text presenting hazard quotients (by substance, exposure pathways, and target organs) and the (total) hazard indices by substance and target organs. Note:

Chronic noncancer results should be shown with inhalation and oral contributions (shown separately) and for the combined (multipathway) impact.

- Identify any sensitive subpopulations (e.g., child daycare facilities, schools, nursing homes) of concern.
- Table and text presenting estimates of population exposure (e.g., population exposure estimates or cancer burden from HARP) (consult District or agency). Tables should indicate the number of persons exposed to a (total) cancer risk greater than  $10^{-7}$ ,  $10^{-6}$ ,  $10^{-5}$ ,  $10^{-4}$ , etc., and total hazard quotient or hazard index greater than 0.5, 1.0, 2.0, and 3.0, etc. Provide a table that shows excess cancer burden for each population unit and the total excess cancer burden, if cancer burden calculation is required.
- Provide maps that illustrate the HRA results for the three sub-bullet points below. These maps should be an actual street map of the area impacted by the facility with elevation contours and actual UTM coordinates, and the facility boundaries clearly labeled. In some cases the elevation contours will make the map too crowded and should therefore not appear. This should be a true map (one that shows roads, structures, etc.), drawn to scale, and not just a schematic drawing. USGS 7.5-minute maps are usually the most appropriate choice (see Section 4.6).
  - The facility (emission points and boundaries), the locations of the PMI, MEIR, MEIW, and sensitive receptors.
  - Maps of the cancer zone of impacts (e.g.,  $10^{-6}$  or  $10^{-7}$  levels - consult District or Agency). The map should clearly identify the zone of impact for the inhalation pathway, the minimum exposure pathways (soil ingestion, dermal exposure, and breast-milk consumption) if multipathway substances are emitted, and the zone of impact for all the applicable exposure pathways (minimum exposure pathways plus any additional site/route specific pathways) for multipathway analyses. Two maps may be needed to accomplish this. The legend of these maps should state the level(s) used for the zone of impact and identify the exposure pathways that were included in the assessment.
  - Maps of the noncancer hazard index (HI) zone of impacts (e.g., 0.5 or 1.0 - consult District or Agency). The noncancer maps should clearly identify the noncancer zones of impact. These include the acute (inhalation), 8-hour (inhalation), chronic (inhalation), and chronic (multipathway) zones of impact. For clarity, presentation of the noncancer zones of impact may require two or more maps. The

legend of these maps should state the level(s) used for the zone of impact and identify the exposure pathways.

- The risk assessor may want to include a discussion of the strengths and weaknesses of the risk analyses and associated uncertainty directly related to the facility HRA.
- If appropriate, comment on the possible alternatives for control or remedial measures. How do the risks compare?
- If possible, identify any community concerns that influence public perception of risk.
- Sample calculations may be needed for all analyses in the HRA if proprietary software other than HARP was used. The District should be consulted. These calculations should be clearly presented and referenced to the findings they are supporting in the HRA text.
- Version of the Risk Assessment Guidelines and computer program used to prepare the risk assessment.
- If software other than HARP is used for the health assessment modeling, all supporting material must be included with the HRA (e.g., all algorithms and parameters used in a clear, easy to review format).

#### **E. References**

Include any references used for the HRA in this section.

#### **F. Appendices**

The appendices should contain all data, sample calculations, assumptions, and all modeling and risk assessment files that are needed to reproduce the HRA results. Ideally, a summary of data used in the HRA will be on paper and all data and model input and output files will be provided electronically (e.g., CD), unless otherwise specified by the district or reviewing authority. All appendices and the information they contain should be referenced, clearly titled, and paginated.

#### ***Potential Appendix Topics (if not presented elsewhere in the HRA report):***

- List of all receptors locations (UTM coordinates, receptor ID number or index from the modeling, and the block/street address (e.g., north side of 3,000 block of Smith Street)) for the PMI, MEIR, MEIW, and sensitive receptors.
- List of all emitted substances.
- All emissions files.

- List of dose-response factors (Reference Exposure Levels and cancer potency factors).
- All air dispersion modeling input and output files. Detailed discussions of meteorological data, regulatory options, emission parameters, receptor locations, etc.
- Census data.
- Maps.
- Identify the site/route dependent exposure pathways for the receptor(s), where appropriate (e.g., MEIR). Provide a summary of the site-specific inputs used for each pathway (e.g., water or grazing intake assumptions) and the data to support them.
- All calculations used to determine emissions, concentrations, and potential health impacts at the PMI, MEIR, MEIW, and sensitive receptors.
- All HRA model input and output (HARP) files for receptors of concern.
- (Total) cancer and noncancer impacts by receptor, substance, and exposure pathway (by endpoint for noncancer) at all receptors.
- Presentation of alternate risk assessment methods (e.g., alternate exposure durations, or Tier-2 to Tier-4 evaluations with supporting information).

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## List of Abbreviations

A - Area

AB2588 - Air Toxics "Hot Spots" Information and Assessment Act, 1987

ACFM - Actual Cubic Feet per Minute

ADL - Annual Dermal Load

AQMD - Air Quality Management District (District)

ARB - Air Resources Board

ASF - Age Sensitivity Factor

AT - Average Time for Lifetime Cancer Risk

BAF - Bioaccumulation Factor

BG - Urban Block Groups

BLP - Buoyant Line and Point Source Dispersion Model

BMI - Breast Milk Intake

BPIP - Building Profile Input Program

BPIPPRM - Building Profile Input Program for PRIME

BSA - Body Surface Area

BW - Bodyweight

$C_{air}$  - annual average air concentration

CALMPRO - Calms processor program

CAPCOA - California Air Pollution Control Officer's Association

CAS - Chemical Abstracts Service

CERCLA - Comprehensive Environmental Response, Compensation and Liability Act

$C_f$  - Average concentration of a substance in fish

$C_m$  - Average concentration of a substance in mother's milk (misabeled on 114 as  $C_f$ )

$C_{fa}$  - Average concentration of a substance in animal products

CONST2 - Constant in the Briggs' stable plume rise equation using BLP

CONST3 - Constant in the Briggs' neutral plume rise equation using BLP

CPF - Cancer Potency Factor

CRIT - Convergence criterion for the line source calculations using BLP

$C_s$  - Concentration of Substance in the Soil

CTDMPLUS - Complex Terrain Dispersion Model

CTSCREEN - Complex Terrain Screening Model

$C_v$  - Average concentration of a substance in and on vegetation

$C_w$  - Concentration of a Substance in the Water

DECFACT - Pollutant decay factor for use with BLP

DF - Discount Factor

$DOSE_{air}$  - Daily inhaled dose

$DOSE_{fa}$  - Exposure through ingesting home-raised or farm animal products

$DOSE_{fish}$  - Exposure through ingestion of angler-caught fish

Dose- $lm$  - Exposure through mother's milk ingestion

$DOSE_p$  - Exposure through ingesting home-grown produce

$DOSE_{water}$  - Exposure through ingesting water

DTHTA - Vertical potential temperature gradient  
DTSC - Department of Toxic Substance Control  
EASA - Exposure Assessment and Stochastic Analysis  
ED - Rural Enumeration Districts or Exposure Duration (in years)  
EF - Exposure Frequency  
EICG - Emission Inventory Criteria and Guidelines  
EPA - Environmental Protection Agency  
EQ - Equation  
F - Fahrenheit  
FAH - Fraction of Time at Home  
FG - Fraction of diet provided by grazing  
GIS - Geographic Information Systems  
GLC - Ground-Level Concentrations  
GRAF - Gastrointestinal Relative Absorption Factor  
HARP - Hot Spots Analysis and Reporting Program  
HESIS - Hazard Evaluation System and Information Service  
HI - Hazard Index  
HQ - Hazard Quotient  
HRA - Health Risk Assessment  
HSC - Health and Safety Code  
IARC - International Agency for Research on Cancer  
IDELS - Maximum variation in number of stability classes per hour (BLP option)  
ISCST3 - Industrial Source Complex Short Term  
IUPAC - International Union of Pure and Applied Chemistry  
K - Kelvin  
L - Fraction of locally-grown (source-impacted) feed that is not pasture (site-specific)  
LOAEL - Lowest Observed Adverse Effects Level  
LOD - Level of Detection  
LSHEAR - Plume rise wind shear (BLP option)  
LTRANS - Transitional point source plume rise (BLP option)  
MAXIT - Maximum iterations allowed for line source calculations (BLP option)  
MEIR - Maximally Exposed Individual Resident  
MEIW - Maximally Exposed Individual Worker  
METDB - Meteorological Database  
METS - Metabolic Equivalents  
MPRM - Meteorological Processor for Regulatory Models  
MWF - Molecular Weight Adjustment Factor  
NAS - National Academy of Sciences  
NCDC - National Climatic Data Center  
NOAEL - No Observed Adverse Effects Level  
NTP - National Toxicology Program  
NWS - National Weather Station  
OCD - Offshore and Coastal Dispersion Model  
OEHHA - Office of Environmental Health Hazard Assessment  
p - Population density  
PAH - Polycyclic Aromatic Hydrocarbons

PCB - Polychlorinated Biphenyl  
PCDD - Polychlorinated dibenzo-p-dioxins  
PCDF - Polychlorinated dibenzofurans  
PEXP - Vertical wind speed power law profile exponents  
PM2.5 - Particulate Matter less than 2.5 microns in diameter  
PM10 - Particulate Matter less than 10 microns in diameter  
PMI - Point of Maximum Impact  
QA - Quality Assurance  
QC - Quality Control  
RCRA - Resource Conservation and Recovery Act  
REL - Reference Exposure Level  
RfC - Reference Concentration  
RfD - Reference Dose  
SCRAM - Support Center for Regulatory Air Models  
SDM - Shoreline Dispersion Model  
SIR - Soil Ingestion Rate  
SMAQMD - Sacramento Metropolitan Air Quality Management District  
SRP - Scientific Review Panel  
TAC - Toxic Air Contaminant  
Tco – Biotransfer coefficient  
TEF - Toxic Equivalency Factor  
TERAN – Terrain option in BLP  
TSD - Technical Support Document  
TSP - Total Suspended Particulates  
UCL - Upper Confidence Limits  
USGS - U.S. Geological Survey  
UTM - Universal Transvers Mercator  
WAF - Worker Adjustment Factor  
WHO - World Health Organization

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**From:** Luke Swickard <lswickard@ninyoandmoore.com>

**Sent:** Thursday, October 31, 2024 5:51 PM

**To:** Adrian Napolitano <anapolitano@oakha.org>; Brandon Wilken <bwilken@ninyoandmoore.com>

**Cc:** Thomas Deloye <tdeloye@Oakha.org>; Rod Stinson <rods@raneymanagement.com>; Joe Baucum <jbaucum@raneymanagement.com>

**Subject:** RE: 401 Santa Clara - Phase 1 Questions - NEPA Review

Hello Adrian, nice to hear from you. I would be happy to answer your colleague's questions. First I will define a REC so we can have some clarity on what a constitutes a REC. As defined in the ASTM E1527-21 standard, which all Phase I ESAs are required to follow, a REC is defined as *"(1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment."*

Pertaining to the database listings (FINDS, ECHO, HWTS, HAZNET, RCRA NonGen / NLR), the reason these are not considered RECs is because, although hazardous materials and waste were handled and generated from the Site, there is no record nor observation of any spill, leak, or release to the environment. The presence of hazardous waste or materials alone is not considered a REC.

As for the off-site dry cleaning facilities, seven historical dry cleaning facilities were found in the vicinity of the Site, however all of them were downgradient of the Site, and the closest dry cleaner was 170 feet away. Due to the downgradient relationship to the Site, and the distance from the Site, these are not considered RECs. Additionally no records of any releases to the environment associated with the dry cleaners were found.

As for the 50-gallon used cooking oil AST, this was used to store used cooking oil generated by the

Site kitchen. The AST was located in the parking garage. I do not know if it will be needed in the future use of the Site building, that is a question for the Oakland Housing Authority.

Hopefully that answers all of the questions. Please let me know if there is any other way I can be of assistance. Thanks

**Luke Swickard**

Project Manager

**Ninyo & Moore** | Geotechnical & Environmental Sciences Consultants  
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**From:** Adrian Napolitano <[anapolitano@oakha.org](mailto:anapolitano@oakha.org)>

**Sent:** Wednesday, October 30, 2024 3:08 PM

**To:** Luke Swickard <[lswickard@ninyoandmoore.com](mailto:lswickard@ninyoandmoore.com)>; Brandon Wilken <[bwilken@ninyoandmoore.com](mailto:bwilken@ninyoandmoore.com)>

**Cc:** Thomas Deloye <[tdeloye@Oakha.org](mailto:tdeloye@Oakha.org)>; [rods@raneymanagement.com](mailto:rods@raneymanagement.com); Joe Baucum <[jbaucum@raneymanagement.com](mailto:jbaucum@raneymanagement.com)>

**Subject:** 401 Santa Clara - Phase 1 Questions - NEPA Review

Hi Luke and Brandon,

Hope you are well. Your team prepared the Phase I for 401 Santa Clara for the Authority back in May. We are in the middle of our NEPA review with our consultant Raney (cc'd), and our City of Oakland contact has the following comments/questions (in bold underlined font):

Regarding the analysis of potential impacts related to Contamination and Toxic Substances, she would like clarification on why the listing of the project site on various environmental databases is not considered a Recognized Environmental Condition (REC).

- “With respect to the review of applicable environmental databases, a computerized environmental information database search for the project site and vicinity was conducted by Environmental Data Resources (EDR) as part of the Phase I ESA. According to the EDR search results, the project site is listed on the RCRA NonGen/NLR, FINDS, and ECHO databases for handling – but not generating – hazardous waste, in 2016, 2022, and 2023; on the HWTS database for having tracked hazardous waste on-site in 2008, 2014, and 2016; and on the HAZNET database for storing, transferring, and disposing of several tons of pharmaceutical waste, and asbestos-containing waste from 2008 to 2020. The Phase I ESA determined that none of the foregoing database listings are considered RECs” – **Why aren't they “RECs”, especially since this was before the fire so unrelated to that?**

Additionally, concerning off-site facilities identified as part of the Phase I ESA's environmental database search:

- “Additionally, several off-site facilities were identified as part of the EDR search, including properties with records for handling – but not generating – hazardous waste, which is not considered a REC. Several off-site facilities were identified as listed laundry service facilities; however, none were considered a REC, as none of the listings included reports of release of hazardous materials.” **Why isn't dry cleaning considered an “REC”?**

Finally, regarding the on-site 50-gallon AST:

- The project itself contains a 50-gallon AST” – **Why does the property contain a 50-gallon AST? Is it still needed and where is it located?**

Thank you,  
Adrian



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*Please note that the Authority's offices are closed to the public every other Friday. To view a complete schedule of office closure dates, please go to: <http://www.oakha.org/AboutUs/Pages/OHA-Holidays.aspx>*

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Building Site Development

Construction Materials

Disaster Recovery Planning

**Land Classifications**

California Revised Storie Index (CA)

Conservation Tree and Shrub Group

Ecological Classification ID

Ecological Classification Name

**Farmland Classification**

[View Description](#) [View Rating](#)

**View Options**

Map

Table

Description of Rating

Rating Options

Detailed Description

**Advanced Options**

[View Description](#) [View Rating](#)

Hydric Rating by Map Unit

Irrigated Capability Class

Irrigated Capability Subclass

National Commodity Crop Productivity Index

NH Forest Soil Group

Nonirrigated Capability Class

Nonirrigated Capability Subclass

NRCS Ecological Site ID

NRCS Ecological Site Name

Order of Soil Survey

Soil Moisture Class

Soil Moisture Subclass

Soil Taxonomy Classification

Soil Taxonomy Great Group

Soil Taxonomy Order

Soil Taxonomy Particle Size or Substitute Class

Soil Taxonomy Subgroup

**Map — Farmland Classification**

**Scale** (not to scale)



Warning: Soil Ratings Map may not be valid at this scale.

**Tables — Farmland Classification — Summary By Map Unit**

Soil Taxonomy Suborder
Soil Temperature Regime
Land Management
Military Operations
Recreational Development
Sanitary Facilities
Soil Health
Subaqueous Soils
Vegetative Productivity
Waste Management
Water Management
Wildlife Management

Summary by Map Unit — Alameda County, California, Western Part (CA610)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
151	Urban land-Tierra complex, 5 to 15 percent slopes	Not prime farmland	1.0	100.0%
<b>Totals for Area of Interest</b>			<b>1.0</b>	<b>100.0%</b>
<b>Description — Farmland Classification</b>				
Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.				
<b>Rating Options — Farmland Classification</b>				
<b>Aggregation Method:</b> No Aggregation Necessary				
<b>Tie-break Rule:</b> Lower				

# DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the [Day/Night Noise Level Calculator Electronic Assessment Tool Overview \(/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/\)](/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/).

## Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

## Tools and Guidance

[Day/Night Noise Level Assessment Tool User Guide \(/resource/3822/day-night-noise-level-assessment-tool-user-guide/\)](/resource/3822/day-night-noise-level-assessment-tool-user-guide/)

[Day/Night Noise Level Assessment Tool Flowcharts \(/resource/3823/day-night-noise-level-assessment-tool-flowcharts/\)](/resource/3823/day-night-noise-level-assessment-tool-flowcharts/)

<b>Site ID</b>	401 Santa Clara Avenue
<b>Record Date</b>	09/11/2024
<b>User's Name</b>	

<b>Road # 1 Name:</b>	Interstate 580
-----------------------	----------------

**Road #1**

<b>Vehicle Type</b>	<b>Cars</b> <input checked="" type="checkbox"/>	<b>Medium Trucks</b> <input type="checkbox"/>	<b>Heavy Trucks</b> <input type="checkbox"/>
Effective Distance	214		
Distance to Stop Sign			
Average Speed	65		
Average Daily Trips (ADT)	154000		
Night Fraction of ADT	15		
Road Gradient (%)			
Vehicle DNL	72	0	0
<b>Calculate Road #1 DNL</b>	72	<b>Reset</b>	

[Add Road Source](#) [Add Rail Source](#)

Airport Noise Level	<input type="text"/>
Loud Impulse Sounds?	<input type="radio"/> Yes <input type="radio"/> No
Combined DNL for all Road and Rail sources	<input type="text" value="0"/>
Combined DNL including Airport	<input type="text"/>
Site DNL with Loud Impulse Sound	<input type="text"/>

## Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative:** Cancel the project at this location
- **Other Reasonable Alternatives:** Choose an alternate site
- **Mitigation**
  - **Contact your Field or Regional Environmental Officer**  
(</programs/environmental-review/hud-environmental-staff-contacts/>)
  - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
  - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
  - Incorporate natural or man-made barriers. See *The Noise Guidebook*  
(</resource/313/hud-noise-guidebook/>)
  - Construct noise barrier. See the **Barrier Performance Module**  
(</programs/environmental-review/bpm-calculator/>)

# Acceptable Separation Distance (ASD) Electronic Assessment Tool

The Environmental Planning Division (EPD) has developed an electronic-based assessment tool that calculates the Acceptable Separation Distance (ASD) from stationary hazards. The ASD is the distance from above ground stationary containerized hazards of an explosive or fire prone nature, to where a HUD assisted project can be located. The ASD is consistent with the Department's standards of blast overpressure (0.5 psi-buildings) and thermal radiation (450 BTU/ft<sup>2</sup> - hr - people and 10,000 BTU/ft<sup>2</sup> - hr - buildings). Calculation of the ASD is the first step to assess site suitability for proposed HUD-assisted projects near stationary hazards. Additional guidance on ASDs is available in the Department's guidebook "Siting of HUD- Assisted Projects Near Hazardous Facilities" and the regulation 24 CFR Part 51, Subpart C, Siting of HUD-Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature.

**Note:** Tool tips, containing field specific information, have been added in this tool and may be accessed by hovering over the ASD result fields with the mouse.

## Acceptable Separation Distance Assessment Tool

Is the container above ground? Yes:  No:

Is the container under pressure? Yes:  No:

Does the container hold a cryogenic liquified gas? Yes:  No:

Is the container diked? Yes:  No:

What is the volume (gal) of the container?

What is the Diked Area Length (ft)?

What is the Diked Area Width (ft)?

Diked Area (sqft)

ASD for Blast Over Pressure (ASDBOP)

ASD for Thermal Radiation for People (ASDPPU)

ASD for Thermal Radiation for Buildings (ASDBPU)

ASD for Thermal Radiation for People (ASDPNPD)

ASD for Thermal Radiation for Buildings (ASDBNPD)

**For mitigation options, please click on the following link:** [Mitigation Options \(/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/\)](/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/)

## Providing Feedback & Corrections

After using the ASD Assessment Tool following the directions in this User Guide, users are encouraged to provide feedback on how the ASD Assessment Tool may be improved. Users are also encouraged to send comments or corrections for the improvement of the tool.

Please send comments or other input using the **Contact Us** (<https://www.hudexchange.info/contact-us/>) form.

## Related Information

- [ASD User Guide \(/resource/3839/acceptable-separation-distance-asd-assessment-tool-user-guide/\)](/resource/3839/acceptable-separation-distance-asd-assessment-tool-user-guide/)
- [ASD Flow Chart \(/resource/3840/acceptable-separation-distance-asd-flowchart/\)](/resource/3840/acceptable-separation-distance-asd-flowchart/)













391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Carbon Dic Carbon Dioxide, Argon Mixture	0-2599 Cu 0-2599 Cu	365	FALSE	TRUE	Gas, Mix	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Cationic Emulsion General Purpose Cationic Polyurethane	0-99 Poun 0-99 Poun	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Chassis Grease Classic Grease Solution	0-11 Gall 0-11 Gall	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Chassis Grease Classic Grease	100-499 P 100-499 P	365	FALSE	TRUE	Solid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Concrete C Concrete Cutting Water	60-119 Gall 12-59 Gall	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Diesel Diesel 1-3-Flammable and Cor	120-599 G 12-59 Gall	365	FALSE	TRUE	Liquid, Pur	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Diesel Fuel Diesel Fuel	100-499 P 100-499 P	365	FALSE	TRUE	Liquid, Pur	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Differential Differential Oil	120-599 G 60-119 Ga	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Difluorom R-407C 2-2-Nonflammable G	100-499 P 0-99 Poun	365	FALSE	TRUE	Gas, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Engine Oil Engine Oil	3000-5999 3000-5999	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Ethylene G Antifreeze	60-119 Gall 12-59 Gall	365	FALSE	TRUE	Liquid, Pur	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Engine G Automobile Antifreeze	60-119 Gall 12-59 Gall	365	FALSE	TRUE	Liquid, Pur	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Ethylene G Ethylene Glycol	120-599 G 120-599 G	365	FALSE	TRUE	Liquid, Pur	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Ethylene G Ethylene Glycol	120-599 G 60-119 Ga	365	FALSE	TRUE	Liquid, Pur	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Fatty acid Biodegest	9000-1199 1200-2999	365	FALSE	TRUE	Liquid, Pur	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Gear Oil Gear Oil	9000-1199 2000-5999	365	FALSE	TRUE	Liquid, Pur	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	General pu General purpose cleaner	60-119 Gall 60-119 Ga	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Grease Grease	60-119 Gall 12-59 Gall	365	FALSE	TRUE	Liquid, Pur	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Groundwat Groundwater	120-599 G 120-599 G	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	HTL Diesel Oil Diesel	9000-1199 1200-2999	365	FALSE	TRUE	Liquid, Pur	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Hydraulic F Hydraulic Fluid	60-119 Gall 12-59 Gall	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Hydraulic H Hydraulic Oil	1200-2999 1200-2999	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Hydrogen, Hydrogen, Compressed Gas	12000-599 6000-8999	365	FALSE	TRUE	Gas, Pure	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Hydrogen, Hydrogen, Refrigerated/Liquid	9000-1199 0-11 Gall	365	FALSE	TRUE	Liquid, Pur	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Latex Paint Latex Paint	120-599 G 120-599 G	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Lead Acid L Lead Acid Battery	100-499 P 100-499 P	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Lubricant Lubricant	120-599 G 120-599 G	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Marine Gas Multigrade oil	60-119 Gall 12-59 Gall	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Naftelene N Naftelene	600-1199 1100-599 G	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Nitrogen Nitrogen	0-2599 Cu 0-2599 Cu	365	FALSE	TRUE	Gas, Pure	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Non-RCRA Oily Rags	Tons Tons	365	FALSE	TRUE	Solid	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Oil Separator Sludge	1000-4999 100-599 G	365	FALSE	TRUE	Liquid, Pur	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Oily Absorb Oil Absorbent	500-999 P 100-499 P	365	FALSE	TRUE	Solid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Oxygen Oxygen	0-2599 Cu 0-2599 Cu	365	FALSE	TRUE	Gas, Pure	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Petroleum Chassis Grease	120-599 G 120-599 G	365	FALSE	TRUE	Solid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Power was Rinswash Soap	120-599 G 120-599 G	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Phenol H Premium Lithium EPi Grease	60-119 Gall 60-119 Ga	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Propane Propane	0-2599 Cu 0-2599 Cu	365	FALSE	TRUE	Gas, Pure	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Propane Propane 2.1-Flammable Gas	0-99 Poun 0-99 Poun	365	FALSE	TRUE	Gas, Pure	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Quick salt Quick Salt Soap	120-599 G 120-599 G	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Salt Pellet Salt Pellet	100-499 P 100-499 P	365	FALSE	TRUE	Solid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Salt Cutting Soli Cutting	100-499 P 0-99 Poun	365	FALSE	TRUE	Solid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Spent ethy Spent Antifreeze	120-599 G 120-599 G	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Unleaded U Unleaded Gasoline	6000-8999 3000-5999	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Used Oil Diesel Exhaust Fluid (DEF)	600-1199 120-2999	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Urethane F Urethane Paint	60-119 Gall 60-119 Ga	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Used Dies Used Diesel Fuel	120-599 G 120-599 G	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Used Oil Used Oil	1200-2999 600-1199 I	365	FALSE	TRUE	Liquid	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Used Oil F Used Oil Filters (Metal)	600-1199 120-599 G	365	FALSE	TRUE	Solid	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Used Oil F Used Oil Filters (Plastic)	600-1199 120-599 G	365	FALSE	TRUE	Solid	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Vital Oxide Vital Oxide	600-1199 120-599 G	365	FALSE	TRUE	Liquid, Mix	FALSE													
391059	AC Transit	1100 SEMI	OAKLAND	94621	2024	*****	Waste Pair Waste Pair	12-59 Gall 12-59 Gall	365	FALSE	TRUE	Liquid	FALSE													
384137	AC TRANS	1177 47TH	EMERYVILLE	94608	2024	*****	1,1,1,2 Tet 1,1,1,2-Tetrahydro-2,2,2-Trifluoroethane	0-2599 Cu 0-2599 Cu	0	FALSE	TRUE	Liquid, Pur	FALSE													
384137	AC TRANS	1177 47TH	EMERYVILLE	94608	2024	*****	Acetone Acetone	12-59 Gall 0-11 Gall	0	FALSE	TRUE	Liquid, Pur	FALSE													
384137	AC TRANS	1177 47TH	EMERYVILLE	94608	2024	*****	Acetylene Acetylene 2.1-Flammable Gas	0-2599 Cu 0-2599 Cu	365	FALSE	TRUE	Gas, Pure	FALSE													
384137	AC TRANS	1177 47TH	EMERYVILLE	94608	2024	*****	Acrylonitrile Acrylonitrile	0-2599 Cu 0-2599 Cu	365	FALSE	TRUE	Gas, Pure	FALSE													
384137	AC TRANS	1177 47TH	EMERYVILLE	94608	2024	*****	Argon G Argon Gas	100-499 P 100-499 P	365	FALSE	TRUE	Gas, Pure	FALSE													
384137	AC TRANS	1177 47TH	EMERYVILLE	94608	2024	*****	Antifreeze Antifreeze	120-599 G 120-599 G	0	FALSE	TRUE	Liquid, Mix	FALSE													
384137	AC TRANS	1177 47TH	EMERYVILLE	94608	2024	*****	Argon, mix Helium/argon/carbon dioxide mix	0-2599 Cu 0-2599 Cu																		





52287	ASILE 1# 2	2881 BLAN ALAMEDA	94501	2024	*****	68476-34	Diesel Fuel	Diesel Fuel 3 - Flammable and Co	9000-1199 3000-5999	365	FALSE	TRUE	Liquid, Pur	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE
52287	ASILE 1# 2	2881 BLAN ALAMEDA	94501	2024	*****	68290-81	Gasoline	Premium 3 - Flammable and Co	12000-9999 6000-8999	365	FALSE	TRUE	Liquid, Pur	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
52287	ASILE 1# 2	2881 BLAN ALAMEDA	94501	2024	*****	68296-81	Gasoline	Regular 3 - Flammable and Co	12000-9999 6000-8999	365	FALSE	TRUE	Liquid, Pur	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
52287	ASILE 1# 2	2881 BLAN ALAMEDA	94501	2024	*****	74-8-9	Propane	Propane 3 - Flammable and Co	60-119 Gall 12-59 Gall	365	FALSE	TRUE	Liquid, Pur	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
52287	ASILE 1# 2	2881 BLAN ALAMEDA	94501	2024	*****		Ultra Degr	Car wash degreaser	12-59 Gall 12-59 Gall	365	FALSE	TRUE	Liquid, Mix	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
272514	A's Auto C	6006 SAN OAKLAND	94608	2024	*****		Argon/CO2 2.2	- Nonflammable and Co	0-2599 Cu 0-2599 Cu	365	FALSE	TRUE	Gas, Mix	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
272514	A's Auto C	6006 SAN OAKLAND	94608	2024	*****		Liquidin 3	- Flammable and Co	12-59 Gall 12-59 Gall	365	FALSE	TRUE	Liquid, Mix	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
272514	A's Auto C	6006 SAN OAKLAND	94608	2024	*****		Misc. Paint Related Material		0-99 Pounds 0-99 Pounds	365	FALSE	TRUE	Liquid, Mix	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
272514	A's Auto C	6006 SAN OAKLAND	94608	2024	*****		Used Moto 3	- Flammable and Co	12-59 Gall 12-59 Gall	365	FALSE	TRUE	Liquid, Mix	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
272514	A's Auto C	6006 SAN OAKLAND	94608	2024	*****		Waste Antifreeze		12-59 Gall 12-59 Gall	365	FALSE	TRUE	Liquid, Mix	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
272514	A's Auto C	6006 SAN OAKLAND	94608	2024	*****		Waste Flar 3	- Flammable and Co	12-59 Gall 12-59 Gall	365	FALSE	TRUE	Liquid	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
272514	A's Auto C	6006 SAN OAKLAND	94608	2024	*****		Compressed 2.2	- Nonflammable and Co	0-2599 Cu 0-2599 Cu	365	FALSE	TRUE	Gas, Pure	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
272514	A's Auto C	6006 SAN OAKLAND	94608	2024	*****		Acetylene	Acetylene 2.1 - Flammable Gas	0-2599 Cu 0-2599 Cu	365	FALSE	TRUE	Gas, Pure	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
90378	AAJ AUTO	2895 3RD / SAN FRAN	94107	2023	*****		bleach		0-11 Gall 0-11 Gall	0	FALSE	TRUE	Liquid, Mix	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
90378	AAJ AUTO	2895 3RD / SAN FRAN	94107	2023	*****		R-134a		0-2599 Cu 0-2599 Cu	0	FALSE	TRUE	Gas, Pure	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
90378	AAJ AUTO	2895 3RD / SAN FRAN	94107	2023	*****		used oil filter		60-119 Gall 60-119 Gall	0	FALSE	TRUE	Liquid	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
90378	AAJ AUTO	2895 3RD / SAN FRAN	94107	2023	*****		combustib waste coolant		60-119 Gall 60-119 Gall	0	FALSE	TRUE	Liquid	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
90378	AAJ AUTO	2895 3RD / SAN FRAN	94107	2023	*****		corrosives lead acid batteries		12-59 Gall 12-59 Gall	0	FALSE	TRUE	Liquid, Mix	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
90378	AAJ AUTO	2895 3RD / SAN FRAN	94107	2023	*****		74986	Flammable propane	1.1 - Flammable Gas	120-599 Gall 120-599 Gall	0	FALSE	TRUE	Gas, Pure	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE
90378	AAJ AUTO	2895 3RD / SAN FRAN	94107	2023	*****		70514-12	Lubricating Used lubricating oils		120-599 Gall 120-599 Gall	0	FALSE	TRUE	Liquid, Mix	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE
90378	AAJ AUTO	2895 3RD / SAN FRAN	94107	2023	*****		motor oil	motor oil	0-11 Gall 0-11 Gall	0	FALSE	TRUE	Liquid, Mix	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
68219	AK AUTO	650 PACIFIC ALAMEDA	94501	2022	*****		Motor Oil 3	- Flammable and Co	12-59 Gall 12-59 Gall	365	FALSE	TRUE	Liquid, Mix	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
68219	AK AUTO	650 PACIFIC ALAMEDA	94501	2022	*****		127-18-4	1,1,2,2-tetra Perchlorate 6.1 - Toxic Substances	0-99 Pounds 0-99 Pounds	365	FALSE	TRUE	Liquid	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
68219	AK AUTO	650 PACIFIC ALAMEDA	94501	2022	*****		Ethylene G	Ethylene Glycol	12-59 Gall 0-11 Gall	365	FALSE	TRUE	Liquid	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
68219	AK AUTO	650 PACIFIC ALAMEDA	94501	2022	*****		107-21-1	Ethylene G	Ethylene Glycol	12-59 Gall 0-11 Gall	365	FALSE	TRUE	Liquid, Pur	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE
68219	AK AUTO	650 PACIFIC ALAMEDA	94501	2022	*****		70514-12	Lubricating Used lubricating oils		120-599 Gall 120-599 Gall	0	FALSE	TRUE	Liquid, Pur	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE
3857	ALAMEDA,	1814 EVER ALAMEDA	94501	2023	*****		waterborne waste		12-59 Gall 0-11 Gall	0	FALSE	TRUE	Liquid, Pur	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
3857	ALAMEDA,	1814 EVER ALAMEDA	94501	2023	*****		2-butanol	Hemlth Ethyl 3 - Flammable and Co	12-59 Gall 0-11 Gall	0	FALSE	TRUE	Liquid, Pur	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
3857	ALAMEDA,	1814 EVER ALAMEDA	94501	2023	*****		70343-43	Argon mixe Argon mixed with Carbon Dioxide	0-2599 Cu 0-2599 Cu	0	FALSE	TRUE	Gas, Pure	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
3857	ALAMEDA,	1814 EVER ALAMEDA	94501	2023	*****		107-21-1	Ethylene G	Ethylene Glycol	12-59 Gall 0-11 Gall	0	FALSE	TRUE	Liquid, Pur	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE
3857	ALAMEDA,	1814 EVER ALAMEDA	94501	2023	*****		70514-12	Lubricating Used lubricating oils		12-59 Gall 0-11 Gall	0	FALSE	TRUE	Liquid, Pur	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE
3858	ALAMEDA,	2405 EAGL ALAMEDA	94501	2024	*****		74-8-9	Propane	Propane 3 - Flammable and Co	120-599 Gall 120-599 Gall	365	FALSE	TRUE	Gas, Pure	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
3858	ALAMEDA,	2405 EAGL ALAMEDA	94501	2024	*****		2-butanol 2	-butanol 2 -butanol 3 - Flammable and Co	12-59 Gall 0-11 Gall	365	FALSE	TRUE	Liquid, Pur	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
3858	ALAMEDA,	2405 EAGL ALAMEDA	94501	2024	*****		74-86-2	Acetylene	Acetylene 2.1 - Flammable Gas	0-2599 Cu 0-2599 Cu	365	FALSE	TRUE	Gas, Pure	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE
3858	ALAMEDA,	2405 EAGL ALAMEDA	94501	2024	*****		70343-43	Argon, mixe Argon/CO2	0-2599 Cu 0-2599 Cu	365	FALSE	TRUE	Gas, Mix	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
3858	ALAMEDA,	2405 EAGL ALAMEDA	94501	2024	*****		7439-10-1	Lead	Lead - 9-Misc. Hazardous M	500-999 Pounds 500-999 Pounds	365	FALSE	TRUE	Solid	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE
3858	ALAMEDA,	2405 EAGL ALAMEDA	94501	2024	*****		70514-12	Lubricating Used lubricating oils		120-599 Gall 120-599 Gall	365	FALSE	TRUE	Liquid, Mix	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE
3858	ALAMEDA,	2405 EAGL ALAMEDA	94501	2024	*****		PPD waste automotive		12-59 Gall 12-59 Gall	365	FALSE	TRUE	Liquid, Mix	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
3858	ALAMEDA,	2405 EAGL ALAMEDA	94501	2024	*****		Used antifr	Used antifr	12-59 Gall 12-59 Gall	365	FALSE	TRUE	Liquid	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
38474	ALAMEDA,	631 BIUENI ALAMEDA	94501	2023	*****		Automatic 3	- Flammable and Co	60-119 Gall 0-11 Gall	365	FALSE	TRUE	Liquid, Pur	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
38474	ALAMEDA,	631 BIUENI ALAMEDA	94501	2023	*****		Motor Oil 3	- Flammable and Co	120-599 Gall 0-11 Gall	365	FALSE	TRUE	Liquid, Pur	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
38474	ALAMEDA,	631 BIUENI ALAMEDA	94501	2023	*****		Motor Oil 3	- Flammable and Co	120-599 Gall 0-11 Gall	365	FALSE	TRUE	Liquid, Pur	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
38474	ALAMEDA,	631 BIUENI ALAMEDA	94501	2023	*****		100-52-7	Benzaldehy Synthetic 3 - Flammable and Co	120-599 Gall 0-11 Gall	365	FALSE	TRUE	Liquid, Pur	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
38474	ALAMEDA,	631 BIUENI ALAMEDA	94501	2023	*****		107-21-1	Ethylene G	Ethylene Glycol	12-59 Gall 0-11 Gall	365	FALSE	TRUE	Liquid, Pur	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE
38474	ALAMEDA,	631 BIUENI ALAMEDA	94501	2023	*****		Motor Oil 5	Motor Oil 5 3 - Flammable and Co	60-119 Gall 0-11 Gall	365	FALSE	TRUE	Liquid, Pur	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
38474	ALAMEDA,	631 BIUENI ALAMEDA	94501	2023	*****		74-86-2	Oxygen	Oxygen 2.2 - Nonflammable and Co	0-2599 Cu 0-2599 Cu	365	FALSE	TRUE	Gas, Pure	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE
38474	ALAMEDA,	631 BIUENI ALAMEDA	94501	2023	*****		74-86-2	Propane	Liquidin 2.1 - Flammable Gas	2000-1299 2000-1299	365	FALSE	TRUE	Gas, Pure	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE
90485	Alameda C	1600 FRAN OAKLAND	94612	2023	*****		1311-97-2	9-Misc. Hazardous M	500-999 Pounds 500-999 Pounds	365	FALSE	TRUE	Solid	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
90485	Alameda C	1600 FRAN OAKLAND	94612	2023	*****		Bleach	Bleach	60-119 Gall 12-59 Gall	365	FALSE	TRUE	Liquid, Mix	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
90485	Alameda C	1600 FRAN OAKLAND	94612	2023	*****		Diesel Fuel	Diesel Fuel	1200-2999 1200-2999	365	FALSE	TRUE	Liquid, Mix	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
90485	Alameda C	1600 FRAN OAKLAND	94612	2023	*****		Lead Acid	Lead Acid 1.8 - Corrosives	1200-599 Gall 1200-599 Gall	365	FALSE	TRUE	Liquid, Mix	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
90485	Alameda C	1600 FRAN OAKLAND	94612	2023	*****		Used Fluorescent Tubes		100-999 Pounds 100-999 Pounds	365	FALSE	TRUE	Liquid, Pur	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
90485	Alameda C	1600 FRAN OAKLAND	94612	2023	*****		Vitali Oxide	Vitali Oxide	120-599 Gall 60-119 Gall	365	FALSE	TRUE	Liquid, Mix	FALSE</											











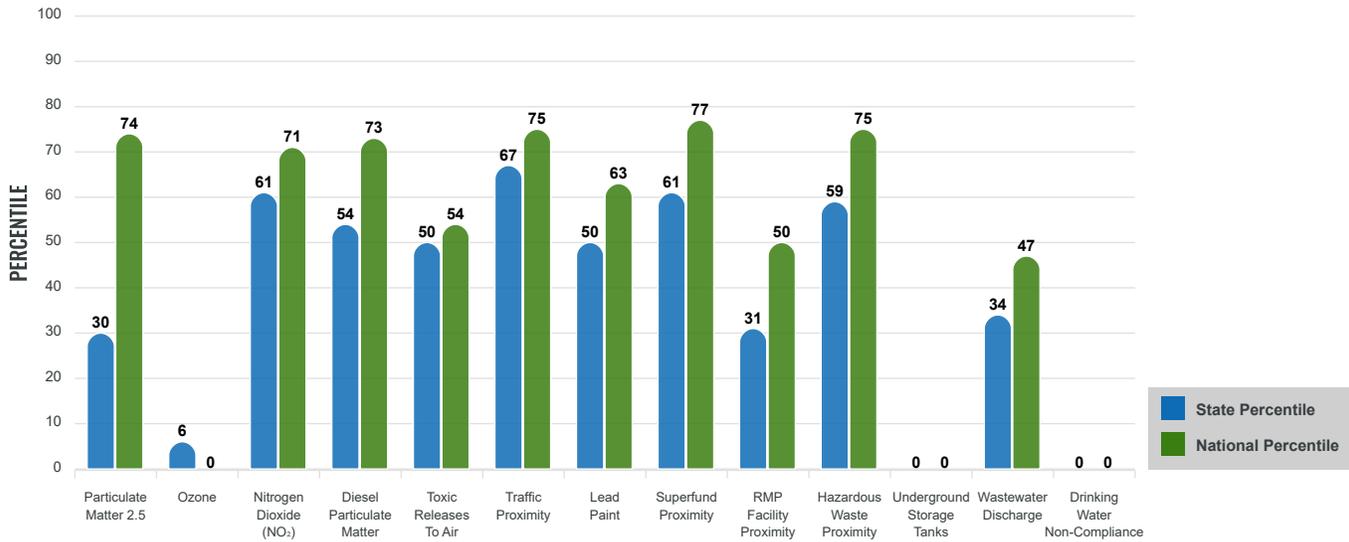
# Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen reflecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the [EJScreen website](#).

## EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

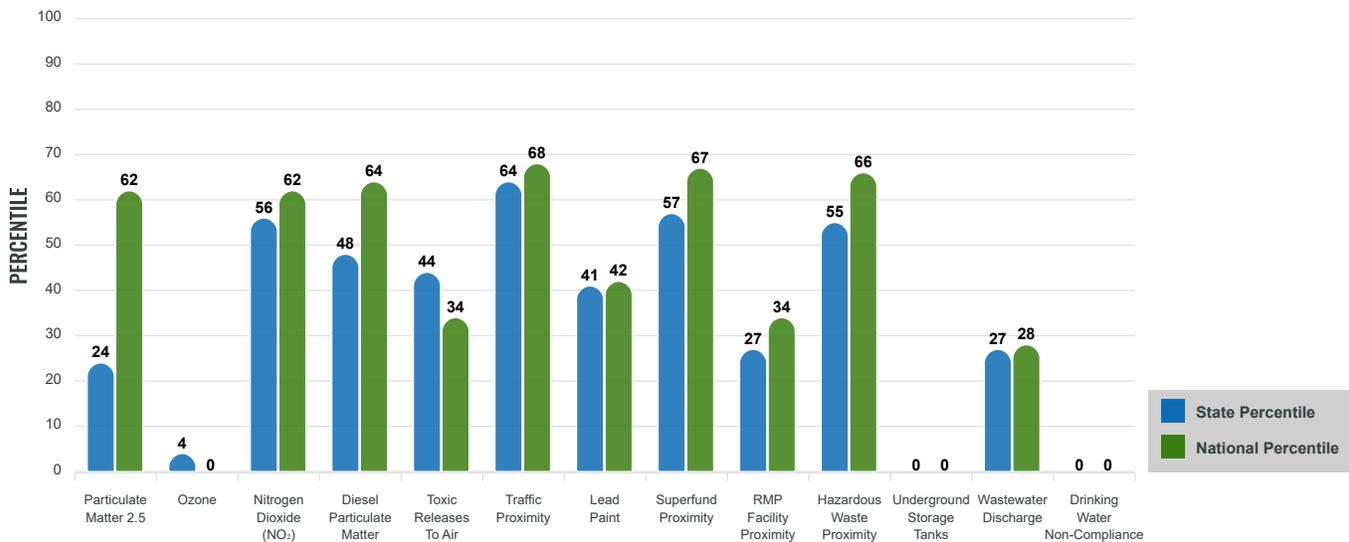
### EJ INDEXES FOR THE SELECTED LOCATION



## SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low income, percent persons with disabilities, percent less than high school education, percent limited English speaking, and percent low life expectancy with a single environmental indicator.

### SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



Report for Blockgroup: 060014039003

Report produced September 11, 2024 using EJScreen Version 2.3

# EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
<b>ENVIRONMENTAL BURDEN INDICATORS</b>					
Particulate Matter 2.5 (µg/m <sup>3</sup> )	11.2	12.3	30	8.45	91
Ozone (ppb)	47.4	74.2	5	61.8	0
Nitrogen Dioxide (NO <sub>2</sub> ) (ppbv)	12	9.1	86	7.8	88
Diesel Particulate Matter (µg/m <sup>3</sup> )	0.378	0.286	69	0.191	90
Toxic Releases to Air (toxicity-weighted concentration)	520	780	61	4,600	47
Traffic Proximity (daily traffic count/distance to road)	11,000,000	4,000,000	96	1,700,000	99
Lead Paint (% Pre-1960 Housing)	0.35	0.31	60	0.3	62
Superfund Proximity (site count/km distance)	0.48	0.68	76	0.39	83
RMP Facility Proximity (facility count/km distance)	0.16	0.83	31	0.57	40
Hazardous Waste Proximity (facility count/km distance)	18	11	77	3.5	96
Underground Storage Tanks (count/km <sup>2</sup> )	0	0.00036	0	3.6	0
Wastewater Discharge (toxicity-weighted concentration/m distance)	15	11000	34	700000	39
Drinking Water Non-Compliance (points)	0	0.5	0	2.2	0
<b>SOCIOECONOMIC INDICATORS</b>					
Demographic Index USA	1.13	N/A	N/A	1.34	48
Supplemental Demographic Index USA	0.99	N/A	N/A	1.64	15
Demographic Index State	1.28	1.83	29	N/A	N/A
Supplemental Demographic Index State	0.86	1.49	17	N/A	N/A
People of Color	49%	62%	34	40%	64
Low Income	15%	28%	32	30%	28
Unemployment Rate	4%	6%	45	6%	56
Limited English Speaking Households	4%	8%	48	5%	73
Less Than High School Education	11%	16%	52	11%	63
Under Age 5	3%	5%	34	5%	36
Over Age 64	26%	16%	85	18%	82

\*Diesel particulate matter index is from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

## Sites reporting to EPA within defined area:

Superfund .....	0
Hazardous Waste, Treatment, Storage, and Disposal Facilities .....	0
Water Dischargers .....	0
Air Pollution .....	0
Brownfields .....	0
Toxic Release Inventory .....	0

## Other community features within defined area:

Schools .....	0
Hospitals .....	0
Places of Worship .....	1

## Other environmental data:

Air Non-attainment .....	Yes
Impaired Waters .....	No

Selected location contains American Indian Reservation Lands* .....	No
Selected location contains a "Justice40 (CEJST)" disadvantaged community .....	No
Selected location contains an EPA IRA disadvantaged community .....	No

Report for Blockgroup: 060014039003

Report produced September 11, 2024 using EJScreen Version 2.3

# EJScreen Environmental and Socioeconomic Indicators Data

## HEALTH INDICATORS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	11%	18%	2	20%	1
Heart Disease	3.2	4.8	9	5.8	6
Asthma	9.4	9.6	45	10.3	25
Cancer	5.4	5.6	52	6.4	28
Persons with Disabilities	11.4%	11.3%	58	13.7%	40

## CLIMATE INDICATORS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	10%	13%	65	12%	67
Wildfire Risk	0%	30%	0	14%	0

## CRITICAL SERVICE GAPS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	3%	9%	30	13%	21
Lack of Health Insurance	5%	7%	46	9%	40
Housing Burden	No	N/A	N/A	N/A	N/A
Transportation Access Burden	No	N/A	N/A	N/A	N/A
Food Desert	No	N/A	N/A	N/A	N/A

Report for Blockgroup: 060014039003

Report produced September 11, 2024 using EJScreen Version 2.3

401 Santa Clara Ave. Basemap Imagery Draw Erase Save Session Tools More Data



Select Map Contents

Measure

Click one of the following buttons to start measuring:



Unit: Miles Mode: Auto

Distance 67.29 mi

New Measurement

401 Santa Clara Ave, X Q Basemap

Imagery Draw Erase Save Session Tools More Data

**Measure**

Click one of the following buttons to start measuring:

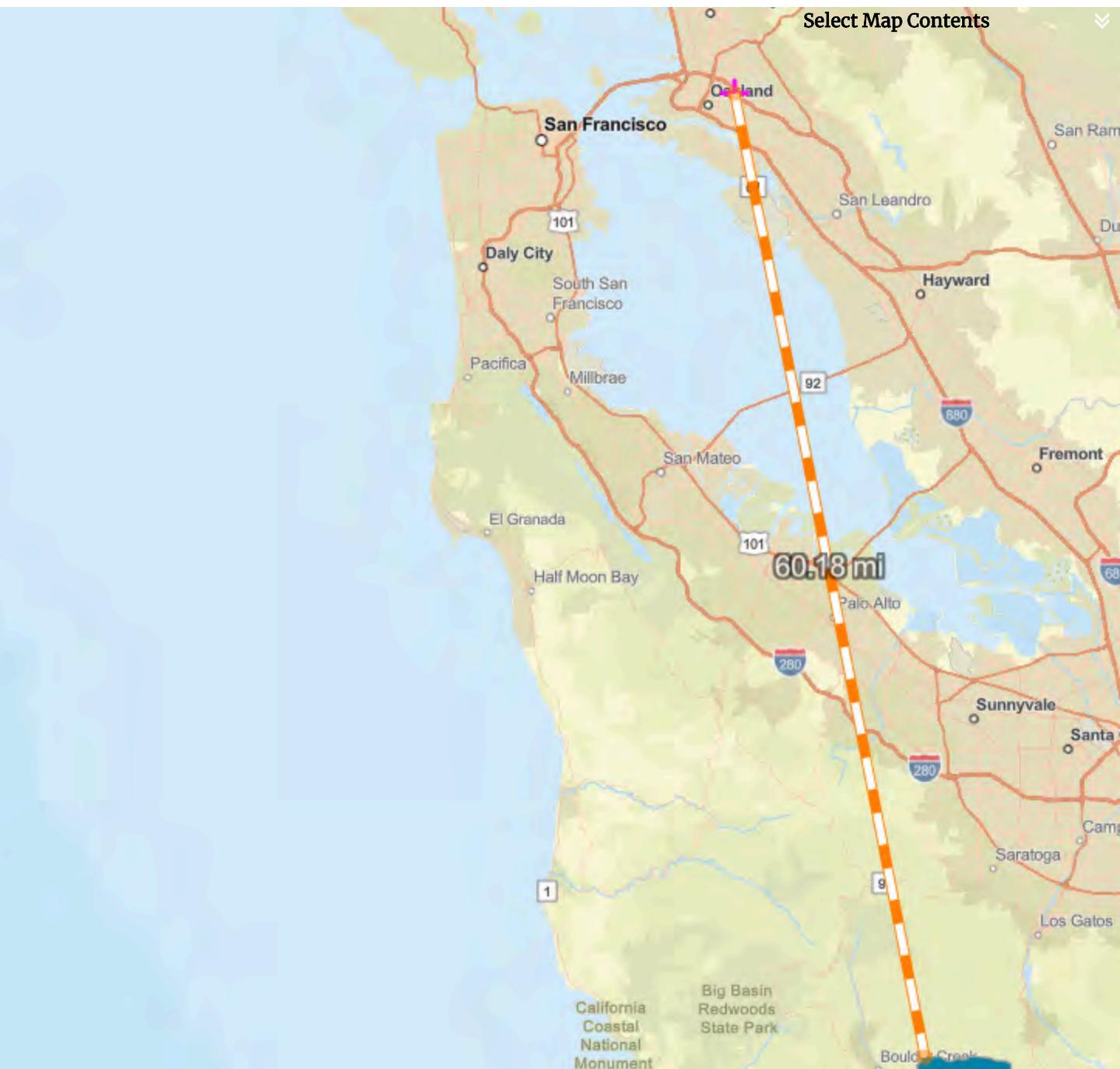
 

**Unit** **Mode**

Miles Auto

Distance  
**60.18 mi**

**New Measurement**





# User's Guide for the AMS/EPA Regulatory Model (AERMOD)



EPA-454/B-24-007  
November 2024

User's Guide for the AMS/EPA Regulatory Model (AERMOD)

U.S. Environmental Protection Agency  
Office of Air Quality Planning and Standards  
Air Quality Assessment Division  
Research Triangle Park, NC

## **Notice**

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## **Preface**

This User's Guide for the AMS/EPA Regulatory Model (AERMOD) provides user instructions for the AERMOD model. The technical description of the AERMOD algorithms is provided in a separate AERMOD Model Formulation document (EPA, 2024a). Additional resources provided by the USEPA that may be helpful with respect to the application of AERMOD can be accessed via the Support Center for Regulatory Atmospheric Modeling (SCRAM) website at <https://www.epa.gov/scram>.



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## **1.0 Introduction**

This section provides an overall introduction to the AERMOD model and to the AERMOD user's guide. Some suggestions are offered on how various users would best benefit from using the manuals. Additionally, an overview of the model's applicability, range of options, and basic input data and hardware requirements are provided. The input file required to run the AERMOD model (commonly referred to as the control file) is based on an approach that uses descriptive keywords and allows for a flexible structure and format.

### **1.1 How to use the AERMOD manuals**

The AERMOD model user's guide has been designed to meet the needs of various users with differing levels of experience with the model. This section describes briefly how users can benefit from using the manual.

#### **1.1.1 Novice users**

Novice users are those with limited exposure to or experience with the AERMOD model. They may be new to dispersion modeling applications in general, or new to the AERMOD model and therefore unfamiliar with the keyword/parameter approach utilized for the input file. These users should review the remainder of this Introduction to gain an overall perspective of the use of the AERMOD model, particularly for regulatory modeling applications. They should then focus their attention on Section 2.0, which provides an overview of the types of input and output files and setting up an input file that illustrates the more commonly used options of the AERMOD model. Section 2.0 provides a basic description of the input file structure and explains some of the advantages of the keyword/parameter approach to specifying modeling options and inputs. Section 3.0 then provides a more detailed and complete reference of the various options for running the model.

#### **1.1.2 Experienced modelers**

Experienced modelers have considerable experience in applying the AERMOD model in various situations. They should have basic familiarity with the overall goals and purposes of regulatory modeling and with the scope of options available in the AERMOD model. Experienced modelers who are new to the AERMOD model will benefit from first reviewing the contents of Section 2.0 of this guide, which

provides a basic orientation to the structure, organization, and philosophy of the keyword/parameter approach used for the input control file. Once they have a basic grasp of the input file structure and syntax rules, they will benefit most from using Section 3.0 of this volume as a reference to learn the overall capabilities of the model, or to understand the mechanics for implementing specific options. The information in Section 3.0 has functional organization with detailed descriptions of each of the individual keyword options by functional pathway. Once they are familiar with the keywords, they may find the functional keyword reference provided in APPENDIX A useful to quickly review the proper syntax and available options/parameters for a particular keyword.

Experienced modelers may also need to refer to the description of model formulation for AERMOD (EPA, 2024a) to gain a more complete understanding of the technical basis for the AERMOD model.

### 1.1.3 Management/decision makers

Those involved in a management or decision-making role for dispersion modeling applications will be especially interested in the remainder of this section, which provides an overview of the model, including its role in various regulatory programs, a brief description of the range of available options, and basic input and output data and computer hardware requirements needed to run the model. From this information, they should understand the basic capabilities of the AERMOD model well enough to judge the suitability of the model for specific applications. They may also want to review the overview provided in Section 2.0 to learn about the nature and structure of the input control file to better review the modeling results.

## **1.2 Overview of the AERMOD model**

This section provides an overview of the AERMOD model, including a discussion of the regulatory applicability of the model, a description of the basic options available for running the model, and an explanation of the basic input data and hardware requirements needed for executing the model.

### 1.2.1 Regulatory applicability

The U.S. Environmental Protection Agency (EPA) maintains a *Guideline on Air Quality Models* (EPA, 2017b), hereafter, Guideline, which is published as Appendix W to 40 CFR Part 51 (as revised). The Guideline provides the agency's guidance on regulatory applicability of air quality dispersion models. In general, regulatory modeling applications should be carried out in accordance with a modeling protocol that is reviewed and approved by the appropriate agency prior to conducting the modeling. The modeling protocol should identify the specific model, modeling options, and input data (e.g., meteorology, emission source parameters, etc.) to be used for a particular application.

### 1.2.2 Basic input data requirements

One of the basic inputs to AERMOD is the control file which contains the selected modeling options, as well as source location and parameter data, receptor locations, meteorological data file specifications, and output options. Another type of basic input data needed to run the model is the meteorological data. AERMOD requires two types of meteorological data files that are provided by the AERMET meteorological preprocessor program (EPA, 2024e). One file consists of surface scalar parameters, and the other file consists of vertical profiles of meteorological data. These meteorological data files are briefly described later in this section, and in more detail in Sections 2.0 and 3.0. For applications involving elevated terrain effects, the receptor and terrain data will need to be processed by the AERMAP terrain preprocessing program (EPA, 2018) before input to the AERMOD model.

### 1.2.3 Computer hardware requirements

The current version of the AERMOD model was developed within the Microsoft Windows operating system (Windows) and has been designed to run on Windows PCs within a Command-prompt using command-line arguments to initiate a model run. The amount of storage space required on the hard disk for a particular application will depend greatly on the output options selected. Some of the optional output files of concentration data can be rather large. More information on output file products is provided in Sections 2.1 and 3.7.

The AERMOD model includes a wide range of options for modeling air quality impacts of pollution sources, making it a popular choice among the modeling community for a variety of

applications. The following sections provide a brief overview of the options available within the AERMOD model.

#### 1.2.4 Dispersion options

Since the AERMOD model is designed to support the EPA's regulatory modeling programs, the regulatory modeling options will be the default mode of operation for the model. These options include the use of stack-tip downwash and a routine for processing averages in cases of calm winds or missing meteorological data. The model also includes various non-default options (e.g., suppress the use of stack-tip downwash, deposition modeling, NO<sub>2</sub> conversion, special processing for low wind conditions, and disable the date checking for non-sequential meteorological data files, to list a few). The latter option listed is needed to facilitate model evaluation. The AERMOD model also includes a non-default screening mode added specifically for integration with the AERSCREEN model interface (EPA, 2021). The user can specify several short-term averages to be calculated in a single run of the AERMOD model, as well as request the overall period (e.g., annual) averages.

#### 1.2.5 Source options

The model is capable of handling multiple sources, including point, volume, area, open pit, and both buoyant and non-buoyant line source types. AERMOD models non-buoyant line sources as elongated area sources or a series of volume sources. If elongated area sources are used to represent a narrow non-buoyant line source, the user can specify a line source in the control file, and the input required to define the source is simplified from the typical input required for an area source.

The buoyant line source algorithm from the Buoyant Line and Point Source (BLP) model (Schulman and Scire, 1980) has been incorporated into the AERMOD model beginning with version 15181. Several source groups may be specified in a single run, with the source contributions combined for each group. This is particularly useful for PSD applications where combined impacts may be needed for a subset of the modeled background sources that consume increment, while the combined impacts from all background sources (and the permitted source) are needed to demonstrate compliance with the National Ambient Air Quality Standards (NAAQS). The model contains algorithms for modeling the effects of aerodynamic downwash due to nearby buildings on point source emissions and depositional effects on particulate emissions.

Source emission rates can be treated as constant throughout the modeling period, or may be varied by month, season, hour-of-day, or other optional periods of variation. Variable emission rate factors may be specified for a single source or for a group of sources. The user may also specify a separate file of hourly emission rates for all source or some subset of sources that are included in a model run.

#### 1.2.6 Receptor options

The AERMOD model has considerable flexibility in the specification of receptor locations. The user has the capability of specifying multiple receptor networks in a single run and may also mix Cartesian grid receptor networks and polar grid receptor networks in the same run. This is useful for applications where the user may need a coarse grid over the whole modeling domain, but a denser grid over the area of maximum expected impacts. There is also flexibility in specifying the location of the origin for polar receptors, other than the default origin at (0,0) in x,y, coordinates.

The user can input elevated receptor heights to model the effects of terrain above (or below) the stack base elevation and may also specify receptor elevations above ground level to model flagpole receptors. There is no distinction in AERMOD between elevated terrain below release height and terrain above release height, as is with earlier regulatory models that distinguished between simple terrain and complex terrain. For applications involving elevated terrain, the user must also input a hill height scale along with the receptor elevation. To facilitate the generation of hill height scales for AERMOD, a terrain preprocessor, called AERMAP, has been developed (EPA, 2018).

#### 1.2.7 Meteorology options

The AERMOD model utilizes a file of surface boundary layer parameters and a file of profile variables including wind speed, wind direction, and turbulence parameters. These two types of meteorological inputs are generated by the meteorological preprocessor for AERMOD, which is called AERMET (EPA, 2024e). Both meteorological input files are sequential ASCII files, and the model automatically recognizes the format generated by AERMET as the default format. The model will process all available meteorological data in the specified input file by default, but the user can easily specify selected days or ranges of days to process.

### 1.2.8 Output options

The basic types of printed output available by AERMOD are:

- Summaries of high values (highest, second highest, etc.) by receptor for each different combinations of averaging period and source group;
- Summaries of overall maximum values (e.g., the maximum 50) for each averaging period and source group combination; and
- Tables of concurrent values summarized by receptor for each combination of averaging period and source group, for each day of data processed. These "raw" concentration values may also be output to unformatted (binary) files, as described below.

The summaries of high values by receptor and summaries of maximum values can be output for one or more groups of sources and individual sources in the same model simulation. In addition, when maximum values for individual sources are output, the user has the option of specifying whether the maximum source values are to be the maximum values for each source independently, the contribution of each source to the maximum group values, or both.

In addition to the tabular printed output products described above, the AERMOD model provides options for several types of file output products. One of these options for AERMOD is to output an unformatted ("binary") file of all concentration values as they are calculated. These files are often used for special postprocessing of the data. In addition to the unformatted concentration files, AERMOD provides options for several additional types of file outputs. One option is to generate a file of (X, Y) coordinates and design values (e.g., the second highest values at each receptor for a particular averaging period and source group combination) that can be easily imported into many graphic plotting packages to generate contour plots of the concentration values. Separate files can be specified for all the averaging period and source group combinations of interest to the user.

Another output file option from the AERMOD model is to generate a file of all occurrences when a concentration value equals or exceeds a user-specified threshold. Again, separate files are generated for only those combinations of averaging period and source group that are of interest to the user. These files include the date on which the threshold violation occurred, the receptor location, and the concentration value.

AERMOD includes options for two types of output files that are designed to facilitate model evaluation. One type of file lists concentrations by rank, where only one value per date is included. This file may be used to generate Q-Q (quantile) plots of results, where values from different models and/or observed data are paired by rank. The other type of output file provides arc maxima results, along with detailed information about the plume characteristics associated with the arc maximum.

Finally, there are output options specifically for comparing model results to the 24-hour PM<sub>2.5</sub>, 1-hour NO<sub>2</sub> and 1-hour SO<sub>2</sub> NAAQS. The forms of these standards are based on averages of ranked values across years which complicates their evaluation, especially the 1-hour NO<sub>2</sub> and SO<sub>2</sub> standards which are based on ranked values from the distribution of daily maximum 1-hour averages.

### 1.2.9 Source contribution analyses

In air quality dispersion modeling applications, the user may have a need to know the contribution that a particular source makes to an overall concentration value for a group of sources. This section provides a brief introduction to how these types of source contribution (sometimes referred to as source culpability) analyses are performed using the AERMOD model. More detailed information about exercising these options is provided in Section 3.0.

The AERMOD model provides the option of specifying source groups for which the model calculates high values independently. However, users may often have to run the model a second time selecting only specific days where the high values occurred and setting up each source in its own source group to obtain source contribution results. An EVENT processor has been incorporated into AERMOD to simplify this task when required. Also, special processing and output options, mentioned above, are included that are specific to determining source contributions with respect to the PM<sub>2.5</sub>, NO<sub>2</sub> and SO<sub>2</sub> standards.

## **2.0 Getting started - a brief tutorial**

This section provides a brief tutorial for setting up a simple application problem with the AERMOD model, which serves as an introduction for novice users to the AERMOD model. The example illustrates the usage of the more commonly used options in the AERMOD model. A more complete description of the available options for setting up the AERMOD model is provided in Section 3.0.

The example problem presented in this section is a simple application of the AERMOD model to a single point source. The source is a hypothetical stack at a small, isolated facility in a rural setting. Since the stack is below the Good Engineering Practice (GEP) stack height, the emissions from the source are subject to the influence of aerodynamic downwash due to the presence of nearby buildings. The tutorial guides the user through selection and specification of modeling options, specification of source parameters, definition of receptor locations, specification of the input meteorological data, and selection of output options. Since this discussion is aimed at novice users of the AERMOD model, general overviews of input and output files, as well as control file keyword/parameter approach, is provided first.

### **2.1 Controlling input and output files**

This section describes the various input and output files used by the AERMOD model and discusses control of input and output (I/O) in the Microsoft Windows PC environment. Much of this discussion also applies to operating the model in other environments.

#### **2.1.1 Description of AERMOD input files**

The two basic types of input files required to run the AERMOD model are: 1) the input control file containing the modeling options, source data and receptor data, and 2) the meteorological data files including a file of surface parameters and a separate file of multilevel parameters. Each of these is discussed below, as well as a third file type that may be used to initialize the AERMOD model with intermediate results from a previous run.

##### **2.1.1.1 Input control file**

The input control file contains the user-specified options for running the various AERMOD model (with a default filename, AERMOD.INP), includes the source parameter data and source group information, defines the receptor locations, specifies the location and parameters regarding the

meteorological data, and specifies the output options. Details regarding the keywords and parameters used in the input control file are provided in Section 3.0, and APPENDIX A.

#### 2.1.1.2 Meteorological data files

The input meteorological data is read into the AERMOD model from two separate data files, one corresponding to surface (scalar) parameters, and the other corresponding to multi-level profiles of data. The meteorological data filenames and formats are specified within the input control file using the ME SURFFILE and PROFFILE keywords. The AERMOD model accepts meteorological data that has been preprocessed by the AERMET meteorological preprocessor program (EPA, 2024e). The data are read from formatted ASCII files of hourly sequential records.

#### 2.1.1.3 Initialization file for model re-start

The AERMOD model has an optional capability to store intermediate results to an unformatted (sometimes called binary) file for later re-starting of the model in the event of a power failure or user interrupt. This unformatted file may, therefore, be used as an input file to initialize the model. This option is controlled by the SAVEFILE (saves intermediate results to a file) and the INITFILE (initialize result arrays from a previously saved file) keywords on the CO pathway.

When initializing the model for the re-start option, the user specifies the name of the unformatted results file on the INITFILE keyword. The default filename used if no parameter is provided is TMP.FIL.

#### 2.1.2 Description of AERMOD output files

The AERMOD model can produce a variety of output files, including a main file of model results, an unformatted file of intermediate results for later re-start of the model (AERMOD only), and several output data files for specialized purposes. These files are described below.

### 2.1.2.1 Main output file

The AERMOD model produces a standard output file of model results called AERMOD.OUT, by default, unless a unique name is provided by the user when AERMOD is executed at the command prompt. The contents and organization of this file are shown in Figure 2-5. This file includes a duplication of the contents of the input control up unless 'NO ECHO' is encountered in the input control file. The contents of the input control file will be duplicated in the output file up to the place in the file where 'NO ECHO' is specified. The contents of the input control file beyond 'NO ECHO' will not be duplicated in the output file. A summary of control file setup messages and a summary of the inputs follow the echo of inputs. The input summary includes a summary of modeling options, source data, receptor data, and meteorological data, following the same order as the pathways in the control file. If model calculations are performed, then the model results are summarized next. The content and order of the model result summaries depend on the output options selected. Following the detailed model results are summary tables of the high values for each averaging period and source group. The final portion of the main output file is the summary of messages for the complete model run.

### 2.1.2.2 Detailed error message file

The user may select an option for the model to save a separate file of detailed error and other messages, through use of the CO ERRORFIL keyword. The format and syntax of these messages is described in APPENDIX B. The order of messages within the file is the order in which they were generated by the model. The file includes all types of messages that were generated.

### 2.1.2.3 Intermediate results file for model re-start

The AERMOD model has an optional capability to store intermediate results to an unformatted (sometimes called binary) file for later re-starting of the model in the event of a power failure or user interrupt. This unformatted file may therefore be used as an input file to initialize the model. This option is controlled by the SAVEFILE (saves intermediate results to a file) and the INITFILE (initialize result arrays from a previously saved file) keywords on the CO pathway.

When saving the intermediate results for the re-start option, the user specifies the name of the unformatted results file on the SAVEFILE keyword. The user has the option of specifying a single filename, two filenames (for alternate saves), or specifying no filename. The default filename used if no parameter is provided is TMP.FIL. If a single file is used, then the intermediate results file is overwritten

on each successive dump, with the chance that the file will be lost if the interrupt occurs during the time that the file is opened. If two filenames are provided, then the model also saves to the second file on alternate dumps, so that the next most recent dump will always be available.

#### 2.1.2.4 Maximum value/threshold file

The user may select an option for the AERMOD model to generate a file or files of concentration values exceeding a user-specified threshold. The OU MAXIFILE keyword controls this option. The user may select separate files for each averaging period and source group combination for which a list of threshold violations may be needed. Each file includes several records with header information identifying the averaging period, source group and threshold value, and then a record for every occurrence where the result for that averaging period/source group equals or exceeds the threshold value. Each of these records includes the averaging period, source group ID, date for the threshold violation (ending hour of the averaging period), the x, y, z and flagpole receptor height for the receptor location where the violation occurred, and the concentration value.

The structure of the threshold violation file is described in more detail in APPENDIX C. Each of the files selected by the user is opened explicitly by the model as a formatted file. The filenames are provided on the input control file command. The user may specify the file unit on the MAXIFILE card through the optional FUNIT parameter. Please note, when specifying the FUNIT 1 to 32 are reserved for input/output files, internally computed file units range 100 to 730, and the following are reserved for debug files: 731, 931, 932, 933, 937, 938, 939, 941, 8837, 8932, 9937, 9938, 9939, 9940. Therefore, to ensure there will be no file conflicts, it is recommended that user-specified units begin at a large integer value such as 10,000 and increment by one. If no file unit is specified, then the file unit is determined internally according to the following formula:

$$\text{IMXUNT} = 100 + \text{IGRP} * 10 + \text{IAVE}$$

where IMXUNT is the Fortran unit number, IGRP is the source group number (the order in which the group is defined in the control file), and IAVE is the averaging period number (the order of the averaging period as specified on the CO AVERTIME card). This formula was developed for up to nine source groups and up to nine short-term averaging periods, therefore the range of possible internally generated file units for MAXIFILE is 100 to 199.

#### 2.1.2.5 Sequential results file for postprocessing

The user may select an option for the AERMOD model to generate a file or files of concentration values suitable for postprocessing. The OU POSTFILE keyword controls this option. The user may select separate files for each averaging period and source group combination for which postprocessing may be needed. For each file requested, the user has the option of specifying whether to use unformatted files suitable for postprocessing or to use a plot format which could allow for importing the x, y concentration files into a graphics package for plotting. For the unformatted file option, each file consists of sequential unformatted records of values at each receptor location for every averaging period calculated. For the plot file format option, each file consists of formatted records listing the x-coordinate, y-coordinate and concurrent concentration values for each receptor and for all averaging periods calculated. For certain applications, these files may become quite large, and should only be used when needed, especially when using the plot format.

The structure of both types of postprocessing file is described in more detail in APPENDIX C. Each of the postprocessing files selected by the user is opened explicitly by the model as either an unformatted or a formatted file, depending on the option selected. The filenames are provided on the input control file command. The user may specify the file unit on the POSTFILE card through the optional FUNIT parameter. Please note, when specifying the FUNIT 1 to 32 are reserved for input/output files, internally computed file units range 100 to 730, and the following are reserved for debug files: 731, 931, 932, 933, 937, 938, 939, 941, 8837, 8932, 9937, 9938, 9939, 9940. Therefore, to ensure there will be no file conflicts, it is recommended that user-specified units begin at a large integer value such as 10,000 and increment by one. If no file unit is specified, then the file unit is determined internally according to the following formulas:

$$\text{IPSUNT} = 200 + \text{IGRP} * 10 + \text{IAVE} \text{ for short-term averages}$$

$$\text{IAPUNT} = 300 + \text{IGRP} * 10 - 5 \quad \text{for PERIOD averages}$$

where IPSUNT and IAPUNT are the Fortran unit numbers, IGRP is the source group number (the order in which the group is defined in the control file), and IAVE is the averaging period number (the order of the averaging period as specified on the CO AVERTIME card). This formula will not cause any conflict with other file units used by the model for up to 9 source groups and up to 9 short-term averaging periods. This formula was developed for up to nine source groups and up to nine short-term averaging periods, therefore the range of possible internally generated file units for POSTFILE is 200 to 299 or 300 to 385 for PERIOD averaging periods.

#### 2.1.2.6 High value summary file for plotting

The user may select an option for the AERMOD model to generate a file or files of the highest concentration values at each receptor suitable for importing into a graphics package in order to generate contour plots. The OU PLOTFILE keyword controls this option. The user may select separate files for each averaging period, source group and high value combination for which a plot file may be needed. Each file includes several records with header information identifying the averaging period, source group and high value number of the results, and then a record for each receptor which contains the x and y coordinates for the receptor location, the appropriate high value at that location, and the averaging period, source group and high value number.

The structure of the plot file is described in more detail in APPENDIX C. Each of the plot files selected by the user is opened explicitly by the model as a formatted file. The filenames are provided on the input control file command. The user may specify the file unit on the PLOTFILE card through the optional FUNIT parameter. Please note, when specifying the FUNIT 1 to 32 are reserved for input/output files, internally computed file units range 100 to 730, and the following are reserved for debug files: 731, 931, 932, 933, 937, 938, 939, 941, 8837, 8932, 9937, 9938, 9939, 9940. Therefore, to ensure there will be no file conflicts, it is recommended that user-specified units begin at a large integer value such as 10,000 and increment by one. If no file unit is specified, then the file unit is determined internally according to the following formulas:

$$\begin{aligned} \text{IPLUNT} &= (\text{IVAL}+3)*100 + \text{IGRP}*10 + \text{IAVE} && \text{for short-term averages} \\ \text{IPPUNT} &= 300 + \text{IGRP}*10 && \text{for PERIOD averages} \end{aligned}$$

where IPLUNT and IPPUNT are the Fortran unit numbers, IVAL is the high value number (1 for FIRST highest, 2 for SECOND highest, etc.), IGRP is the source group number (the order in which the group is defined in the control file), and IAVE is the averaging period number (the order of the averaging period as specified on the CO AVERTIME card). This formula was developed for up to nine source groups and up to nine short-term averaging periods, therefore the range of possible internally generated file units for PLOTFILE is 400 to 499 or 300 to 385 with the use of PERIOD AVERTIME.

#### 2.1.2.7 TOXX model input files

The user may select an option for the AERMOD model to generate an unformatted file or files of concentration values exceeding a user-specified threshold for use with the TOXX model component of TOXST. The OU TOXXFILE keyword controls this option. The user may select separate files for each

averaging period for which a threshold violation file may be needed. Each file includes several records with header information identifying the title, averaging period, threshold value, and receptor network information, and then records including every occurrence where the result of any source group for that averaging period equals or exceeds the threshold value. Records are also output that identify the averaging period (hour number of the year), source group number and receptor number corresponding to the concentration values.

The structure of the threshold exceedance file for use with the TOXX model component of TOXST is described in more detail in APPENDIX C. Each of the files specified by the user is opened explicitly by the model as an unformatted file. The filenames are provided in the input control file. The user may specify the file unit on the TOXXFILE card through the optional FUNIT parameter. Please note, when specifying the FUNIT 1 to 32 are reserved for input/output files, internally computed file units range 100 to 730, and the following are reserved for debug files: 731, 931, 932, 933, 937, 938, 939, 941, 8837, 8932, 9937, 9938, 9939, 9940. Therefore, to ensure there will be no file conflicts, it is recommended that user-specified units begin at a large integer value such as 10,000 and increment by one. If no file unit is specified, then the file unit is determined internally according to the following formula:

$$ITXUNT(INDAVE) = 300 + INDAVE$$

where ITXUNT is a Fortran array that stores the Fortran unit number for each output file specified and INDAVE index reference for the ITXUNT array representing the averaging period based on the order each averaging period is specified on the CO AVERTIME card.

### 2.1.3 Controlling file inputs and outputs (I/O)

#### 2.1.3.1 Controlling I/O on PCs.

The main input control file and the main output print file are specified internally by AERMOD as AERMOD.INP and AERMOD.OUT by default, respectively. The user has the option to provide command-line arguments when executing the model at the command prompt to specify a user-defined input control input filename and main output filename. When using the default names of AERMOD.INP and AERMOD.OUT, a standard command line to execute the AERMOD model might look something like this:

C:\>AERMOD

where the command prompt has been given as "C:\>", but may look different on different systems, or may include a subdirectory specification. Refer to Section 2.4.8 for details on specifying user-defined filenames when running AERMOD from the command prompt.

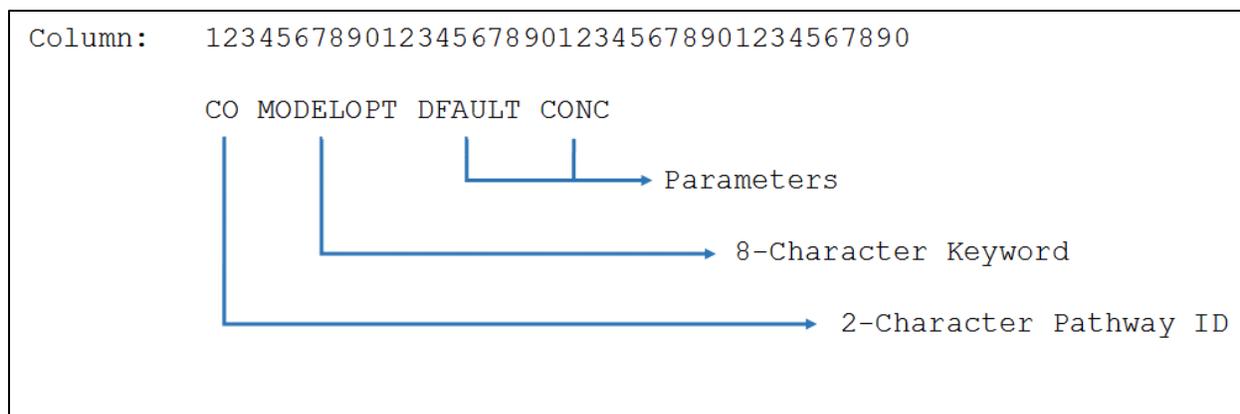
## 2.2 Description of keyword/parameter approach

The input control file for the AERMOD model makes use of a keyword/parameter approach to specifying the options and input data for running the model. The descriptive keywords and parameters that make up this control file may be thought of as a command language through which the user communicates with the model what he/she wishes to accomplish for a particular model run. The keywords specify the type of option or input data being entered on each line of the input file. An individual line or record in the control file is often referred to as a "card" throughout this manual and is commonly identified by the primary keyword associated with the information entered on the record. The parameters following the keyword define the specific options selected or the actual input data. Some of the parameters are also input as descriptive secondary keywords.

The control file is divided into five functional "pathways." These pathways are identified by a two-character pathway ID placed at the beginning of each line of the control file. The pathways and the order in which they are input to the model are as follows:

- CO** - for specifying overall job **C**ontrol options;
- SO** - for specifying **S**ource information;
- RE** - for specifying **R**eceptor information;
- ME** - for specifying **M**eteorology information;
- EV** - for specifying **E**vent processing;
- OU** - for specifying **O**utput options.

Each line of the input control file consists of a pathway ID, an 8-character keyword, and a parameter list. An example of a line of input from a control file, with its various parts identified, is shown below:



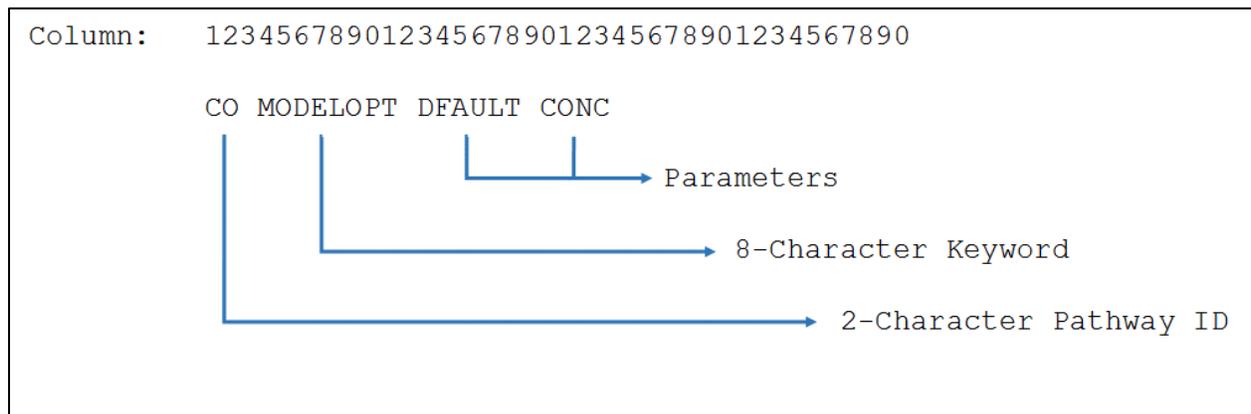
The following sections describe the rules for structuring the input control file and explain some of the advantages of the keyword/parameter approach.

### 2.2.1 Basic rules for structuring input control files

While the input control file has been designed to provide the user with considerable flexibility in structuring the input file, there are some basic syntax rules that need to be followed. These rules serve to maintain some consistency between input files generated by different users, to simplify the job of error handling performed by the model on the input data, and to provide information to the model in the appropriate order wherever order is critical to the interpretation of the inputs. These basic rules and the various elements of the input control file are described in the paragraphs that follow.

One of the most basic rules is that all inputs for a particular pathway must be “grouped within that specific pathway” and occur in the expected order, i.e., all inputs for the CO pathway must come first, followed by the inputs for the SO pathway, and so on. The beginning of each pathway is identified with a "STARTING" keyword, and the ending of the pathway with the "FINISHED" keyword. Thus, the first functional record of each input file must be "CO STARTING" and the last record of each input file must be "OU FINISHED." The rest of the input control file commands will define the options and input data for a particular run.

Each record in the input control file is read into the model as a 512-character image beginning with version 09292. The information on each input image consists of a "pathway," a "keyword," and one or more "parameters." Each of these "fields" on a line in the control file command must be separated from other fields by at least one blank space. To simplify the interpretation of the control file command by the model, the control file must be structured with the two-character pathway in columns 1 and 2, the eight-character keyword in columns 4 through 11, followed by the parameters beginning in column 13 through the end of image, limited to 512 characters. For most keywords, the order of parameters following the keyword is important -- the exact spacing of the parameters is not important as long as they are separated from each other by at least one blank space and do not extend beyond the 512-character limit. The example of a control file command from the CO pathway shown above is repeated here:



Alphabetical characters can be input as either lower case or uppercase letters. The model converts all character input to upper case letters internally, except the title fields and file names to be discussed later. Throughout this document, the convention of using upper case letters is followed. For numeric input data, it should be noted that all data are assumed to be in metric units, i.e., length units of meters, speed units of meters per second, temperature units of degrees Kelvin, and emission units of grams per second. In a few instances, the user has the option of specifying units of feet for length and the model will perform the conversion to meters. These exceptions are the input of receptor heights for elevated terrain and the specification of anemometer height since these values are often more readily available in feet than in meters.

Certain keywords are mandatory and must be present in every control file, such as the MODELOPT keyword shown in the example above which identifies the modeling options. There are

also keywords that are optional and are only needed to exercise specific options, such as the option to allow for the input of flagpole receptor heights. Some of the keywords are repeatable, such as the keywords to specify source parameters, while other keywords may only appear once. The keyword references are provided in Section 3.0 and APPENDIX A.

With a few exceptions that are described below, the order of keywords within each pathway is not critical. For the SO pathway, the LOCATION keyword must be specified before other keywords for a particular source, and the SRCGROUP keyword must be the last keyword before SO FINISHED unless the PSDCREDIT keyword is specified on the MODELOPT card, in which case, SRCGROUP is replaced with the PSDGROUP keyword. For keywords on the SO pathway that accept a range of source IDs, the source parameters specified by those keywords will only be applied to the sources already defined and will exclude any sources that are specified later in the input file.

The PARAMETER ILEN\_FLD is used to specify the maximum length of individual fields on the input control file command and to declare the length of all filename and format variables. This PARAMETER is currently assigned a value of 200 beginning with version 09292 and is in MODULE MAIN1 in MODULES.FOR.

### 2.2.2 Advantages of the keyword approach

The keyword approach provides some advantages over the type of input file used by other models that require formatted input of several numeric switches. One advantage is that the keywords are descriptive of the options and inputs being used for a particular run, making it easier for a reviewer to ascertain what was accomplished in a particular run by reviewing the input file. Another advantage is that the user has considerable flexibility in structuring the inputs to improve their readability and understandability if they adhere to the few basic rules described above.

Some special provisions have been made to increase the flexibility to the user in structuring the input files. One provision is to allow for blank records in the input file. This allows the user to separate the pathways from each other, or to separate a group of images, such as source locations, from the other images. Another provision is for the use of "comment lines," identified by a "\*\*\*" in the pathway field. Any input image that has "\*\*\*" for the pathway ID will be ignored by the model. This is especially useful for labeling the columns in the source parameter input images, as illustrated in the example problem later in this section. It may also be used to "comment out" certain options for a particular run without deleting the options and associated data (e.g., elevated terrain heights) completely from the input file. Because of

the descriptive nature of the keyword options and the flexibility of the inputs it is generally much easier to make modifications to an existing input control file to obtain the desired result.

Another reason for improved "user-friendliness" is that detailed error-handling has been built into the model. The model provides descriptions of the location and nature of all the errors encountered for a particular run. Rather than stopping execution at each occurrence of an input error, the model will read through and attempt to process all input records and report all errors encountered. If a fatal error occurs, then the model will not attempt to execute the model calculations.

### **2.3 Regulatory default modeling options**

The regulatory default option is controlled from the MODELOPT keyword on the CO pathway. As its name implies, this keyword controls the selection of modeling options. It is a mandatory, non-repeatable keyword, and it is an especially important keyword for understanding and controlling the operation of the AERMOD model. Unless specified otherwise through the available keyword options, the AERMOD model implements the following default options:

- Use the elevated terrain algorithms requiring input of terrain height data;
- Use stack-tip downwash (except for building downwash cases);
- Use the calms processing routines;
- Use the missing data processing routines; and
- Use a 4-hour half-life for exponential decay of SO<sub>2</sub> for urban sources.

**Note that beginning with AERMOD version 18081, the 4-hour half-life is included by default for SO<sub>2</sub> urban sources for regulatory default applications and non-regulatory applications.**

The parameters used to specify options on the MODELOPT keyword are character strings, called "secondary keywords," that are descriptive of the option being selected. For example, to ensure that the regulatory default options listed above are used for a particular model simulation, the user would include the secondary keyword "DFAULT" on the MODELOPT input. Upon initial execution, the model reads the control file to identify any conflicts in the options specified. In most cases, the model will issue an error message to inform the user of the conflict and abort before the simulation begins. For regulatory modeling applications, it is strongly suggested that the DFAULT switch be set to ensure the regulatory default options listed above are used and non-regulatory options are not used.

In addition to the default regulatory options listed above, AERMOD includes several other regulatory options that are application dependent and are required to be set explicitly by the user in the control file. Most of these can be set with the use of secondary keywords associated with the MODELOPT keyword. The MODELOPT keyword is described in more detail in the Section 3.2.2. Throughout this user's guide, there has been an effort to clearly distinguish regulatory options that are required to be set by the user and can be used simultaneously with the DFAULT keyword from non-regulatory options that cannot be used along with the DFAULT keyword. These non-regulatory options are sometimes referred to as "non-DFAULT" options since they cannot be used along with the DFAULT keyword.

## **2.4 Setting up a simple control file**

This section goes through a step-by-step description of setting up a simple application problem, illustrating the more commonly used options of the AERMOD model. The example problem is based on a simple industrial source application. The input file for AERMOD for the example problem is shown in Figure 2-1. The remainder of this section explains the various parts of the input file for the AERMOD model and illustrates some of the flexibility in structuring the input file.

```

CO STARTING
CO TITLEONE A Simple Example Problem for the AERMOD-PRIME Model
CO MODELOPT CONC FLAT
CO AVERTIME 3 24 PERIOD
CO POLLUTID SO2
CO RUNORNOT RUN
CO FINISHED

SO STARTING
SO LOCATION STACK1 POINT 0.0 0.0 0.0
SO SRCPARAM STACK1 500.0 65.00 425. 15.0 5.
SO BUILDHGT STACK1 36*50.
SO BUILDWID STACK1 62.26 72.64 80.80 86.51 89.59 89.95
SO BUILDWID STACK1 87.58 82.54 75.00 82.54 87.58 89.95
SO BUILDWID STACK1 89.59 86.51 80.80 72.64 62.26 50.00
SO BUILDWID STACK1 62.26 72.64 80.80 86.51 89.59 89.95
SO BUILDWID STACK1 87.58 82.54 75.00 82.54 87.58 89.95
SO BUILDWID STACK1 89.59 86.51 80.80 72.64 62.26 50.00
SO BUILDLLEN STACK1 82.54 87.58 89.95 89.59 86.51 80.80
SO BUILDLLEN STACK1 72.64 62.26 50.00 62.26 72.64 80.80
SO BUILDLLEN STACK1 86.51 89.59 89.95 87.58 82.54 75.00
SO BUILDLLEN STACK1 82.54 87.58 89.95 89.59 86.51 80.80
SO BUILDLLEN STACK1 72.64 62.26 50.00 62.26 72.64 80.80
SO BUILDLLEN STACK1 86.51 89.59 89.95 87.58 82.54 75.00
SO XBADJ STACK1 -47.35 -55.76 -62.48 -67.29 -70.07 -70.71
SO XBADJ STACK1 -69.21 -65.60 -60.00 -65.60 -69.21 -70.71
SO XBADJ STACK1 -70.07 -67.29 -62.48 -55.76 -47.35 -37.50
SO XBADJ STACK1 -35.19 -31.82 -27.48 -22.30 -16.44 -10.09
SO XBADJ STACK1 -3.43 3.34 10.00 3.34 -3.43 -10.09
SO XBADJ STACK1 -16.44 -22.30 -27.48 -31.82 -35.19 -37.50
SO YBADJ STACK1 34.47 32.89 30.31 26.81 22.50 17.50
SO YBADJ STACK1 11.97 6.08 0.00 -6.08 -11.97 -17.50
SO YBADJ STACK1 -22.50 -26.81 -30.31 -32.89 -34.47 -35.00
SO YBADJ STACK1 -34.47 -32.89 -30.31 -26.81 -22.50 -17.50
SO YBADJ STACK1 -11.97 -6.08 0.00 6.08 11.97 17.50
SO YBADJ STACK1 22.50 26.81 30.31 32.89 34.47 35.00
SO SRCGROUP ALL
SO FINISHED

RE STARTING
RE GRIDPOLR POL1 STA
RE GRIDPOLR POL1 ORIG STACK1
RE GRIDPOLR POL1 DIST 175. 350. 500. 1000.
RE GRIDPOLR POL1 GDIR 36 10 10
RE GRIDPOLR POL1 END
RE FINISHED

ME STARTING
ME SURFFILE AERMET2.SFC
ME PROFFILE AERMET2.PFL
ME SURFDATA 14735 1988 ALBANY,NY
ME UAIRDATA 14735 1988 ALBANY,NY
ME SITEDATA
ME PROFBASE 0.0 METERS
ME FINISHED

OU STARTING
OU RECTABLE ALIVE FIRST-SECOND
OU MAXTABLE ALIVE 50
OU FINISHED

```

**Figure 2-1. Example Input File for AERMOD for Sample Problem**

### 2.4.1 A simple industrial source application

For this simple tutorial, an application is selected involving a single point source of SO<sub>2</sub> that is subject to the influences of building downwash. The source consists of a 50-meter stack with a buoyant release that is adjacent to a building. It is assumed that the stack is situated in flat terrain in a rural setting. A polar receptor network will be placed around the stack location to identify areas of maximum impact.

### 2.4.2 Selecting modeling options - CO pathway

The modeling options are input to the model on the Control pathway. The mandatory keywords for the CO pathway are listed below. A complete listing of all keywords is provided in Section 3.2 and APPENDIX A

- STARTING - Indicates the beginning of inputs for the pathway; this keyword is mandatory on each of the pathways.
- TITLEONE - A user-specified title line (up to 68 characters) that will appear on each page of the printed output file (an optional second title line is also available with the keyword TITLE TWO).
- MODELOPT - Controls the modeling options selected for a particular run through a series of secondary keywords.
- AVERTIME - Identifies the averaging periods to be calculated for a particular run.
- POLLUTID - Identifies the type of pollutant being modeled. At the present time, this option has no influence on the results.
- RUNORNOT - A special keyword that tells the model whether to run the full model executions or not. If the user selects not to run, then the control file will be processed and any input errors reported, but no dispersion calculations will be made.
- FINISHED - Indicates that the user is finished with the inputs for this pathway; this keyword is also mandatory on each of the other pathways.

The first two keywords are self-explanatory. As discussed above in Section 2.3, the MODELOPT keyword on the CO pathway is pivotal to controlling the modeling options used for a particular run. For this example, we intend to use the regulatory default option, and have specified for the model to output concentration values. After the first three input records our input file will look something like this:

```
CO STARTING
CO TITLEONE A Simple Example Problem for the AERMOD-PRIME Model
CO MODELOPT CONC FLAT
```

Note that the title parameter field does not need to be in quotations, even though it represents a single parameter. The model simply reads whatever appears beginning in column 13 out to a length of 200 characters of the TITLEONE card as the title field, without changing the lower case to upper case letters. Leading blanks are therefore significant if the user wishes to center the title within the field. Note that in the output files, only the first 68 characters of TITLEONE are printed. Note also that the spacing and order of the secondary keywords on the MODELOPT card are not significant. A MODELOPT card that looked like this:

```
CO MODELOPT CONC FLAT
```

would have an identical result as the example above. It is suggested that the user adopt a style that is consistent and easy to read. A complete description of the available modeling options that can be specified on the MODELOPT keyword is provided in Section 3.0.

For this example, the average values are calculated for 3-hour and 24-hour and the full period that is modeled. The control file might, therefore, look similar to this after adding two more keywords:

```
CO STARTING
CO TITLEONE A Simple Example Problem for the AERMOD-PRIME Model
CO MODELOPT CONC FLAT
CO AVERTIME 3 24 PERIOD
CO POLLUTID SO2
```

Note again that the order of the parameters on the AVERTIME keyword is not critical, although the order of the short-term averages given on the AVERTIME keyword will also be the order in which the results are presented in the output file. The order of the keywords within each pathway is also not critical in most cases, although the intent of the input control file may be easier to decipher if a consistent and logical order is followed. It is suggested that users follow the order in which the keywords are presented in Section 3.0, in APPENDIX A, and in the Quick Reference, unless there is a clear advantage to doing otherwise.

The only remaining mandatory keywords for the CO pathway are RUNORNOT and FINISHED. We will set the RUNORNOT switch to RUN for this example. If a user is unsure about the operation of certain options or is setting up a complex control file to run for the first time, it may be desirable to set the model NOT to run, but simply to read and analyze the input file and report any errors or warning messages that are generated. Once the input file has been debugged using these descriptive error/warning messages, then the RUNORNOT switch can be set to RUN, avoiding a possible costly waste of resources generating erroneous results. Even if the model is set NOT to run, all the inputs are summarized in the output file for the user to review.

Our complete control file for the CO pathway may look something like this:

```
CO STARTING
CO TITLEONE A Simple Example Problem for the AERMOD-PRIME Model
CO MODELOPT CONC FLAT
CO AVERTIME 3 24 PERIOD
CO POLLUTID SO2
CO RUNORNOT RUN
CO FINISHED
```

The following set of control file options has a more structured look, but it is equivalent to the example above:

```
CO STARTING
  TITLEONE A Simple Example Problem for the AERMOD-PRIME Model
  MODELOPT CONC FLAT
  AVERTIME 3 24 PERIOD
  POLLUTID SO2
  RUNORNOT RUN
CO FINISHED
```

Since the pathway ID is required to begin in column 1 (see Section 2.4.8 for a discussion of this restriction), the model will assume that the previous pathway is in effect if the pathway field is left blank. The model will do the same for blank keyword fields, which will be illustrated in the next section, Section 2.4.3.

In addition to these mandatory keywords on the CO pathway, the user may select optional keywords to allow the use of receptor heights above ground-level for flagpole receptors, to specify a decay coefficient or a half-life for exponential decay, and to generate an input file containing events for EVENT processing. The user also has the option of having the model periodically save the results to a file for later re-starting in the event of a power failure or other interruption of the model's execution. These options are described in more detail in Section 3.0 of this volume.

### 2.4.3 Specifying source inputs - SO pathway

Besides the STARTING and FINISHED keywords that are mandatory for all pathways, the Source pathway has the following mandatory keywords:

- LOCATION - Identifies a particular source ID and specifies the source type and location of that source.
  
- SRCPARAM - Specifies the source parameters for a particular source ID identified by a previous LOCATION card.
  
- SRCGROUP - Specifies how sources will be grouped for calculational purposes.  
There is always at least one group, even though it may be the group of ALL sources and even if there is only one source.

Since the hypothetical source in this example problem is influenced by a nearby building, we also need to include the optional keywords BUILDHGT and BUILDWID in our input file.

The input file for the SO pathway for this example will like the following:

```
STARTING
```

LOCATION	STACK1	POINT	0.0	0.0	0.0		
SRCPARAM	STACK1	500.0	65.00	425.	15.0	5.0	
BUILDHGT	STACK1	50.00	50.00	50.00	50.00	50.00	50.00
BUILDHGT	STACK1	50.00	50.00	50.00	50.00	50.00	50.00
BUILDHGT	STACK1	50.00	50.00	50.00	50.00	50.00	50.00
BUILDHGT	STACK1	50.00	50.00	50.00	50.00	50.00	50.00
BUILDHGT	STACK1	50.00	50.00	50.00	50.00	50.00	50.00
BUILDWID	STACK1	62.26	72.64	80.80	86.51	89.59	89.95
BUILDWID	STACK1	87.58	82.54	75.00	82.54	87.58	89.95
BUILDWID	STACK1	89.59	86.51	80.80	72.64	62.26	50.00
BUILDWID	STACK1	62.26	72.64	80.80	86.51	89.59	89.95
BUILDWID	STACK1	87.58	82.54	75.00	82.54	87.58	89.95
BUILDWID	STACK1	89.59	86.51	80.80	72.64	62.26	50.00
BUILDLN	STACK1	82.54	87.58	89.95	89.59	86.51	80.80
BUILDLN	STACK1	72.64	62.26	50.00	62.26	72.64	80.80
BUILDLN	STACK1	86.51	89.59	89.95	87.58	82.54	75.00
BUILDLN	STACK1	82.54	87.58	89.95	89.59	86.51	80.80
BUILDLN	STACK1	72.64	62.26	50.00	62.26	72.64	80.80
BUILDLN	STACK1	86.51	89.59	89.95	87.58	82.54	75.00
XBADJ	STACK1	-47.35	-55.76	-62.48	-67.29	-70.07	-70.71
XBADJ	STACK1	-69.21	-65.60	-60.00	-65.60	-69.21	-70.71
XBADJ	STACK1	-70.07	-67.29	-62.48	-55.76	-47.35	-37.50
XBADJ	STACK1	-35.19	-31.82	-27.48	-22.30	-16.44	-10.09
XBADJ	STACK1	-3.43	3.34	10.00	3.34	-3.43	-10.09
XBADJ	STACK1	-16.44	-22.30	-27.48	-31.82	-35.19	-37.50
YBADJ	STACK1	34.47	32.89	30.31	26.81	22.50	17.50
YBADJ	STACK1	11.97	6.08	0.00	-6.08	-11.97	-17.50
YBADJ	STACK1	-22.50	-26.81	-30.31	-32.89	-34.47	-35.00
YBADJ	STACK1	-34.47	-32.89	-30.31	-26.81	-22.50	-17.50
YBADJ	STACK1	-11.97	-6.08	0.00	6.08	11.97	17.50
YBADJ	STACK1	22.50	26.81	30.31	32.89	34.47	35.00
SRCGROUP	ALL						
FINISHED							

There are a few things to note about these inputs. First, the source ID (STACK1 in this example) is an alphanumeric parameter (up to 12 characters) that identifies the inputs for different keywords with a particular source. It is crucial that the source be identified with a LOCATION card before any other keyword references the source, since this identifies the source type (POINT in this case), and therefore, which parameters the model will allow. See Section 3.3.1 for a complete list and descriptions of the valid source types. If the effects of elevated terrain were included in this analysis, it would be important to specify the source base elevation above mean sea level (MSL) on the LOCATION card. For this example, the source base elevation is 0.0 meters MSL.

Another thing to note is that since the model uses direction-specific building dimensions for all sources with downwash, there are 36 building heights and 36 building widths entered on the appropriate keywords, one value for each 10-degree sector beginning with the 10-degree flow vector (direction toward which the wind is blowing) and continuing clockwise. Since the user could not fit all 36 values on a single record, the pathway, keyword, and source ID were repeated as many times as were necessary. In this case there were six values given on each of the six lines for each of the building dimensions. There could have been fewer or more lines if exactly 36 values were entered before starting with a new keyword. Since the building height was the same across the sectors (fairly realistic for the height but not

for widths, unless the structure was circular), there is a short cut available for specifying numeric input in the control files for the model. The user can specify "repeat values" by entering a field such as "36\*50.0" as a parameter for the BUILDHGT keyword. The model will interpret this as "36 separate entries, each with a value of 50.0," and store the values in the appropriate arrays within the model. Since the model must identify this as a single parameter field, there must not be any spaces between the repeat-value and the value to be repeated.

The final keyword before finishing the SO pathway must be the SRCGROUP keyword (unless the PSDCREDIT keyword is specified on the MODELOPT card, in which case SRCGROUP is replaced with the PSDGROUP keyword). In this example, since there is only one source, we have taken advantage of a short cut provided by the model by specifying a source group ID (which may be up to eight characters) of ALL. Whenever this card appears in an input file, it will generate a source group with a source-group ID of ALL, consisting of all sources defined for that run. The sources do not have to be explicitly identified. In a run involving multiple sources, the user may specify multiple source groups by repeating the SRCGROUP keyword. The use of the SRCGROUP card is explained in more detail in Section 3.0.

Using some of the formatting options discussed above, the SO pathway for this example may look like this, with the same result as above:

```

SO STARTING
LOCATION      STACK1  POINT  0.0 0.0 0.0
** Point Source
** Parameters:
SRCPARAM STACK1  500.0 65.0 425.0 15.0 5.0
BUILDHTS STACK1  36*50.
BUILDWTS STACK1  62.26 72.64 80.80 86.51 89.59 89.95
           STACK1  87.58 82.54 75.00 82.54 87.58 89.95
           STACK1  89.59 86.51 80.80 72.64 62.26 50.00
           STACK1  62.26 72.64 80.80 86.51 89.59 89.95
           STACK1  87.58 82.54 75.00 82.54 87.58 89.95
           STACK1  89.59 86.51 80.80 72.64 62.26 50.00
XBADJ      STACK1 -47.35 -55.76 -62.48 -67.29 -70.07 -70.71
           STACK1 -69.21 -65.60 -60.00 -65.60 -69.21 -70.71
           STACK1 -70.07 -67.29 -62.48 -55.76 -47.35 -37.50
           STACK1 -35.19 -31.82 -27.48 -22.30 -16.44 -10.09
           STACK1 -3.43 3.34 10.00 3.34 -3.43 -10.09
           STACK1 -16.44 -22.30 -27.48 -31.82 -35.19 -37.50
YBADJ      STACK1 34.47 32.89 30.31 26.81 22.50 17.50
           STACK1 11.97 6.08 0.00 -6.08 -11.97 -17.50
           STACK1 -22.50 26.81 -30.31 -32.89 -34.47 -35.00
           STACK1 -34.47 -32.89 -30.31 -26.81 -22.50 -17.50
           STACK1 -11.97 -6.08 0.00 6.08 11.97 17.50
           STACK1 22.50 26.81 30.31 32.89 34.47 35.00
SRCGROUP ALL
SO FINISHED

```

This example of the SO pathway inputs illustrates the use of the comment card to label the stack parameters on the SRCPARAM card, i.e., QS for emission rate (g/s), HS for stack height (m), TS for stack exit temperature (K), VS for exit velocity (m/s), and DS for stack diameter (m). A complete description of the source parameter card, with a list of parameters for each source type, is provided in Section 3.3 and in APPENDIX A.

Other optional inputs that may be entered on the SO pathway include specifying variable emission rate factors for sources whose emissions vary as a function of month, season, hour-of-day, or season and hour-of-day (see Section 3.3.11 for more details). The number of factors entered depends on the option selected, and factors may be input for single sources or for a range of sources.

#### 2.4.4 Specifying a receptor network - RE pathway

As mentioned above, this example will illustrate the use of a single polar receptor network centered on the stack location. Other options available on the REceptor pathway include specifying a Cartesian grid receptor network and specifying discrete receptor locations in either a polar or a Cartesian system. These other options are described in more detail in Section 3.4.

The RE pathway for this example will look like this:

```
RE STARTING
  GRIDPOLR POL1 STA
  GRIDPOLR POL1 ORIG STACK1
  GRIDPOLR POL1 DIST 175. 350. 500. 1000.
  GRIDPOLR POL1 GDIR 36 10 10
  GRIDPOLR POL1 END
RE FINISHED
```

Looking at the example for the RE pathway, the first thing to note about these inputs is that there is a new set of keywords, including something that looks like a STArting and ENdIng. In fact, the GRIDPOLR keyword can be thought of as a "sub-pathway," in that all of the information for a particular polar network must be in contiguous records, and that the start and end of the sub-pathway are identified. Like the main pathways, the order of secondary keywords within the sub-pathway is not critical. Each card must be identified with a network ID (up to eight alphanumeric characters), in this case it is "POL1." Multiple networks may be specified in a single model run. The model waits until the END secondary keyword is encountered to set the variables, which may include terrain heights for receptors on elevated terrain or flagpole receptor heights if those options are being exercised by the user. The use of these optional secondary keywords is described in detail in Section 3.4.

For this example, the ORIG secondary keyword specifies the location of the origin for the polar network being defined as being the location of the source STACK1. The origin can also be specified as X and Y-coordinates. The ORIG keyword is optional, and the model will default to an origin of (0.0, 0.0) if it is omitted. The DIST keyword identifies the distances along each direction radial at which the receptors will be located. In this case there are four distances. More distances could be added by adding values to that input card or by including a continuation card with the DIST keyword, if needed. The GDIR keyword specifies that the model will Generate DIRection radials for the network, in this case there will be 36 directions, beginning with the 10-degree flow vector and incrementing every 10 degrees

clockwise. The user may elect to define Discrete DIRection radials instead by using the DDIR keyword in place of the GDIR keyword.

#### 2.4.5 Specifying the meteorological Input - ME pathway

The MEteorology pathway has the following four mandatory keywords in addition to the common STARTING and FINISHED keywords:

SURFFILE - Specifies the filename and format for the input surface meteorological data file.

PROFFILE - Specifies the filename and format for the input profile meteorological data file.

SURFDATA - Specifies information about the surface meteorological data which will be used in the modeling.

UAIRDATA - Specifies information about the upper air meteorological data which will be used in the modeling.

PROFBASE - Specifies the base elevation above MSL for the potential temperature profile.

For the purposes of this example, it is assumed that the meteorological data files are for Albany, NY and that an on-site location called Hudson has also been used. It is also assumed that the surface and profile data files were generated by the AERMET preprocessor and are in the default format for AERMOD. The filename of the surface file is AERMET2.SFC and it consists of four days of data for Albany/Hudson from March 1988. The filename of the profile file is AERMET2.PFL. The data files used in this example correspond with the on-site example files used for the AERMET preprocessor program. The control file commands for the MEteorology pathway would look like the following:

```
ME STARTING
SURFFILE  AERMET2.SFC
PROFFILE  AERMET2.PFL
SURFDATA  14735  1988  ALBANY,NY
UAIRDATA  14735  1988  ALBANY,NY
SITEDATA  99999  1988  HUDSON
PROFBASE  0.0  METERS
ME FINISHED
```

The first parameters on the SURFFILE and PROFFILE keywords are the filenames for the surface and profile data file, respectively, which can be entered as a full DOS pathname, including the drive specification and subdirectories, up to a total of 200 characters (with the maximum number of characters controlled by the ILEN\_FLD PARAMETER located in MODULE MAIN1 - see Section 2.2.1). Since there is no second parameter, the model will assume the default ASCII format for the data files. The format of the surface and profile data files is described in APPENDIX C.

The next two mandatory inputs identify the location and data period of the input meteorological data. A separate keyword is used for the surface meteorological data and for the upper air (mixing height) data. The parameters on these cards are the station number (e.g., WBAN number for NWS stations), the data period (year), and a station name. In order to identify potential errors in the model inputs, the model compares the station number from the control input file with values provided in the first record of the surface meteorology file, and issues warning messages if there are any mismatches. The user may also optionally input the (X,Y) coordinates for the location of the station(s), although these values are not currently used by the model. In this case, we have also included the optional SITEDATA keyword to identify the location for the on-site meteorological data that were preprocessed by AERMET.

The final mandatory keyword is PROFBASE, which is used to specify the base elevation (above MSL) for the potential temperature profile generated by AERMOD for use in the plume rise calculations. This should correspond to the base elevation for the main meteorological tower, which in this example is specified as 0.0 meters and is the same as the source base elevation.

Other optional keywords available on the ME pathway provide the user with options to specify selected days to process from the meteorological data file, and a wind direction rotation correction term. These optional inputs are described in more detail in Section 3.5.

#### 2.4.6 Selecting output options - OU pathway

All the keywords on the Output pathway are optional, although the model will warn the user if no printed outputs are requested and will halt processing if no outputs (printed results or file outputs) are selected. The user has considerable flexibility to select only the outputs that are needed for a particular application. The printed table keywords are:

RECTABLE - Specifies the selection of high value by receptor table output options.

- MAXTABLE - Specifies the selection of overall maximum value table output options.
- DAYTABLE - Specifies the selection of printed results (by receptor) for each day of data processed (this option can produce very large files and should be used with caution).

The RECTABLE keyword provides the highest, second highest and third highest values, etc., by receptor. The MAXTABLE keyword provides a table of the overall maximum *n* number of values. For both keywords, the user has additional flexibility to specify for which short-term averaging periods the outputs are selected. For the MAXTABLE keyword the user can also specify the number of overall maximum values to summarize for each averaging period selected, up to a maximum number controlled by a parameter in the computer code. In the example below, the highest and second-highest values by receptor and the maximum 50 values for all averaging periods are specified.

```

OU STARTING
  RECTABLE  ALLAVE  FIRST  SECOND
  MAXTABLE  ALLAVE  50
OU FINISHED

```

To simplify the input for users who request the same printed table output options for all averaging periods, these keywords recognize the secondary keyword "ALLAVE" as the first parameter for that purpose. To obtain the overall maximum 10 values for the 24-hour averages only, the OU pathway input would look like the following example:

```

OU STARTING
  RECTABLE  ALLAVE  FIRST  SECOND
  MAXTABLE  24  10
OU FINISHED

```

It should also be noted that these output table options apply only to the short-term averaging periods, such as the 3-hour and 24-hour averages used in our example. If the user has selected that PERIOD averages be calculated (on the CO AVERTIME keyword), then the output file will automatically include a table of period averages summarized by receptor (the RECTABLE option does not apply since there is only one period value for each receptor). In addition, the printed output file will include tables summarizing the highest values for each averaging period and source group.

Other options on the OU pathway include several keywords to produce output files for specialized purposes, such as generating contour plots of high values, identifying occurrences of

violations of a particular threshold value (e.g., a NAAQS), and for postprocessing of the raw concentration data. These options are described in detail in Section 3.7.

The complete input control file for this simple example is shown in Figure 2-2. Note that a consistent style has been used for formatting and structuring the file to improve its readability. This input file is comparable to the version shown earlier in Figure 2-1, which used a somewhat different style.

```

CO STARTING
  TITLEONE A Simple Example Problem for the AERMOD-PRIME Model
  MODELOPT CONC FLAT
  AVERTIME 3 24 PERIOD
  POLLUTID SO2
  RUNORNOT RUN
CO FINISHED

SO STARTING
  LOCATION STACK1 POINT 0.0 0.0 0.0
** Point Source      QS      HS      TS      VS      DS
** Parameters:      -----
  SRCPARAM STACK1 500.0 65.0 425. 15.0 5.0
  BUILDHGT STACK1 36*50.
SO BUILDWID STACK1 62.26 72.64 80.80 86.51 89.59 89.95
                STACK1 87.58 82.54 75.00 82.54 87.58 89.95
                STACK1 89.59 86.51 80.80 72.64 62.26 50.00
                STACK1 62.26 72.64 80.80 86.51 89.59 89.95
                STACK1 87.58 82.54 75.00 82.54 87.58 89.95
                STACK1 89.59 86.51 80.80 72.64 62.26 50.00
SO BUILDLEN STACK1 82.54 87.58 89.95 89.59 86.51 80.80
                STACK1 72.64 62.26 50.00 62.26 72.64 80.80
                STACK1 86.51 89.59 89.95 87.58 82.54 75.00
                STACK1 82.54 87.58 89.95 89.59 86.51 80.80
                STACK1 72.64 62.26 50.00 62.26 72.64 80.80
                STACK1 86.51 89.59 89.95 87.58 82.54 75.00
SO XBADJ  STACK1 -47.35 -55.76 -62.48 -67.29 -70.07 -70.71
                STACK1 -69.21 -65.60 -60.00 -65.60 -69.21 -70.71
                STACK1 -70.07 -67.29 -62.48 -55.76 -47.35 -37.50
                STACK1 -35.19 -31.82 -27.48 -22.30 -16.44 -10.09
                STACK1 -3.43 3.34 10.00 3.34 -3.43 -10.09
                STACK1 -16.44 -22.30 -27.48 -31.82 -35.19 -37.50
SO YBADJ  STACK1 34.47 32.89 30.31 26.81 22.50 17.50
                STACK1 11.97 6.08 0.00 -6.08 -11.97 -17.50
                STACK1 -22.50 -26.81 -30.31 -32.89 -34.47 -35.00
                STACK1 -34.47 -32.89 -30.31 -26.81 -22.50 -17.50
                STACK1 -11.97 -6.08 0.00 6.08 11.97 17.50
                STACK1 22.50 26.81 30.31 32.89 34.47 35.00
  SRCGROUP ALL
SO FINISHED

RE STARTING
  GRIDPOLR POL1 STA
  GRIDPOLR POL1 ORIG STACK1
  GRIDPOLR POL1 DIST 175. 350. 500. 1000.
  GRIDPOLR POL1 GDIR 36 10 10
  GRIDPOLR POL1 END
RE FINISHED

ME STARTING
  SURFFILE AERMET2.SFC
  PROFFILE AERMET2.PFL
  SURFDATA 14735 1988 ALBANY,NY
  UAIRDATA 14735 1988 ALBANY,NY
  SITEDATA 99999 1988 HUDSON
  PROFBASE 0.0 METERS
ME FINISHED

OU STARTING
  RECTABLE ALLAVE FIRST-SECOND
  MAXTABLE ALLAVE 50
OU FINISHED

```

**Figure 2-2. Example Input control file for Sample Problem**

#### 2.4.7 Using the error message file to debug the input control file

The previous sections in this tutorial have provided a step-by-step construction of a sample control input file for AERMOD. This simple example problem illustrated the usage of the more commonly used options of the AERMOD model. However, many real-time applications of the model will be much more complex than this example, perhaps involving multiple sources and source groups, multiple receptor networks, the addition of discrete receptor locations, and/or elevated terrain heights. To reduce errors in modeling applications, an effort has been made to develop detailed error handling capabilities for the AERMOD model.

The error handling capabilities of the AERMOD model are designed to accomplish two things for the user. First, the model reads through the complete input file and report all occurrences of errors or suspect entries before stopping, rather than stopping on the first instance (and every instance thereafter) of an error in the input file. Second, the model provides error and warning messages that are detailed and descriptive enough that they will help the user in his/her effort to debug the input file. The remainder of this section provides a brief introduction to the use of the model's error handling capabilities.

APPENDIX B of this volume provides more details about the error handling provided by the AERMOD model.

The AERMOD model generates messages during the processing of the input data and during the execution of model calculations. These messages inform the user about a range of possible conditions including:

- Errors that will halt any further processing, except to identify additional error conditions;
- Warnings that do not halt processing but indicate possible errors or suspect conditions; and
- Informational messages that may be of interest to the user but have no direct bearing on the validity of the results.

As the model encounters a condition for which a message is generated, the model writes the message to a temporary storage file. At the completion of the setup processing for a run, and at the completion of the model calculations, the model rereads the message file and generates a summary of the messages which is included in the main printed output file. If the processing of the model setup information indicates no errors or warnings, and the user has selected the option to RUN the model calculations on the CO RUNORNOT card, then the model will simply write a statement to the print file that the model setup was completed successfully. Otherwise, the model will report a summary of the



In deciphering the error and warning messages, the line number provided as part of the message may be particularly helpful in locating the error within the input file. However, if it is an error of omission that is caught by the error checking performed at the completion of inputs for a pathway, then the line number will correspond to the last record for that pathway. The user may need to examine all of the messages carefully before locating the error or errors, especially since a single occurrence of certain types of errors may lead to other error conditions being identified later in the input file which do not really constitute errors in themselves. An example of this is provided in Figure 2-4, which shows some inputs for the SO pathway where the building dimension keywords have been typed incorrectly, and the associated list of error messages. Since continuation cards (cards or records that require multiple entries and the input continues on subsequent lines) were used for the building width inputs, and the keyword was entered incorrectly on the first line, the subsequent records were also taken by the model to be invalid keyword inputs. While the error messages are the same for these records, the message originates from a different part of the model (SUBROUTINE SOCARD) for the records with the blank keyword.

Since the detailed error and warning messages are listed in the output file as part of the message summary table, there will generally not be a need for the user to examine the contents of the detailed message file. For this reason, the default operation of the model is to write the messages that are generated by a particular run to a temporary file that is deleted when the run is completed. If the user wishes to examine the complete list of detailed messages (of all types), there is an optional keyword available on the CO pathway for that purpose. The ERRORFIL keyword, which is described in detail in Section 3.2.19, allows the user to save the complete list of detailed messages to a user-specified filename.

```

*** Message Summary : AERMOD Model Execution ***

----- Summary of Total Messages -----

A Total of          0 Fatal Error Message(s)
A Total of          1 Warning Message(s)
A Total of          0 Informational Message(s)

A Total of          96 Hours Were Processed

A Total of          0 Calm Hours Identified

A Total of          0 Missing Hours Identified ( 0.00 Percent)

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****
MX W403    57      PFLCNV: Turbulence data is being used w/o ADJ_U* option      SigA & SigW

*****
*** AERMOD Finishes Successfully ***
*****

```

**Figure 2-3. Example Message Summary Table for AERMOD Execution**

```

SO STARTING
LOCATION      STACK1  POINT  0.0 0.0 0.0
** Point Source      QS      HS      TS      VS      DS
** Parameters:
   SRCPARAM STACK1  500.0 65.0 425.0 15.0   5.0
   BUILDHTS STACK1  36*50.
   BUILDWTS STACK1  62.26 72.64 80.80 86.51 89.59 89.95
   STACK1     87.58 82.54 75.00 82.54 87.58 89.95
   STACK1     89.59 86.51 80.80 72.64 62.26 50.00
   STACK1     62.26 72.64 80.80 86.51 89.59 89.95
   STACK1     87.58 82.54 75.00 82.54 87.58 89.95
   STACK1     89.59 86.51 80.80 72.64 62.26 50.00
   XBADJ     STACK1 -47.35 -55.76 -62.48 -67.29 -70.07 -70.71
   STACK1    -69.21 -65.60 -60.00 -65.60 -69.21 -70.71
   STACK1    -70.07 -67.29 -62.48 -55.76 -47.35 -37.50
   STACK1    -35.19 -31.82 -27.48 -22.30 -16.44 -10.09
   STACK1     -3.43  3.34 10.00  3.34 -3.43 -10.09
   STACK1    -16.44 -22.30 -27.48 -31.82 -35.19 -37.50
   YBADJ     STACK1 34.47 32.89 30.31 26.81 22.50 17.50
   STACK1     11.97  6.08  0.00 -6.08 -11.97 -17.50
   STACK1    -22.50 26.81 -30.31 -32.89 -34.47 -35.00
   STACK1    -34.47 -32.89 -30.31 -26.81 -22.50 -17.50
   STACK1    -11.97 -6.08  0.00  6.08 11.97 17.50
   STACK1     22.50 26.81 30.31 32.89 34.47 35.00
SRCGROUP     ALL
SO FINISHED
*** Message Summary For AERMOD Model Setup ***

----- Summary of Total Messages -----

A Total of          7 Fatal Error Message(s)
A Total of          1 Warning Message(s)
A Total of          0 Informational Message(s)

***** FATAL ERROR MESSAGES *****
SO E105      15      SETUP: Invalid Keyword Specified. The Troubled Keyword is      BUILDWTS
SO E110      16      SOCARD: Keyword is Not Valid for This Pathway. Keyword is      BUILDWTS
SO E110      17      SOCARD: Keyword is Not Valid for This Pathway. Keyword is      BUILDWTS
SO E110      18      SOCARD: Keyword is Not Valid for This Pathway. Keyword is      BUILDWTS
SO E110      19      SOCARD: Keyword is Not Valid for This Pathway. Keyword is      BUILDWTS
SO E110      20      SOCARD: Keyword is Not Valid for This Pathway. Keyword is      BUILDWTS
SO E237      40      SRCQA: Not Enough BUILDWIDs Specified for SourceID      STACK1

***** WARNING MESSAGES *****
MX W403      57      PFLCNV: Turbulence data is being used w/o ADJ_U* option      SigA & SigW

*****
*** SETUP Finishes UN-successfully ***
*****

```

**Figure 2-4. Example of Keyword Error and Associated Message Summary Table**

#### 2.4.8 Running the model and reviewing the results

Now that we have a complete and error-free control input file, we are ready to run the model and then review the results. The PC-executable file available on the SCRAM website opens the control input and printed output files and the model can be executed from the command prompt three ways as follows:

*Path-to-AERMOD.EXE\AERMOD*

*Path-to-AERMOD.EXE\AERMOD runstream\_input\_filename*

*Path-to-AERMOD.EXE\AERMOD runstream\_input\_filename output\_filename*

The first example above is applicable for all versions of AERMOD and assumes that the control input and printed output files are AERMOD.INP and AERMOD.OUT (not case sensitive in DOS and case sensitive on Unix and Linux systems). The other two examples apply to AERMOD versions beginning with 18081 in which the user can specify the control input filename and optionally the output filename as well. The filenames can include a directory pathname if the files reside in a different directory than the working directory. If the output filename is not specified, AERMOD will use the control input filename (including pathname) and replace the input filenames extension (e.g., “.INP”) with a “.OUT” extension. Otherwise, if both files are specified, they can be in different locations. The important points are that the AERMOD.EXE file either be in the directory from which you are attempting to run the model or in a directory that is included on the DOS PATH command when the system is "booted-up." The control input file (AERMOD.INP) must also be located in the directory which the model is being executed when the control input filename is not specified. When the default control file and main output filenames are used and reside in the working directory with AERMOD.EXE, the model can also be executed by double clicking on the executable file from Windows Explorer.

As mentioned above, the SCRAM PC-executable file for AERMOD opens the input and output files explicitly. One reason for this is to allow for the model to write an update on the status of processing to the PC terminal screen. For the AERMOD model, the model first indicates that setup information is being processed and then gives the Julian day currently being processed. If no status message is displayed, then the model did not load into memory properly. If the model stops after completing the setup processing, then the RUNORNOT option was set NOT to run. If a fatal error is encountered during the setup processing, then a message to that effect will be written to the screen and model execution will be stopped. Another reason for not sending the printed output to the default output device (i.e., to the screen or redirected to a file), is so that any DOS error messages will be visible on the screen and not be

written to the printed file. One such message might be that there is insufficient memory available to run the program. Handling of DOS error messages may require some knowledge of DOS, unless the meaning of the message is obvious.

The order of contents and organization of the main output file for the AERMOD model is presented in Figure 2-5.

Echo of Input Control File Commands
Summary of Control File Messages
Summary of Inputs
Summary of Modeling Options
Summary of Source Data Summary of
Receptor Data Summary of
Meteorology Data
Model Results
Daily Results for Each Averaging Period Selected for Each Day Processed (If Applicable)
- DAYTABLE Keyword
PERIOD Results for Each Source Group (If Applicable)
- PERIOD Parameter on AVERTIME Keyword
Short-Term Average Results (High, Second High, etc.) by Receptor for Each Source
Group (If Applicable)
- RECTABLE Keyword
Overall Maximum Short-Term Average Results for Each Source Group (If
Applicable)
- MAXTABLE Keyword
Summary Tables of High Values for Each Averaging Period and Source Group (Always provided if
PERIOD averages or the RECTABLE keyword are used)
Summary of Complete Model Execution Messages

**Figure 2-5. Organization of the AERMOD Model Output File**

Each page of the output file, except for the echo of the input file entries, is labeled with the model name and version number, user-specified title(s), page number, and, for the PC version of the model, the date and time of the particular run. Also included as part of the header information for each page is a one-line summary of the modeling options used for that particular run. The modeling options are listed as the secondary keywords used to control the options, such as DFAULT, CONC, etc.

Since the complete input file is normally echoed back as part of the output file, and since processing of the inputs stops when the OU FINISHED card is reached, the run can be duplicated by simply specifying the output filename as the input control file. Alternatively, the input records could be "cut and pasted" from the output file to a separate file using a text editor.

By default, the model will echo each line of the input control file to the printed output file. This provides a convenient record of the inputs as originally read into the model, without any rounding of numerical values that may appear in the input summary tables. As noted above, it also means that the output file can be used as an input file to the model to reproduce a particular application. However, for some applications, the length of the input control file may be too cumbersome to include the entire set of inputs at the beginning of each output file. This may happen, for example, if a large number of sources are being defined or if a large number of discrete receptor locations are used. For this reason, the user is provided with the option to "turn off" the echoing of the input file at any point within the control file. This is accomplished by entering the keywords "NO ECHO" in the first two fields anywhere within the control file. In other words, place NO in the pathway field, followed by a space and then ECHO. None of the input control file options after the NO ECHO will be echoed to the output file. Thus, a user may choose to place NO ECHO after the Control pathway in order to keep the control options echoed but suppress echoing the rest of the input file.

The details of the message summary tables were discussed in the previous section. A portion of the summary of modeling option inputs is shown in Figure 2-6 for the simple example described in this section. The summary of source parameter input data includes separate tables for each source type, rather than combining all sources onto a single table. In this way the column headings are specific to the source type.

Figure 2-7 presents an example of the results output for the first highest values by receptor for our sample problem. These values are the first highest 3-hour averages at each receptor location. The number in parentheses following each concentration value is the date corresponding to each value. The

date is given as an eight-digit integer variable that includes the year (2-digits), month, day, and hour corresponding to the end of the averaging period.

For each of the different types of model result tables, the controlling keyword is identified in Figure 2-5 at the end of the description. All of the outputs of the same type, e.g., high values by receptor, are printed together, and the order of tables loops through all source groups for a particular averaging period, and then loops through all averaging periods. The summary tables of high values at the end of the model results follow the same order of loops. An example of the summary tables for our sample problem is shown in Figure 2-8.

```

*** AERMOD - VERSION 22112 ***   *** A Simple Example Problem for the AERMOD-PRIME Model   ***   06/07/22
*** AERMET - VERSION 22112 ***   ***   ***   ***   14:18:02
*** MODELOPTs:   NonDEFAULT CONC FLAT RURAL SigA&SigW   ***   PAGE 1
-----
***   MODEL SETUP OPTIONS SUMMARY   ***
-----
** Model Options Selected:
* Model Allows User-Specified Options
* Model Is Setup For Calculation of Average CONCentration Values.
* NO GAS DEPOSITION Data Provided.
* NO PARTICLE DEPOSITION Data Provided.
* Model Uses NO DRY DEPLETION. DDPLETE = F
* Model Uses NO WET DEPLETION. WETDPLT = F
* Stack-tip Downwash.
* Model Assumes Receptors on FLAT Terrain.
* Use Calms Processing Routine.
* Use Missing Data Processing Routine.
* No Exponential Decay.
* Model Uses RURAL Dispersion Only.
* CCVR_Sub - Meteorological data includes CCVR substitutions
* Model Assumes No FLAGPOLE Receptor Heights.
* The User Specified a Pollutant Type of: SO2

**NOTE: Special processing requirements applicable for the 1-hour SO2 NAAQS have been disabled!!!
User has specified non-standard averaging periods: 3-HR 24-HR
High ranked 1-hour values are NOT averaged across the number of years modeled, and
complete years of data are NOT required.

**Model Calculates 2 Short Term Average(s) of: 3-HR 24-HR
and Calculates PERIOD Averages

**This Run Includes: 1 Source(s); 1 Source Group(s); and 144 Receptor(s)

with: 1 POINT(s), including
0 POINTCAP(s) and 0 POINTHOR(s)
and: 0 VOLUME source(s)
and: 0 AREA type source(s)
and: 0 LINE source(s)
and: 0 RLINE/RLINEXT source(s)
and: 0 OPENPIT source(s)
and: 0 BUOYANT LINE source(s) with a total of 0 line(s)
and: 0 SWPOINT source(s)

**Model Set To Continue RUNNING After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 22112

**Output Options Selected:
Model Outputs Tables of PERIOD Averages by Receptor
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs Tables of Overall Maximum Short Term Values (MAXTABLE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 0.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 3.5 MB of RAM.

```

**Figure 2-6. Sample of Model Option Summary Table from an AERMOD Model Output File**



\*\*\* AERMOD - VERSION 22112 \*\*\* \*\*\* A Simple Example Problem for the AERMOD-PRIME Model \*\*\* 06/07/22  
 \*\*\* AERMET - VERSION 22112 \*\*\* \*\*\* 14:18:02  
 PAGE 15

\*\*\* MODELOPTs: NonDEFAULT CONC FLAT RURAL SigA&SigW

\*\*\* THE SUMMARY OF MAXIMUM PERIOD ( 96 HRS) RESULTS \*\*\*

\*\* CONC OF SO2 IN MICROGRAMS/M\*\*3 \*\*

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	24.85173 AT ( 433.01, -250.00, 0.00, 0.00, 0.00)	GP	POL1
	2ND HIGHEST VALUE IS	23.13772 AT ( 469.85, -171.01, 0.00, 0.00, 0.00)	GP	POL1
	3RD HIGHEST VALUE IS	21.03529 AT ( 303.11, -175.00, 0.00, 0.00, 0.00)	GP	POL1
	4TH HIGHEST VALUE IS	19.33506 AT ( 328.89, -119.71, 0.00, 0.00, 0.00)	GP	POL1
	5TH HIGHEST VALUE IS	17.19044 AT ( 383.02, -321.39, 0.00, 0.00, 0.00)	GP	POL1
	6TH HIGHEST VALUE IS	16.86865 AT ( 866.03, -500.00, 0.00, 0.00, 0.00)	GP	POL1
	7TH HIGHEST VALUE IS	15.01122 AT ( 939.69, -342.02, 0.00, 0.00, 0.00)	GP	POL1
	8TH HIGHEST VALUE IS	14.27336 AT ( 268.12, -224.98, 0.00, 0.00, 0.00)	GP	POL1
	9TH HIGHEST VALUE IS	12.80321 AT ( 492.40, -86.82, 0.00, 0.00, 0.00)	GP	POL1
	10TH HIGHEST VALUE IS	12.38150 AT ( 766.04, -642.79, 0.00, 0.00, 0.00)	GP	POL1

\*\*\* RECEPTOR TYPES: GC = GRIDCART  
 GP = GRIDPOLR  
 DC = DISCCART  
 DP = DISCPOLR

\*\*\* AERMOD - VERSION 22112 \*\*\* \*\*\* A Simple Example Problem for the AERMOD-PRIME Model \*\*\* 06/07/22  
 \*\*\* AERMET - VERSION 22112 \*\*\* \*\*\* 14:18:02  
 PAGE 16

\*\*\* MODELOPTs: NonDEFAULT CONC FLAT RURAL SigA&SigW

\*\*\* THE SUMMARY OF HIGHEST 3-HR RESULTS \*\*\*

\*\* CONC OF SO2 IN MICROGRAMS/M\*\*3 \*\*

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	329.96015 ON 88030112:	AT ( 433.01, -250.00, 0.00, 0.00, 0.00)	GP	POL1
	HIGH 2ND HIGH VALUE IS	261.07805 ON 88030112:	AT ( 469.85, -171.01, 0.00, 0.00, 0.00)	GP	POL1

\*\*\* RECEPTOR TYPES: GC = GRIDCART  
 GP = GRIDPOLR  
 DC = DISCCART  
 DP = DISCPOLR

\*\*\* AERMOD - VERSION 22112 \*\*\* \*\*\* A Simple Example Problem for the AERMOD-PRIME Model \*\*\* 06/07/22  
 \*\*\* AERMET - VERSION 22112 \*\*\* \*\*\* 14:18:02  
 PAGE 17

\*\*\* MODELOPTs: NonDEFAULT CONC FLAT RURAL SigA&SigW

```

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF SO2      IN MICROGRAMS/M**3      **

          DATE
GROUP ID  AVERAGE CONC  (YYMMDDHH)  RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  NETWORK
-----
ALL      HIGH  1ST HIGH VALUE IS  88.89517 ON 88030124: AT ( 433.01, -250.00, 0.00, 0.00, 0.00) GP POL1
          HIGH  2ND HIGH VALUE IS  10.09519 ON 88030324: AT ( 866.03, -500.00, 0.00, 0.00, 0.00) GP POL1

*** RECEPTOR TYPES:  GC = GRIDCART
                       GP = GRIDPOLR
                       DC = DISCCART
                       DP = DISCPOLR

```

**Figure 2-8. Example of Result Summary Tables for the AERMOD Model**

## **2.5 Modifying an existing control file**

As noted earlier, one of the advantages of the keyword/parameter approach and the flexible format adopted for the input control file is that it will be easier for the user to make modifications to the control file and obtain the desired result. This section briefly illustrates some examples of how a control file can be modified. It is assumed that the reader is familiar with the operation of and basic editing commands for a text editor (i.e., a program that edits ASCII files), and is familiar with the previous sections of this tutorial.

### 2.5.1 Modifying modeling options

Depending on the type of analysis being performed, the user may need to modify the modeling options and run the model again. Because of the descriptive nature of the keywords and the secondary keywords used to control the modeling options, this can easily be done with the new control file, and usually without having to refer back to the user's guide each time a modification is attempted.

### 2.5.2 Adding or modifying a source or source group

Modifying the input file to add a source or a source group, or to add a source to a source group, is as simple as just adding it. There is no need to specify the total number of sources in the run, which would then have to be changed if more sources were added. The same applies to the number of groups, or the number of sources per group. If the user attempts to input more than the total number of sources or groups allowed for a particular run, an error message will be generated to that effect. Also, modifying a source group to delete a source is as easy as just deleting it from the input card, without having to change any other inputs.

Another way of "deleting" a source or a group from an input file is to place a "\*\*\*" in the pathway field of the card or cards which define the source or group to "comment out" those inputs. This approach, which was discussed above in Section 2.2.2, has the advantage of leaving the input data for the source or group in the input file for possible later use. It doesn't matter whether the "\*\*\*" is entered with the text editor in "insert" mode, in which case the other inputs of that line are moved over, or if it is in "overtyping" mode, which would replace the pathway ID that was already there.

### 2.5.3 Adding or modifying a receptor network

As with source data, adding to or modifying the receptor information in the AERMOD model is relatively straight forward. The problem of having to make several changes to accomplish one small modification, such as adding a distance to a polar receptor network, has been avoided in the new model. All

that the user needs to do is to add the new distance on the appropriate input card, which is easily identifiable because of the use of descriptive keywords. The model checks to ensure that the user does not attempt to specify more than the maximum number of receptors for a particular run and generates an appropriate message if too many are input.

#### 2.5.4 Modifying output options

Modifying the output options involves many of the same principles that are described above. In addition, all the output options are structured in a way that allows the user to select options for specific averaging periods, so that the user may find it useful to copy a record or group of records set up for one averaging period and simply change the averaging period parameter. The other important short cut that is available for the printed table output options is to use the secondary keyword ALLAVE to indicate that the option applies to all averaging periods that are calculated. In this way, there will be no need to change the output options if a new averaging period is added to a run or if one is deleted.

### 3.0 Detailed keyword reference

This section of the AERMOD user's guide provides a detailed reference for all the input keyword options for the AERMOD model. The information provided in this section is more detailed than the information provided in the Brief Tutorial in Section 2.0. Since this section is intended to meet the needs of experienced modelers who may need to understand completely how particular options are implemented in the model, the information for each keyword should stand on its own. This section assumes that the reader has a basic understanding of the keyword/parameter approach used by the model for specification of input options and data. Novice users should first review the contents of Section 2.0 to obtain that understanding.

#### 3.1 Overview

The information in this section is organized by function, i.e., the keywords are grouped by pathway, and are in a logical order based on their function within the model. The order of keywords presented here is the same as the order used in the functional keyword reference in APPENDIX A. The syntax for each keyword is provided, and the keyword type is specified - either mandatory or optional and either repeatable or non-repeatable. Unless noted otherwise, there are no special requirements for the order of keywords within each pathway, although the order in which the keywords are presented here and in APPENDIX A is recommended. Any keyword which has special requirements for its order within the pathway is so noted following the syntax and type description.

The syntax descriptions in the following sections use certain conventions. Parameters that are in all capital letters and underlined in the syntax description are secondary keywords that are to be entered as indicated for that keyword. Other parameters are given descriptive names to convey the meaning of the parameter and are listed with an initial capital letter. Many of the parameter names used correspond to variable names used in the computer code of the model. Parentheses around a parameter indicate that the parameter is optional for that keyword. The default that is taken when an optional parameter is left blank is explained in the discussion for that keyword.

### 3.2 Control pathway inputs and options

The **CO** pathway contains the keywords that provide the overall control of the model run. These include the dispersion options, averaging time options, terrain height options, and others that are described below. The **CO** pathway must be the first pathway in the control input file.

#### 3.2.1 Title information

There are two keywords that allow the user to specify up to two lines of title information that will appear on each page of the main output file from the model. The first keyword, **TITLEONE**, is mandatory, while the second keyword, **TITLETWO**, is optional. The syntax and type for the keywords are summarized below:

<b>Syntax:</b>	CO TITLEONE Title1 CO TITLETWO Title2
<b>Type</b>	TITLEONE - Mandatory, Non-repeatable TITLETWO - Optional, Non-repeatable

The parameters Title1 and Title2 are character parameters of length 200, which are read as a single field starting at column 13. The title information is taken as it appears in the control file without any conversion of lower case to upper case letters. If the **TITLETWO** keyword is not included in the control file, then the second line of the title in the output file will appear blank. Note that in the output files, only the first 68 characters of **TITLEONE** and **TITLETWO** are printed.

#### 3.2.2 Dispersion options

The dispersion options are controlled by the **MODELOPT** keyword on the **CO** pathway and are specified using secondary keywords that represent each of the different options. The secondary keywords and syntax are shown and described below. Some related options are mutually exclusive, others can be specified in combination with each other, and some are dependent on others and must be specified together.

<b>Syntax:</b>	CO MODELOPT <u>DFAULT</u> <u>ALPHA</u> <u>BETA</u> <u>CONC</u> <u>AREADPLT</u> <u>FLAT</u> <u>NOSTD</u> <u>NOCHKD</u> <u>NOWARN</u> <u>SCREEN</u> <u>SCIM</u> <u>NOMINO3</u> <u>RLINEFDH</u> <u>ELEV</u> <u>WARNCHKD</u> <u>NOURBTRAN</u> <u>VECTORWS</u> <u>PSDCREDIT</u> <u>FASTALL</u> <u>FASTAREA</u> <u>GSRM</u> <u>TTRM</u> <u>TTRM2</u> <u>PVMRM</u> <u>OLM</u> <u>ARM2</u> <u>DEPOS</u> <u>DDEP</u> <u>WDEP</u> <u>DRYDPLT</u> <u>WETDPLT</u> <u>NODRYDPLT</u> <u>NOWETDPLT</u> <u>AREAMNDR</u> <u>HBP</u>
<b>Type:</b>	Mandatory, Non-repeatable
<b>Order:</b>	Must precede POLLUTID, HALFLIFE and DCAYCOEF

where the secondary keyword parameters are described below (the order and spacing of these parameters is not critical):

- DFAULT - Specifies that the regulatory default options will be used; note that specification of the DFAULT option will override some non-DFAULT options that may be specified in the input file, while other non-DFAULT options will cause fatal errors when DFAULT is specified (see below for details).
- ALPHA - Non-regulatory option flag that allows the input control file to include research/experimental options for review and evaluation by the user community; (e.g., LOW\_WIND, PSDCREDIT, ORD\_DWNW, AWMADWNW, PLATFORM, METHOD 2 particle deposition, gas deposition, RLINEFDH, and RLINEXT with options for modeling barriers and depressed roadways) and cannot be used with DFAULT keyword.
- BETA - Non-regulatory option flag that allows the input control file to include options that have been vetted through the scientific community and are waiting to be promulgated as regulatory options. Prior to promulgation, BETA options require alternative model approval for use in regulatory applications and cannot be used with DFAULT keyword.
- CONC - Specifies that concentration values will be calculated.
- DEPOS - Specifies that total deposition flux values (both dry and wet) will be calculated.
- DDEP - Specifies that dry deposition flux values will be calculated.
- WDEP - Specifies that wet deposition flux values will be calculated.
- AREADPLT - Specifies that a non-regulatory method for optimized plume depletion due to dry removal mechanisms will be included in calculations for area sources (cannot be used simultaneously with the DFAULT keyword).
- FLAT - Specifies that the non-regulatory option of assuming flat terrain will be used; Note that FLAT and ELEV may be specified in the same model run to allow specifying the non-regulatory FLAT terrain option on a source-by-source basis; FLAT sources are identified by specifying the keyword FLAT in the MODELOPT line on the CO pathway and in place of the source elevation field on the SO LOCATION keyword (cannot be used simultaneously with the DFAULT keyword).
- ELEV - Specifies that the default option of assuming elevated terrain will be used; Note that FLAT and ELEV may be specified in the same model run to allow

- specifying the non-regulatory FLAT terrain option on a source-by-source basis (the ELEV option is set as a regulatory option with the DFAULT keyword)
- NOSTD - Specifies that the non-regulatory option of no stack-tip downwash will be used (cannot be used with the DFAULT keyword).
- NOCHKD - Specifies that the non-regulatory option of suspending date checking will be used for non-sequential meteorological data files (cannot be used with the DFAULT keyword).
- WARNCHKD - Specifies that the option of issuing warning messages rather than fatal errors will be used for non-sequential meteorological data files.
- NOWARN - Specifies that the option of suppressing the detailed listing of warning messages in the main output file will be used (the number of warning messages is still reported, and warning messages are still included in the error file controlled by the CO ERRORFIL keyword).
- SCREEN - Non-regulatory option for running AERMOD in a screening mode for AERSCREEN (cannot be used when the DFAULT keyword is specified).
- SCIM - Sampled Chronological Input Model – non-regulatory option used only with the ANNUAL average option to reduce runtime by sampling meteorology at a user-specified regular interval; SCIM sampling parameters must be specified on the ME pathway (cannot be used with the DFAULT keyword).
- PVMRM - Specifies that the Plume Volume Molar Ratio Method (PVMRM) for NO<sub>2</sub> conversion will be used (regulatory option, can be used simultaneously with DFAULT); cannot be used with OLM, ARM2, or GRSM; cannot be used with TTRM without TTRM2.
- OLM - Specifies that the Ozone Limiting Method (OLM) for NO<sub>2</sub> conversion will be used (regulatory option, can be used simultaneously with DFAULT keyword); cannot be used with PVMRM, ARM2, or GRSM; cannot be used with TTRM without TTRM2.
- ARM2 - Specifies that the Ambient Ratio Method - 2 (ARM2) for NO<sub>2</sub> conversion will be used (regulatory option, can be used with DFAULT keyword); cannot be used with PVMRM, OLM, or GRSM; cannot be used with TTRM without TTRM2.
- TTRM - Specifies that the non-regulatory Travel Time Reaction Method (TTRM) will be used for NO<sub>2</sub> conversion (non-regulatory ALPHA option, requires the ALPHA keyword and cannot be used with the DFAULT keyword); cannot be used with PVMRM, OLM, ARM2 without TTRM2; cannot be used with GRSM; cannot be used with TTRM2 without PVMRM, OLM, or ARM2.
- TTRM2 - Specifies that the non-regulatory Travel Time Reaction Method (TTRM) will be paired with one of OLM, PVMRM, or ARM2 for NO<sub>2</sub> conversion (non-regulatory ALPHA option, requires the ALPHA keyword and cannot be used with the DFAULT keyword); cannot be used with TTRM alone or GRSM; must be paired with one of PVMRM, OLM, or ARM2 and does not require TTRM keyword when pairing.
- GRSM - Specifies that the Generic Reaction Set Method (GRSM) will be used for NO<sub>2</sub> conversion; cannot be used with PVMRM, OLM, TTRM, TTRM2, or ARM2.

- PSDCREDIT - Specifies that the non-regulatory ALPHA option will be used to calculate the increment consumption with PSD credits using the PVMRM option (cannot be used with the DFAULT keyword).
- FASTALL - Non-regulatory option to optimize model runtime through use of an alternative implementation of horizontal meander for POINT and VOLUME sources; also optimizes model runtime for AREA/AREAPOLY/AREACIRC/LINE, OPENPIT, RLINE, and RLINEXT sources (formerly associated with TOXICS option, now controlled by the FASTAREA and FASTALL option, cannot be used with the DFAULT keyword).
- FASTAREA - Non-regulatory option to optimize model runtime through hybrid approach for AREA/ AREAPOLY/AREACIRC and OPENPIT sources (formerly associated with TOXICS option, cannot be used with the DFAULT keyword).
- DRYDPLT - Option to incorporate dry depletion (removal) processes associated with dry deposition algorithms; this requires specification of dry deposition source parameters and additional meteorological variables; dry depletion will be used by default if dry deposition algorithms are invoked; cannot be used with NODRYDPLT.
- NODRYDPLT - Option to disable dry depletion (removal) processes associated with dry deposition algorithms; cannot be used with DRYDPLT.
- WETDPLT - Option to incorporate wet depletion (removal) processes associated with wet deposition algorithms; this requires specification of wet deposition source parameters and additional meteorological variables; wet depletion will be used by default if wet deposition algorithms are invoked; cannot be used with NOWETDPLT.
- NOWETDPLT - Option to disable wet depletion (removal) processes associated with wet deposition algorithms; cannot be used with WETDPLT.
- NOURBTRAN - Non-regulatory option to ignore the transition from nighttime urban boundary layer to daytime convective boundary layer (i.e., to revert to the urban option as implemented prior to version 11059) (cannot be used with the DFAULT keyword).
- VECTORWS - Option to specify that input wind speeds are vector mean (or resultant) wind speeds, rather than scalar means. Under the VECTORWS option, the adjustments to wind speeds based on Equation 112 of the AERMOD Model Formulation document (EPA, 2024a) will be applied (can be used with the DFAULT keyword).
- NOMINO3 - Option to remove the minimum ozone used for Tier 2 & 3 NO<sub>2</sub> options. Without this option, AERMOD will use a minimum value of 40 ppb of ozone for nighttime stable conditions, regardless of the value in an hourly input file (can be used with the DFAULT keyword).
- RLINEFDH - Option to have wind profile calculations without a displacement height for RLINE and RLINEXT source types. This makes the wind profile closer to other AERMOD source types, which do not use a displacement height in wind profile (requires the ALPHA keyword and cannot be used with the DFAULT keyword).

AREAMNDR - Option to apply plume meander to AREA, AREAPOLY, AREACIRC, and LINE source types. Note that AREAMNDR and FASTAREA or FASTALL can be specified in the same model run, but in that case, meander will not be applied to those source types listed,

HBP - Option for highly buoyant plumes (HBP) when plume penetrates the top of the mixed layer. Limited to point source types (POINT, POINTHOR, POINTCAP). Compares convective mixing height for the current hour and next hour to determine how much of the penetrated plume has been captured by the CBL by the end of the current hour (requires the ALPHA keyword and cannot be used with the DFAULT keyword).

### 3.2.2.1 DFAULT option

As previously discussed, the regulatory DFAULT option in AERMOD informs the model that certain regulatory options will be invoked including stack-tip downwash, effects of elevated terrain, and calms and missing data processing. The DFAULT option in AERMOD also forces the use of a 4-hour half-life when modeling SO<sub>2</sub> in an urban source and does not allow for exponential decay for other applications. If exponential decay is requested via the DCAYCOEFF or HALFLIFE keyword, AERMOD will issue a warning that the DFAULT overrides the requested exponential and will run the model without exponential decay. If exponential decay is desired, then the DFAULT keyword cannot be included. The DFAULT option also imposes a restriction on the optional urban roughness length parameter to be 1 meter for regulatory applications. If the urban roughness length parameter is not 1 m with the DFAULT keyword, AERMOD issues a warning and resets it to 1 m.

The missing data processing routines that are included in the AERMOD model allow the model to handle missing meteorological data in the processing of short-term averages. The model treats missing meteorological data in the same way as the calms processing routine, i.e., it sets the concentration values to zero for that hour and calculates the short-term averages according to EPA's calms policy, as set forth in the Guideline. Calms and missing values are tracked separately for the purpose of flagging the short-term averages. An average that includes a calm hour is flagged with a 'c', an average that includes a missing hour is flagged with an 'm', and an average that includes both calm and missing hours is flagged with a 'b'. If the number of hours of missing meteorological data exceeds 10 percent of the total number of hours for a given model run, a cautionary message is written to the main output file, and the user is referred to Section 5.3.2 of "Meteorological Monitoring Guidance for Regulatory Modeling Applications" (EPA, 2004). An hour is considered missing if one or more of the following surface variables have missing value indicators for the hour: wind speed, wind direction, ambient temperature, Monin-Obukhov length, mechanical mixing height,

surface friction velocity ( $u^*$ ), convective mixing height (convective hours only), or convective velocity scale ( $w^*$ ; for convective hours only).

The DFAULT keyword cannot be used simultaneously with either the ALPHA or BETA secondary keywords or other secondary keywords that enable a specific ALPHA or BETA option.

### 3.2.2.2 ALPHA options

Beginning with version 18081, a new secondary keyword, ALPHA, was added to the MODELOPT keyword. When included, ALPHA indicates one or more options are being used that are in a special category of options. These can include but are not limited to:

- Scientific/formulation updates that are in the research phase and have not been fully evaluated and peer reviewed by the scientific community; and
- Non-scientific model options in development that still need rigorous testing and for which EPA is seeking feedback from the user community.

Different ALPHA options are enabled in the control file in different ways. Some ALPHA options, as indicated above, are enabled by specifying the appropriate secondary keyword with the MODELOPT keyword, while others are specified as either a primary keyword on the CO pathway (e.g., LOW\_WIND, AWMADWNW) or as source type with the LOCATION keyword (e.g., RLINEXT, SWPOINT) on the SO pathway or as a primary keyword on the SO pathway to enter source-specific inputs (e.g., PLATFORM, RBARRIER). AERMOD version 24142 includes the following ALPHA options:

- Prevention of Significant Deterioration Credit (PSDCREDIT)
- Low Wind Parameters (LOW\_WIND)
- A&WMA Downwash Options (AWMADWNW)
- EPA Office of Research and Development Downwash Options (ORD\_DWNW)
- Offshore Platform Downwash (PLATFORM, applies to point sources only)
- Extended RLINE Source Type (RLINEXT)
- Depressed Roadway (RDEPRESS, used only with RLINEXT)
- Roadway Barrier (RBARRIER, used only with RLINEXT)
- Removal of Displacement Height from RLINE Wind Profile (RLINEFDH)
- Particle Deposition - Method 2 (METHOD\_2)

- Gas deposition (GDSEASON, GDLANUSE, GASDEPDF, GASDEPOS, GASDEPVD keywords)
- Travel Time Reaction Method (TTRM, for NO<sub>2</sub> conversion, stand-alone method)
- Travel Time Reaction Method 2 (TTRM2, for NO<sub>2</sub> conversion, applies TTRM to ARM2, OLM, or PVMRM conversion methods)
- Sidewash Point Source (SWPOINT, experimental source type)
- AREA Source Meander (AREAMNDR)
- Highly Buoyant Plume (HBP)
- Aircraft Plume Rise (ARCFTOPT, can be applied to AREA and VOLUME source types only via SO ARCFTSRC grouping and an hourly emission file)

As noted above, METHOD 2 particle deposition and gas deposition are ALPHA options beginning with version 19191 of AERMOD. In previous versions of AERMOD, these two deposition options were non-default and could be used without the ALPHA or BETA keywords. The reason that these two options are now ALPHA options is that they have not been rigorously tested and evaluated since their inclusion in AERMOD's initial promulgation. Thus, it was decided to make the options ALPHA while deposition is further evaluated in AERMOD. Note that METHOD 1 particle deposition is unaffected and can still be used with AERMOD in default mode (i.e., with the DFAULT keyword).

### 3.2.2.3 BETA options

BETA options refer to scientific updates to the formulation of AERMOD that have been fully vetted through the scientific community with appropriate evaluation and peer review. BETA options are planned for future promulgation as regulatory options. However, until they are promulgated, they require alternative model approval by the EPA Regional Office and concurrence by the Model Clearing House. AERMOD version 24142 does not include any BETA options.

### 3.2.2.4 Options for capped and horizontal stack releases

Options are included in AERMOD, beginning with version 06341, for modeling releases from capped and horizontal stacks. For sources that are not subject to building downwash influences, the plume rise for these capped and horizontal stacks is simulated based on an EPA Model Clearinghouse Memorandum, dated July 9, 1993. The Model Clearinghouse procedure for these sources entails setting the exit velocity very low (0.001 m/s) to account for suppression of vertical momentum of the plume and using an effective stack diameter that maintains the actual flow rate of the plume. Maintaining the flow rate will

also serve to maintain the buoyancy of the plume to provide a more realistic estimate of plume rise. The Model Clearinghouse procedure also addresses the issue of stack-tip downwash for these cases.

The Model Clearinghouse procedure is not considered to be appropriate for sources subject to building downwash influences with the PRIME downwash algorithm for the following reason. The PRIME algorithm uses the specified stack diameter to define the initial radius of the plume for the numerical plume rise calculation, and the initial radius of the plume can significantly influence plume rise based on the PRIME algorithm. As a result, use of an effective diameter adjusted to maintain the flow rate is not appropriate and could produce unrealistic results. For PRIME downwash sources modeled using the options for capped and horizontal releases, the basic premise of the Model Clearinghouse procedure, i.e., that the vertical momentum is suppressed while the buoyancy of the plume is conserved has been adapted for the PRIME numerical plume rise formulation. For capped stacks the initial radius of the plume is assumed to be 2 times the actual stack diameter to account for the interaction of the exiting plume with the cap. The initial vertical velocity of the plume is set at 0.001 m/s, and the initial lateral velocity of the plume is set at 25% of the initial exit velocity of the plume. For horizontal stacks, the initial vertical velocity of the plume is set at 0.001 m/s, the total exit velocity of the plume is assigned to the initial lateral velocity, and the plume is assumed to be emitted in the downwind direction. Although this adaptation of the Model Clearinghouse procedure to PRIME downwash sources has not been validated by field tracer or wind tunnel data, analyses have shown that simply setting the exit velocity to 0.001 m/s without any further adjustment when downwash is applied, as suggested in Section 6.1 of the AERMOD Implementation Guide (EPA, 2024b), may lead to overly conservative results (EPA, 2007).

The user selects the options for capped and/or horizontal releases by specifying one of the new source types on the SO LOCATION card: POINTCAP for capped stacks, and POINTHOR for horizontal releases. For each of these options, the user specifies the actual stack parameters [release height (m), exit temperature (K), exit velocity (m/s), and stack diameter (m)] using the SO SRCPARAM card as if the release were a non-capped vertical point source. The syntax of the SO LOCATION and SRCPARAM keywords is described in Sections 3.3.1 and 3.3.2 and is also summarized in APPENDIX A. The AERMOD model performs the necessary adjustments internally to account for plume rise and stack-tip downwash. For horizontal releases, the model currently assumes that the release is oriented with the wind direction, and the model does not account for directional effects that may occur with horizontal releases. The model also does not account for stacks oriented at a non-horizontal angle relative to vertical. For PRIME downwash sources, the user-specified exit velocity for horizontal releases is treated initially as horizontal momentum in the downwind direction.

### 3.2.2.5 Output types (CONC, DEPOS, DDEP and/or WDEP)

The user may select any or all of the output types (CONC, DEPOS, DDEP and/or WDEP) to be generated in a single model run. The order of these secondary keywords on the MODELOPT card has no effect on the order of results in the output files – the outputs will always be listed in the order of CONC, DEPOS, DDEP, and WDEP. Appropriate deposition parameters must be specified in order to output deposition fluxes using the DEPOS, DDEP, and/or WDEP keywords (see Sections 3.3.3 and 3.3.4 for more details). Deposition has not been implemented for RLINE/RLINEXT, BUOYLINE, or SWPOINT source types, thus the user can only run CONC with these source types.

### 3.2.2.6 Deposition depletion options

Beginning with version 04300, the dry and wet removal (depletion) mechanisms (the DRYDPLT and WETDPLT options in earlier versions of AERMOD) will automatically be included in the calculated concentrations or deposition flux values if the dry and/or wet deposition processes are considered, unless the user specifies the NODRYDPLT and/or NOWETDPLT options. Note that dry and wet removal effects on calculated concentration values can be included even if deposition flux values are not being calculated. However, the additional data requirements for dry and wet deposition, described in Sections 3.3.3 and 3.3.4, must be met in order for dry and wet removal to be included in the concentration calculations. The use of the NODRYDPLT and/or NOWETDPLT options will result in a more conservative estimate of concentrations and/or deposition fluxes for applications involving deposition processes, but the degree of additional conservatism will vary depending on the source characteristics, meteorological conditions, receptor locations and terrain influences. However, the inclusion of particle deposition effects may increase ground-level concentrations for some sources compared to the same source modeled as a gaseous emission due to gravitational settling on the particulate plume. The magnitude of this effect will depend on the source characteristics (elevated or low-level) and particle size distribution. As of version 19191, deposition has not been implemented for RLINE/RLINEXT, BUOYLINE, or SWPOINT sources, thus the user can only run CONC with these source types.

### 3.2.2.7 NO<sub>2</sub> conversion options

Beginning with version 16216r, the PVMRM and OLM Tier 3 NO<sub>2</sub> conversion methods, as well as the Tier 2 ARM2 method are regulatory options that can be specified with the DFAULT keyword. PVMRM, OLM, and ARM2 assume the reaction involving NO and available O<sub>3</sub> to form NO<sub>2</sub> occurs instantaneously. Although this chemical reaction is relatively rapid, it is not actually instantaneous and depends on the transport time to the downwind receptor of interest. Beginning with version 21112, TTRM was added as an

ALPHA option for NO<sub>2</sub> conversion that considers the distance and the travel time from the emission source to each receptor. In general, much of the conversion of NO to NO<sub>2</sub> occurs within the first minute of travel which limits the effectiveness of this method to the near field receptors.

In version 21112, TTRM, the Travel Time Reaction Method, was implemented as a stand-alone ALPHA option which can determine the initial fraction of NO to NO<sub>2</sub> conversion in the travel time of each source emissions to each receptor. The conversion is capped at an upper limit, which is typically reached after a few tens of seconds of plume travel. Beyond the distance the fraction reaches the upper limit of the equilibrium fraction (generally 0.9), TTRM is no longer effective, and another method is needed for receptors beyond that distance. Beginning with version 22112, TTRM was integrated to be used simultaneously with PVMRM, OLM, or ARM2. This integration was added as the ALPHA option, TTRM2, separate from TTRM which was retained as a stand-alone option. When TTRM2 is specified along with PVMRM, OLM, or ARM2, TTRM will be implemented for near field receptors where the fraction of conversion has not reached the upper limit, and the other specified method will be used for all other receptors.

In addition to TTRM and TTRM2, beginning with version 21112, GRSM, the Generic Reaction Set Method, was added as an ALPHA option, updated as a BETA option beginning with version 22112, and promulgated as a regulatory option in version 24142. GRSM was adapted from the Atmospheric Dispersion Model Method (ADMMSM), documented by Carruthers et al., 2017, which accounts for the equilibrium between NO, NO<sub>2</sub>, and ozone in the atmosphere. GRSM treats plume entrainment of ozone similar to PVMRM but provides for treatment of reaction rates based on ozone and solar radiation intensity, NO<sub>2</sub> photolysis, and travel time from source to receptor. The reaction rate is based on the generic reaction set (GRS) chemistry scheme, which is a semi-empirical photochemical model developed originally by CSIRO in Australia (Azzi and Johnson, 1992; Venkatram et al., 1994) for multiple step conversions between NO, NO<sub>2</sub>, and O<sub>3</sub>. The integration of GRSM into AERMOD is documented in EPA's related Technical Support Document (TSD) (2024d).

Only one of ARM2, TTRM, OLM, PVMRM, or GRSM options for NO<sub>2</sub> conversion can be specified for a given model run. Alternatively, the TTRM2 ALPHA option (which invokes TTRM), can be paired with ARM2, OLM, or PVMRM by specifying the TTRM2 keyword along with the ARM2, PVMRM, or OLM with the MODELOPT keyword. Because GRSM accounts for travel time between the emission source and receptor, it cannot be paired with TTRM2. All NO<sub>2</sub> conversion options require that the pollutant ID be

specified as 'NO2' on the CO POLLUTID card (see Section 3.2.9.) These options have additional input requirements as described in Section 3.3.6.

### 3.2.2.8 FASTAREA and FASTALL

The FASTAREA secondary keyword on the MODELOPT keyword is used to select the non-regulatory option to optimize model runtime for AREA sources (including AREA, AREAPOLY, AREACIRC and OPENPIT source types, as well as LINE sources introduced with version 12345 (see Section 3.3.1)). When FASTAREA is specified, the area source integration routine is optimized to reduce model runtime by incorporation of a three-tiered approach using the Romberg numerical integration, a 2-point Gaussian Quadrature routine for numerical integration, or a point source approximation, depending on the location of the receptor relative to the source. In the regulatory default mode, the Romberg numerical integration is utilized for all receptors. The FASTAREA approach does not include meander in the AREA, AREAPOLY, AREACIRC, or LINE source types even if the AREAMNDR keyword has been included. Also beginning with version 09292, a non-regulatory option to optimize model runtime for POINT and VOLUME sources was included, which is selected with the FASTALL secondary keyword on the MODELOPT keyword. Specification of the FASTALL option also activates the FASTAREA option if AREA sources are including in the model inputs. Both FASTALL and FASTAREA skip receptors that are more than 80 kilometers from the source. Beginning with version 22112, the RLINE and RLINEXT sources also include a FAST option activated with the FASTALL keyword.

The FASTALL option for POINT/POINTHOR/POINTCAP and VOLUME sources uses an alternative implementation of the horizontal meander algorithm based on an effective horizontal dispersion coefficient ( $\sigma_{yeff}$ ) that replicates the centerline concentration based on the full meander approach. Use of the effective  $\sigma_y$  allows the model runtime to be optimized by skipping receptors that are more than  $4\sigma_{yeff}$  off the plume centerline. Based on tests conducted to date, comparisons of concentrations based on the FASTALL option for POINT and VOLUME sources with concentrations using the DFAULT option are similar to comparisons of concentrations for AREA sources using the FASTAREA option. The average ratio of FASTALL concentrations to DFAULT values is about 1.02 for high ranked values, showing a slight bias toward over prediction for the FASTALL option. However, the range of ratios for high ranked values shows both over predictions and under predictions relative to the DFAULT option, and differences at specific receptors may be much larger.

The FASTALL option for RLINE and RLINEXT uses an approximation to estimate the values for the horizontal and vertical dispersion coefficients ( $\sigma_y$  and  $\sigma_z$ , respectively) and the effective plume wind

speed. These estimates are made by interpolating between values of these variables computed at three distances from the source (1 m, 10 m, and 500 m). **Note that, as of version 19191, the FASTALL option has not been implemented for the BUOYLINE and SWPOINT source types and is not applicable with the PLATFORM keyword.**

#### 3.2.2.9 Urban transition and NOURBTRAN option

The urban option within AERMOD was modified, beginning with version 11059, to address potential issues associated with the transition from the nighttime urban boundary layer to the daytime convective boundary layer. Prior to version 11059, the enhanced dispersion due to the urban heat island during nighttime stable conditions was ignored once the rural boundary layer became convective. This could result in an unrealistic drop in the mixing height for urban sources during the morning transition to a convective boundary layer, which could contribute to overly conservative concentrations for low-level sources under such conditions. This potentially anomalous behavior was observed in a few cases during the application of AERMOD for the Risk and Exposure Assessment (REA) conducted in support of a review for the NO<sub>2</sub> National Ambient Air Quality Standard (NAAQS) (EPA, 2008). The potential significance of this issue for AERMOD applications in support of air quality permitting increased with the promulgation of the more recent 1-hour NO<sub>2</sub> and 1-hour SO<sub>2</sub> NAAQS in 2010.

To address this issue, AERMOD was modified to continue applying the urban boundary layer option for urban sources until the daytime (rural) convective boundary exceeds the population-dependent urban boundary layer height. This modification to the urban option within AERMOD has been evaluated using the 1985 Indianapolis SF<sub>6</sub> field study data (Murray and Bowne, 1988), and shows improved model performance during daytime convective conditions compared to the original implementation of the urban option. Model-to-monitor comparisons of 1-hour NO<sub>2</sub> concentrations from the Atlanta NO<sub>2</sub> REA also exhibit improved model performance with this modification to the urban option in AERMOD. A summary of these model evaluation results is provided in the AERMOD Model Formulation document (EPA, 2024a).

The NOURBTRAN non-regulatory option has been included to allow users to revert to the urban option as implemented prior to version 11059, which ignores the transition from the nighttime urban boundary layer to the daytime convective boundary layer.

### 3.2.2.10 SCREEN mode

The screening mode of AERMOD, which is controlled by the SCREEN keyword on the MODELOPT card, forces the model calculations to represent values for the plume centerline, regardless of the source-receptor-wind direction orientation. This option is included in AERMOD to facilitate the use of the model with the AERSCREEN (EPA, 2021) to estimate worst case impacts. Its use outside of that context is not recommended. Since the screening model is designed to be used with a non-sequential meteorological data file, representing a matrix of conditions, the SCREEN option also forces the use of the NOCHKD option described above, even if NOCHKD is not included on the MODELOPT card. The SCREEN option also restricts the averaging period options to 1-hour averages only on the AVERTIME card (see Section 3.2.2.10). Note that the SCREEN mode is only applicable for point type sources (POINT, POINTCAP, and POINTHOR) and VOLUME sources. For all other source types, screening is not invoked, and results are unchanged from non-screening mode.

### 3.2.2.11 SCIM

The AERMOD model includes the non-regulatory Sampled Chronological Input Model (SCIM) option to reduce model runtime for some uses of the model. The SCIM option can only be used with the ANNUAL average option and is primarily applicable to multi-year model simulations. The approach used by the SCIM option is to sample the meteorological data at a user-specified regular interval to approximate the long-term (i.e., ANNUAL) average impacts. Studies have shown that the uncertainty in modeled results introduced by use of the SCIM option is generally lower for area sources than for point sources.

When only the regular sampling is selected, hourly concentrations are calculated in the normal fashion for each sampled hour. The annual average concentration is then simply calculated by dividing the cumulative concentration for the sampled hours by the number of hours sampled (arithmetic average), i.e.,

$$C = \sum C_S / N_S$$

where:

- $C$  = Calculated concentration
- $\sum C_S$  = Cumulative impacts for the sampled hours
- $N_S$  = Number of sampled hours

To use the SCIM option, the user must include the SCIM keyword on the CO MODELOPT card and the SCIM sampling parameters on the ME SCIMBYHR card. The format and syntax of the ME SCIMBYHR keyword are described in Section 3.5.7.

#### 3.2.2.12 Deposition Options

The AERMOD model includes algorithms for both dry and wet deposition of both particulate and gaseous emissions. The deposition algorithms incorporated into AERMOD are based on the draft Argonne National Laboratory (ANL) report (Wesely et al., 2002), with modifications based on peer review. Treatment of wet deposition was revised from Wesely et al. (2002) based on recommendations by peer review panel members (Walcek et al., 2001). A full technical description of the deposition algorithms implemented in AERMOD is provided in an EPA report specific to these algorithms (EPA, 2003).

Based on the guidance provided for application of the AERMOD model in the Guideline (EPA, 2017b), and the history of the deposition algorithms in the AERMOD and ISC models, the particle deposition algorithms with a user-specified particle size distribution (referred to below as “Method 1”) can be applied simultaneously with the regulatory DFAULT keyword. Method 1 is comparable to the particle deposition algorithm in the ISCST3 model (EPA, 1995a). The gas deposition algorithms and the “Method 2” option for particle deposition based on the ANL draft report (Wesely, et al, 2002) are non-regulatory ALPHA options in AERMOD, and beginning with version 19191, the model will issue a fatal error message and abort processing if the ALPHA keyword is not specified with the gas deposition or Method 2 particle deposition options.

For gaseous dry deposition, the user must define seasonal categories for each of the calendar months, direction-specific land use categories, and several pollutant-specific parameters. An optional keyword is also provided to override default values for three parameters used in the gas deposition algorithm. The input requirements for “Method 1” particle deposition in AERMOD are the same as for the particle deposition algorithm in the ISCST3 model. For “Method 2” particle deposition, the user must define the fraction of the particle mass in the fine particle category (less than 2.5 microns) and a representative mass mean diameter for the particles. Table 3-1 summarizes the required keywords for the various deposition options within AERMOD and whether they are allowed under the DFAULT option. For all keywords associated with METHOD 2 or gas deposition, the ALPHA keyword must be used along with the MODELOPT keyword. The keywords used to define inputs for deposition specified on the CO pathway are described in the sections that follow. The keywords associated with deposition specified on the SO pathway are described in sections 3.3.3 through 3.3.5.

**Table 3-1 Summary of Deposition Options**

<b>Pollutant Type</b>	<b>Model Output Type</b>	<b>Required Keywords</b>	<b>Allowed under DFAULT?</b>
Gaseous	CONC w/dry depletion DDEP	CO GASDEPVD or CO GDSEASON, CO GDLANUSE, and SO GASDEPOS	No <sup>1</sup>
Gaseous	CONC w/wet depletion WDEP	SO GASDEPOS	No <sup>1</sup>
Gaseous	CONC w/dry & wet depletion DEPOS	CO GDSEASON, CO GDLANUSE, and SO GASDEPOS	No <sup>1</sup>
Particulate ("Method 1")	CONC w/dry and/or wet depletion DEPOS DDEP WDEP	SO PARTDIAM, SO PARTDENS, and SO MASSFRAX	Yes <sup>2</sup>
Particulate ("Method 2")	CONC w/dry and/or wet depletion DEPOS DDEP WDEP	SO METHOD_2	No <sup>1</sup>

The user should be aware that one or more of the following meteorological parameters are needed for deposition: precipitation code, precipitation rate, relative humidity, surface pressure, and cloud cover.

### 3.2.2.13 Definition of seasons for gaseous dry deposition

The gas deposition algorithms in AERMOD include land use characteristics and gas deposition resistance terms based on five seasonal categories defined in Table 2 of the ANL report as:

Seasonal Category 1: Midsummer with lush vegetation

Seasonal Category 2: Autumn with unharvested cropland

Seasonal Category 3: Late autumn after frost and harvest, or winter with no snow

Seasonal Category 4: Winter with snow on ground (with generally continuous snow cover)

<sup>1</sup> The ALPHA option must be included.

<sup>2</sup> While "Method 1" is allowed under the regulatory "DFAULT" option within AERMOD, the use of "Method 1" for particulate emissions in regulatory modeling applications should follow the guidance provided in Section 7.2.1.3 of the Guideline (EPA, 2017b).

Seasonal Category 5: Transitional spring with partial green coverage or short annuals

The user correlates these seasonal definitions to calendar months through the GDSEASON keyword on the CO pathway. The syntax and type of the GDSEASON keyword are:

<b>Syntax:</b>	CO GDSEASON Jan Feb Mar ... Dec
<b>Type:</b>	Optional, Non-repeatable

where a numeric value from 1 to 5 is entered for each of the twelve calendar months to associate it with the seasonal definitions given above. This keyword is optional for the model, but mandatory when applying the gas deposition algorithms, unless the GASDEPVD option for user-specified dry deposition velocity on the CO pathway is used, described below in Section 3.3.3.2. Note that some of the seasonal categories defined above may not apply for certain regions, such as Category 4, winter with continuous snow cover, for moderate climates.

3.2.2.14 Definition of land use categories for gas dry deposition

The gas deposition algorithms also require direction-specific land use categories based on the following land use codes and definitions (from Table 1 of the ANL report):

<u>Land Use Category</u>	<u>Description</u>
1	Urban land, no vegetation
2	Agricultural land
3	Rangeland
4	Forest
5	Suburban areas, grassy
6	Suburban areas, forested
7	Bodies of water
8	Barren land, mostly desert
9	Non-forested wetlands

The user defines the land use categories by direction sector through the GDLANUSE keyword on the CO pathway. The syntax and type of the GDLANUSE keyword are:

<b>Syntax:</b>	CO GDLANUSE Sec1 Sec2 Sec3 ... Sec36
<b>Type:</b>	Optional, Non-repeatable

where a numeric value from 1 to 9 is entered for each of the 36 direction sectors (every 10 degrees) to associate it with the land use definitions given above. This keyword is optional for the model, but mandatory when applying the gas deposition algorithms, unless the GASDEPVD option for user-specified deposition velocity is used. The first value, Sec1, corresponds with the land use category, downwind of the application site, for winds blowing toward 10 degrees, plus or minus 5 degrees. The downwind sectors are defined in clockwise order, with Sec36 corresponding to winds blowing toward 360 degrees (North) and should generally reflect conditions downwind relative to the source location. The user can specify "repeat values" by entering a field such as "36\*3" as a parameter for the GDLANUSE keyword. The model will interpret this as "36 separate entries, each with a value of 3." Since the model must identify this as a single parameter field, there must not be any spaces between the repeat-value and the value to be repeated. Option for overriding default parameters for gas dry deposition

An optional keyword is available on the Control (CO) pathway to allow the user to override the default values of the reactivity factor ( $f_o$ ), and the fraction (F) of maximum green leaf area index (LAI) for seasonal categories 2 (autumn/unharvested cropland) and 5 (transitional spring), for use with the gas dry deposition algorithms.

The syntax and type of the GASDEPDF keyword are summarized below:

<b>Syntax:</b>	CO GASDEPDF React F_Seas2 F_Seas5 (Refpoll)
<b>Type:</b>	Optional, Non-repeatable

where the parameter React is the value for pollutant reactivity factor ( $f_o$ ), and F\_Seas2 and F\_Seas5 are the fractions (F) of maximum green LAI for seasonal categories 2 and 5, respectively. The parameter Refpoll is the optional name of the pollutant. If the optional GASDEPDF keyword is omitted, then the default value of 0 is used for React, and default values of 0.5 and 0.25 are used for F\_Seas2 and F\_Seas5, respectively. A value of F=1.0 is used for seasonal categories 1, 3, and 4. A reactivity factor value of 1 should be input for ozone (O<sub>3</sub>), titanium tetrachloride (TiCl<sub>4</sub>), and divalent mercury (Hg<sup>2+</sup>), and a value of 0.1 should be input for nitrogen dioxide (NO<sub>2</sub>).

### 3.2.2.15 Deposition velocity and resistance outputs

In order to facilitate review and testing of the deposition algorithms in the AERMOD model, the model includes an option to output the main resistance terms and deposition velocities for gaseous and particle sources. These optional outputs are generated if the user specifies the 'CO DEBUGOPT MODEL'

option described in Section 3.2.18. The gas deposition data are written to a file called GDEP.DAT, which includes the values of  $R_a$ ,  $R_b$ ,  $R_c$ , and  $V_{dg}$  (see Wesely, et al, 2002, for definitions) for each source and for each hour modeled. A header record is included to identify the columns. The particle deposition data are written to a file called PDEP.DAT, which includes the values of  $R_a$ ,  $R_p$ ,  $V_g$ , and  $V_d$  for each source and for each hour modeled. The particle outputs are labeled as being based on either Method 1 or Method 2. For Method 1, results are output for each particle size category. The filename and file units for these data files are hardcoded in the model, and the files are overwritten each time the model is executed. Since these files include data for each source for each hour, file sizes may become large.

### 3.2.2.16 Remove displacement height from RLINE wind profile

Beginning with version 22112, the ALPHA option RLINEFDH was added to calculate the wind profile for RLINE sources without a displacement height. The displacement height is used in the wind profile to modify the wind profile below five times the surface roughness. When the surface roughness is large, such as in urban environments this displacement height could significantly impact the calculated windspeeds when the mean plume height is below five times the surface roughness length. RLINEFDH removes the displacement height and the wind speed profile is similar to the wind speed profile used in other AERMOD source types. RLINEFDH must be used along with the ALPHA keyword and cannot be used with the DFAULT keyword.

### 3.2.3 Low wind parameters

An ALPHA option, LOW\_WIND (see Section 3.2.3), is included in AERMOD (beginning with the version dated 18081 and updated in versions 21112 and 22112) related to concerns regarding model performance under low wind speed conditions. Inclusion of the LOW\_WIND keyword is intended to facilitate further testing and evaluation of AERMOD in low wind conditions in order to better understand the relationships of certain variables and potentially develop additional regulatory low wind options that will improve AERMOD's performance in low wind conditions. The LOW\_WIND keyword has been added to the CO pathway to allow users to override the default values for seven different parameters that can potentially affect performance under low wind speed conditions with user-defined values. Model default values can be overridden with user-defined values for the following parameters:

- Minimum sigma-v value (SVmin) within a range of 0.01 to 1.0 m/s),
- Minimum wind speed value (WSmin) within a range from 0.01 to 1.0 m/s,
- Maximum value for the meander factor (FRANmax), within a range of 0.0 to 1.0,

- Minimum sigma-w value (SWMin), within a range of 0.0 to 3.0 m/s, and
- Time period (BigT) used to calculate the time scale TRAN, within a range of 0.5 to 48.0 hours.
- Minimum value for the meander factor (FRANmin), within a range of 0.0 to 1.0 but must be less than or equal to FRANmax
- Alternate momentum balance (PBAL) approach to determine plume meander which overrides the default energy balance approach.

Absent user-specified values on the LOW\_WIND keyword, a default value of 0.2828 m/s is used for WSmin, consistent with the default applied in previous versions of AERMOD based on  $\text{SQRT}(2 \cdot \text{SVmin} \cdot \text{SVmin})$ .

The default value of SVmin = 0.2 m/s, FRANMax = 1.0, SWMin = 0.02 m/s, BigT = 24.0 hours, and FRANMin = 0.0.

The syntax and type of the LOW\_WIND keyword is:

<b>Syntax:</b>	CO LOW_WIND SVmin [WSmin] <i>or</i>
	CO LOW_WIND SVmin WSmin [FRANmax] <i>or</i>
	CO LOW_WIND SVmin WSmin FRANmax [SWmin] <i>or</i>
	CO LOW_WIND SVmin WSmin FRANmax SWmin [BigT] <i>or</i>
	CO LOW_WIND SVmin WSmin FRANmax SWmin BigT [FRANmin] <i>or</i>
	CO LOW_WIND SVmin WSmin FRANmax SWmin BigT FRANmin [PBAL]
<b>Type:</b>	Optional, Non-repeatable

where SVmin is the minimum value of sigma-v, within a range of 0.01 to 1.0 m/s. WSmin is the minimum wind speed and can range from 0.01 to 1.0 m/s. FRANmax is the maximum meander factor, within a range of 0.0 to 1.0. BigT is the time scale used to calculate TRAN and can range from 0.5 to 48 hours, FRANmin is the minimum meander factor within a range of 0.0 to 1.0 and is required to be less than or equal to FRANmax. PBAL is a secondary keyword to replace the default energy balance approach for determining meander with a momentum balance approach. The syntax allows one of six ways to specify one or more of the LOW\_WIND parameter values. For each syntax option, the parameter listed in square brackets, [], is optional, but the preceding parameters are required. For example, to override the default value for SWMin, you must also provide values for SVMIn, WSMIn, and FRANmax preceding the value for SWMin, in the order listed above.

**Note: The LOW\_WIND keyword was previously implemented as a BETA option to supplement the former LOWWIND1, LOWWIND2, and LOWWIND3 BETA options. These options have since been removed from AERMOD, and the LOW\_WIND keyword was retained and changed to an ALPHA option.**

In addition to the LOW\_WIND ALPHA option, an option has been incorporated in the AERMET meteorological processor (first as a BETA option beginning with version 12345 and a regulatory option in version 16216) to address concerns regarding model performance under low wind conditions. The ADJ\_U\* option in AERMET adjusts the surface friction velocity ( $U^*$ ) under low wind/stable conditions based on Qian and Venkatram (2011). The ADJ\_U\* option may be used as a regulatory option in AERMET with NWS data or with site-specific data that does not include turbulence (i.e., sigma-w and/or sigma-theta). When the ADJ\_U\* option is used in the absence of turbulence data, AERMOD can accept the data with the regulatory DFAULT option enabled. Beginning with version 16216 of AERMET, an adjustment to  $U^*$  under the ADJ\_U\* option is also available as a regulatory option for applications utilizing the Bulk Richardson Number (BULKRN) method, based on Luhar and Raynor (2009) (see also AECOM (2010)) when used with site-specific data that does not include turbulence parameters. The ADJ\_U\* option, when used with site-specific data that does include turbulence parameters, is currently considered a non-regulatory option and is therefore, subject to the alternative model provisions in Section 3.2 of Appendix W (40 CFR Part 51). During processing, AERMET includes a flag in the header of the surface meteorological data file (.SFC) to inform AERMOD that the data were processed using the ADJ\_U\* option. If AERMOD then encounters turbulence data in the profile file (PFL) generated by AERMET and the DFAULT flag is set, AERMOD will record the error and abort processing. Refer to the AERMET user's guide for additional details regarding the ADJ\_U\* option in AERMET.

#### 3.2.4 Building downwash options

Beginning with version 19191, two distinct sets of ALPHA building downwash options are included in AERMOD and are enabled using the ORD\_DWNW and AWMADWNW keywords. These are research grade options that have been identified as having potential to refine and improve the performance of the PRIME downwash algorithm in AERMOD in certain situations. They have been made available to users for testing and evaluation and require that the secondary keyword, ALPHA, be included with the MODELOPT keyword. The options associated with ORD\_DWNW were developed by the EPA's Office of Research and Development (ORD) and the AWMADWNW options were developed by a research subcommittee of the Air and Waste Management Association (AWMA) formed for the purpose of conducting research that will lead to the improvement of the treatment of building downwash in AERMOD.

In addition to the ALPHA building downwash options implemented in AERMOD by ORD and AWMA, the research and development performed by both groups of researchers used an alternative method for determining the equivalent building dimensions for a rectangular building that is oblique to the wind from the method used by the building preprocessor, BPIPPRM. The alternative method uses the along wind building length and actual building width, for a given wind direction, as the equivalent building length and width, whereas BPIPPRM, for the same wind direction, uses the maximum projected length and maximum projected width. The alternate method reduces the footprint of the building which is reflected in the building parameters that are input into AERMOD.

The alternate method for determining equivalent building dimensions for a rectangular building used by ORD and AWMA has been implemented by ORD in a draft version of BPIPPRM (19191\_DRFT) which can be downloaded from the EPA SCRAM website at: <https://www.epa.gov/scram/air-quality-dispersion-modeling-related-model-support-programs#bippprm>. It is important to note that this draft version of BPIPPRM (19191\_DRFT) is a research grade version that has been provided to the modeling community for testing, evaluation, and feedback and may not be used in a regulatory context. The changes implemented in this draft version affect only the building parameters generated for rectangular buildings or tiers. It is also important to note that this draft version of BPIPPRM (19191\_DRFT) is completely independent of the ALPHA downwash options implemented by ORD and AWMA. Any of the ALPHA downwash options can be tested and evaluated with and without the use of this draft version of BPIPPRM.

The remainder of this section describes the usage of these keywords (ORD\_DWNW and AWMADWNW), the ALPHA building downwash options associated with each, and the corresponding secondary keywords used to enable them for testing and evaluation. While, for the most part, the different downwash options are independent of one another and can be used in various combinations with one another, any conflicts and dependencies between options are noted in the sections below.

#### 3.2.4.1 ORD building downwash options

The first is an initiative led by the EPA's Office of Research and Development (ORD). ORD has performed wind tunnel experiments and embedded large eddy simulations (LES) to better understand how to parameterize buildings that are elongated and angled relative to the wind flow and the parameterization of the plume in the cavity and far wake regions. The ORD studies are concentrated on single rectangular buildings, specifically investigating changes in plume parameters at discrete downwind distances from the building and source, longitudinal and lateral plume profiles, the lateral plume shift on the lee side of rotated buildings, and building characterization in BPIPPRM (Heist et al., 2016). To date, this research has led to

recommended changes to the building preprocessor, BPIPFRM, as well as changes to the building downwash algorithm in the AERMOD program.

ORD has performed wind tunnel experiments and embedded large eddy simulations (LES) to better understand how to parameterize buildings that are elongated and angled relative to the wind flow and the parameterization of the plume in the cavity and far wake regions. The ORD studies focused on single rectangular buildings and investigated changes in plume parameters at discrete downwind distances from the building and source and building characterization.

As previously stated, the ORD building options associated with the ORD\_DWNW keyword are research grade ALPHA options and require the ALPHA secondary keyword included with the MODELOPT keyword. There are three distinct ORD options that can be enabled individually or in combination with one another. For detailed information on ORD’s research and the options implemented in AERMOD, refer to Heist et al., 2016; Monbureau et al., 2018; and Perry et al., 2018. The usage of the ORD\_DWNW keyword and associated secondary keywords is as follows:

<b>Syntax:</b>	CO ORD_DWNW	ORDUEFF ORDTURB ORDCAV	and/or and/or
<b>Type:</b>	Optional, Non-repeatable		

where:

ORDUEFF - Redefines the height at which the wind speed is taken from the profile wind speed used in the calculation of concentrations from the primary plume. The PRIME algorithm currently uses the wind speed at the stack height. ORDUEFF uses the average of the profiled wind speed between the height of the receptor and the plume centerline, allowing the wind speed of the plume to change with a changing environment.

**NOTE: ORDUEFF cannot be used in combination with the AWMADWNW option AWMAUEFF.**

ORDTURB - Redefines the maximum value of the non-dimensional vertical turbulence intensity in the wake, reduced from 0.07, the current value in PRIME, to 0.06 based on Wiel (1996).

ORDCAV- Redefines point downwind at which the vertical and lateral dispersion coefficients begin to grow with downwind distance from the lee edge of the building to the end of the cavity. PRIME considers a cavity plume and a re-emitted plume to simulate two distinct regions with a weighted distribution of mass between the two plumes. The cavity and re-emitted plumes initially have the same lateral and vertical dispersion on the leeward side of the building. The re-emitted plume grows with downwind distance while the dispersion of the cavity plume remains unchanged throughout the cavity which creates a discontinuity of the two plumes at the near-wake boundary and results in a reduction in ground level concentrations. This option sets the dispersion coefficients for the two plumes equal to each other at the cavity edge eliminating the discontinuity between the two plumes.

**NOTE: Each of the three ORD\_DWNW options listed are optional, but at least one must be included if the ORD\_DWNW keyword is specified in the control file.**

#### 3.2.4.2 AWMA building downwash options

AWMA's research focused on the reanalysis of existing wind tunnel data, as well as the completion of new wind tunnel experiments to investigate the decay of the building wake above the top of the building, appropriate height at which approach turbulence and wind speed are calculated, the reduction of wake effects for streamlined structures, and the effect of approach roughness on the wake.

Five ALPHA building downwash options developed by the AWMA have been implemented in AERMOD and require the ALPHA secondary keyword included with the MODELOPT keyword. For detailed information on AWMA's research and the development of these ALPHA building downwash options, refer to Petersen et al., 2017 and Petersen et al., 2018. The usage of the AWMADWNW keyword and the associated secondary keywords to enable the AWMA building downwash ALPHA options is as follows:

<b>Syntax:</b>	CO AWMADWNW AWMAUEFF and/or AWMAENTRAIN and/or ((AWMAUTURB or AWMAUTURBHX) w/wo STREAMLINE(D))
<b>Type:</b>	Optional, Non-repeatable

where:

AWMAUEFF - Redefines the height at which the wind speed is taken from the profile wind speed used in the calculation of concentrations from the primary plume. The PRIME algorithm currently uses the wind speed at the stack height. AWMAUEFF uses the wind speed at the height of the plume centerline.

**NOTE: AWMAUEFF cannot be used in combination with the ORD\_DWNW option ORDUEFF.**

AWMAENTRAIN - AWMAENTRAIN changes beta (B) entrainment coefficient for PRIME downwash from default value of 0.60 to 0.35.

AWMAUTURB - Enables enhanced calculations of turbulence and wind speed using the minimum of the final momentum plume rise or a representative PRIME plume rise height for all calculations. Also, uses the final momentum plume rise height used to compute effective wind speed (UEFF), effective  $\sigma_w$  (SWEFF), effective  $\sigma_v$  (SVEFF), effective potential temperature gradient (TGEFF), and initial turbulence intensities (ambiy and ambiz) and computes mean wind speed,  $\sigma_w$ , and  $\sigma_v$  at 30 meters (U30, SW30 and SV30, respectively).

AWMAUTURBHX - Enables enhanced calculations of turbulence and wind speed using the PRIME plume rise at the downwind distance X, for all calculations. Uses the final momentum plume rise height to initially compute effective wind speed (UEFF), effective  $\sigma_w$  (SWEFF), effective  $\sigma_v$  (SVEFF), effective potential temperature gradient (TGEFF), and initial turbulence intensities (ambiy and ambiz) and then then uses the PRIME computed plume rise at each downwind distance. Also, computes mean wind speed,  $\sigma_w$ , and  $\sigma_v$  at 30 meters (U30, SW30 and SV30, respectively).

**NOTE: If AWMAUTURB and AWMAUTURBHX are both specified, AERMOD will issue a warning and continue processing using the AWMAUTURBHX option.**

STREAMLINE(D) - Reduces dispersion in the wake of streamlined structures such as storage tanks and cooling towers. Uses alternate formulations for turbulence enhancement and velocity deficit associated with the AWMUTURB and AWMATURBHX options with modifications for streamlined structures. When specified, all structures will be treated as streamlined structures.

**NOTE: The STREAMLINE option can only be specified in conjunction with the AWMAUTURB and AWMAUTURBHX options. When specified, AERMOD assumes all buildings defined in the input control file are streamlined structures.**

**NOTE: Each of the AWMADWNW options listed are optional, but at least one must be included if the AWMADWNW is used.**

Refer to Section 3.2.18 for debug output options associated with the ALPHA building downwash options.

### 3.2.5 Input parameters for NO<sub>2</sub> conversion options

This section provides a description of the AERMOD inputs related to the PVMRM, OLM, GRSM, and ARM2 regulatory options for modeling the conversion of NO to NO<sub>2</sub>, as well as the ALPHA options, TTRM and TTRM2. TTRM and GRSM were both added as ALPHA options beginning with version 21112. Beginning with version 22112, GRSM was updated to a BETA option, and TTRM2 was added as an ALPHA option to invoke TTRM simultaneously with ARM2, PVMRM, or OLM. GRSM was updated to a regulatory option beginning in version 24142. As a stand-alone option, TTRM is only effective for near field receptors. TTRM2 paired with ARM2, PVMRM, or OLM, will invoke TTRM for near field receptors and use the other method specified for all other receptors. While TTRM as a method has now been integrated to be paired with these other options using the TTRM2 keyword, the TTRM keyword has been retained as a stand-alone option for testing and diagnostic purposes. Note that the TTRM2 option cannot be paired with GRSM. Also note that beginning with version 16216r, ARM2 replaced the original Ambient Ratio Method (ARM) Tier 2 option for NO conversion to NO<sub>2</sub>. ARM is no longer an option in AERMOD.

A technical description of the PVMRM algorithm as incorporated within AERMOD is provided in the AERMOD Model Formulation document (EPA, 2024a). Additional information regarding the regulatory options for NO<sub>2</sub> modeling are provided in Technical Support Document (TSD) for NO<sub>2</sub>-related AERMOD Modifications (EPA, 2015). Background on the original development of the PVMRM option is provided by Hanrahan (1999a and 1999b).

The ARM2 option is based on work sponsored by API (API, 2013) to develop a method to adjust the modeled NO<sub>x</sub> concentrations based on an empirical relationship between ambient NO<sub>x</sub> and ambient NO<sub>2</sub> concentrations. A key difference between the PVMRM and OLM methods, as compared to the ARM2 method, is that ARM2 does not require the user to input background ozone (O<sub>3</sub>) concentrations or in-stack NO<sub>2</sub>/NO<sub>x</sub> ratios, as required by PVMRM and OLM; however, the default minimum ratio utilized in the ARM2 method may not be appropriate in cases where the sources being modeled are known to have relatively high in-stack NO<sub>2</sub>/NO<sub>x</sub> ratios. ARM2 sums all NO<sub>x</sub> impacts from all sources modeled in a single model run to determine the NO<sub>2</sub>/NO<sub>x</sub> ratio that's applied for each source group (SRCGROUP) specified. While the SRCGROUP keyword is required with at least one source group defined, if source group 'ALL' is omitted, AERMOD will automatically assume a source group 'ALL' internally and apply ARM2 to that assumed source group. In this case, AERMOD will generate a warning message to indicate that source group 'ALL' is missing but not required. Thus, ARM2 will not be calculated based on separate source groups NO<sub>x</sub> impacts. For example, if NO<sub>x</sub> emissions from five stacks are modeled with the ARM2 option, and only one source group is specified for one stack, ARM2 will first determine the total NO<sub>x</sub> impact from all five stacks, calculate the empirically derived NO<sub>2</sub>/NO<sub>x</sub> ratio from the total NO<sub>x</sub> impact (using a 5<sup>th</sup> order polynomial equation discussed in API, 2013), and the final NO<sub>2</sub> impact concentration for the single stack source group would be calculated as the product of the NO<sub>2</sub>/NO<sub>x</sub> ratio and the discrete NO<sub>x</sub> impact for the single stack source group.

The ARM2 has been implemented as a regulatory Tier 2 option while the PVMRM, OLM, and GRSM algorithms have been implemented as regulatory Tier 3 screening options. Therefore, any one of the four options can be used with the DFAULT keyword. TTRM/TTRM2 have been added as non-regulatory ALPHA options and cannot be used with the DFAULT keyword. As with all other ALPHA options, they require the use of the ALPHA keyword. With exception to daytime GRSM NO<sub>2</sub> calculations, it is important to note that the OLM, PVMRM, ARM2, and TTRM/TTRM2 options are NOT applied to the background NO<sub>2</sub> concentrations input through the SO BACKGRND option (described in Section 3.3.8.2). The background NO<sub>2</sub> concentrations, if provided, will be added to the modeled NO<sub>2</sub> concentrations after the NO-NO<sub>2</sub> conversion has been calculated. GRSM daytime NO<sub>2</sub> model concentrations are calculated based on the

net production of NO<sub>2</sub> from the following: NO<sub>2</sub> in-stack ratio, ozone entrainment and conversion of NO<sub>x</sub> to NO<sub>2</sub>, photolysis of NO<sub>2</sub> to NO, and time-of-travel of the NO<sub>x</sub> plume from source to receptor. GRSM nighttime NO<sub>2</sub> model concentrations are calculated similar to OLM and PVMRM, i.e., limited by ozone conversion of NO to NO<sub>2</sub> with background NO<sub>2</sub> concentrations (as specified through SO BACKGRND pathway) simply added to the post-chemistry total NO<sub>2</sub> concentration.

It should be noted that not all NO<sub>2</sub> conversion options have been implemented for all source types in AERMOD. Table 3-2 summarizes which NO<sub>2</sub> conversion options have been implemented for each of the AERMOD source types and which options have not.

**Table 3-2. Implemented NO<sub>2</sub> Conversion Options by AERMOD Source Type**

<b>AERMOD Source Type</b>	<b>Implemented NO<sub>2</sub> Options</b>	<b>Not Implemented Warning Issued</b>
POINT (inc. POINTCAP and POINTHOR)	ALL	NONE
AREA (inc. AREAPOLY, AREACIRC, and LINE)	ALL	NONE
VOLUME	ALL	NONE
OPENPIT	ARM2, PVMRM, OLM, TTRM, GRSM	TTRM2 (unpaired or paired with ARM2, OLM, or PVMRM), TTRM2 by itself produces zero-values!
RLINE/RLINEXT	ARM2	PVMRM, OLM, TTRM, TTRM2, GRSM
BUOYLINE	ARM2	PVMRM, OLM, TTRM, TTRM2, GRSM
SWPOINT	NONE	ARM2, PVMRM, OLM, TTRM, TTRM2, GRSM

As described in Section 3.3.7, the ALPHA model option, PSDCREDIT, has been included for testing and evaluation for increment consumption with PSD credits using PVMRM. The special source grouping required for the PSDCREDIT option is also described below in Section 3.3.7.

3.2.5.1 Specifying ozone concentrations for PVMRM, OLM, TTRM/TTRM2, and GRSM options

The background ozone concentrations for the PVMRM, OLM, TTRM/TTRM2, and GRSM options can be input as a single value through the OZONEVAL keyword on the CO pathway, as temporally varying values through the O3VALUES keyword on the CO pathway, or as hourly values from a separate data file specified through the OZONEFIL keyword on the CO pathway. The user must specify background ozone concentrations through the OZONEVAL, O3VALUES, or OZONEFIL keyword to use the PVMRM, OLM, TTRM/TTRM2, or GRSM option. The OZONEVAL or O3VALUES keyword may also be specified with the OZONEFIL keyword, in which case the value(s) entered on the OZONEVAL or O3VALUES keyword will be used to substitute for hours with missing ozone data in the hourly ozone data file. Users are strongly encouraged to utilize the OZONEVAL or O3VALUES keyword with the OZONEFIL keyword to substitute for missing ozone concentrations in the hourly data file. Beginning with version 13350 users can vary background ozone concentrations by wind sector. For applications that include sector-varying background ozone concentrations, the sectors are defined based on the CO O3SECTOR keyword, as follows:

<b>Syntax:</b>	CO O3SECTOR StartSect1 StartSect2 . . . StartSectN, where $N \leq 6$
<b>Type:</b>	Optional, Non-Repeatable

For applications that include sector-varying background concentration the minimum sector width allowed is 30 degrees and warning messages will be issued for sector widths less than 60 degrees. **Sector-varying background concentrations will be selected based on the flow vector, i.e., the downwind direction based on the wind direction specified in the surface meteorological data file.**

The syntax of the OZONEVAL keyword is as follows:

<b>Syntax:</b>	CO OZONEVAL O3Value (O3Units) (w/o sectors)
	or CO OZONEVAL SECT $x$ O3Value (O3Units), where $x \leq 6$ (w/ sectors)
<b>Type:</b>	Optional, Non-repeatable

where the O3Value parameter is the background ozone concentration in the units specified by the optional O3Units parameter (PPM, PPB, or UG/M3), and SECT $x$  refers to the user-specified sector defined on the

optional O3SECTOR keyword for which the O3Value inputs are applied. Implement as SECT1 or SECT2 ...or SECT $x$  where  $x \leq 6$ , and  $x$  is an integer and corresponds to the Nth sector defined by O3SECTOR. If the optional O3Units parameter is missing, then the model will assume units of micrograms/cubic-meter (UG/M3) for the background ozone values. If units of PPM or PPB are used, then the model will convert the concentrations to micrograms/cubic-meter based on reference temperature (25 C) and pressure (1013.25 mb). If O3SECTOR has been implemented, then OZONEVAL can only be applied for a single sector. However, if using multiple sectors user should use O3VALUES.

The syntax of the O3VALUES keyword is as follows, and is similar to the EMISFACT keyword on the SO pathway (Section 3.3.11) for specifying temporally varying emission rates:

<b>Syntax:</b>	CO O3VALUES O3Flag O3values(i), i=1, $n$ (w/o sectors)
	or CO O3VALUES SECT $x$ O3Flag O3values(i), i=1, $n$ where $x \leq 6$ (w/ sectors)
<b>Type:</b>	Optional, Repeatable

where the SECT $x$  parameter specifies the applicable sector as defined on the optional O3SECTOR keyword. Implement as SECT1 or SECT2 ...or SECT $x$  where  $x \leq 6$ , and  $x$  is an integer and corresponds to the Nth sector defined by O3SECTOR. The parameter O3Flag is the variable ozone concentration flag, and must be specified as one of the following secondary keywords (the number in parentheses indicates the number of values required for each option):

- ANNUAL - annual ozone value ( $n = 1$ ); equivalent to OZONEVAL keyword in PPB,
- SEASON - ozone values vary seasonally ( $n = 4$ ),
- MONTH - ozone values vary monthly ( $n = 12$ ),
- HROFDY - ozone values vary by hour-of-day ( $n = 24$ ),
- WSPEED - ozone values vary by wind speed ( $n = 6$ ),
- SEASHR - ozone values vary by season and hour-of-day ( $n = 96$ ),
- HRDOW - ozone values vary by hour-of-day, and day-of-week [M-F, Sat, Sun] ( $n = 72$ ),
- HRDOW7 - ozone values vary by hour-of-day, and the seven days of the week [M, Tu, W, Th, F, Sat, Sun] ( $n = 168$ ),
- SHRDOW - ozone values vary by season, hour-of-day, and day-of-week [M-F, Sat, Sun] ( $n = 288$ ),
- SHRDOW7 - ozone values vary by season, hour-of-day, and the seven days of the week [M, Tu, W, Th, F, Sat, Sun] ( $n = 672$ ),

MHRDOW - ozone values vary by month, hour-of-day, and day-of-week [M-F, Sat, Sun] ( $n = 864$ ), and

MHRDOW7 - ozone values vary by month, hour-of-day, and the seven days of the week [M, Tu, W, Th, F, Sat, Sun] ( $n = 2,016$ ).

The O3Values array is the array of ozone values, where the number of values is shown above for each O3Flag option. The seasons are defined in the following order: Winter (Dec., Jan., Feb.), Spring (Mar., Apr., May), Summer (Jun., Jul., Aug.), and Fall (Sep., Oct., Nov.). The wind speed categories used with the WSPEED option may be defined using the ME WINDCATS keyword. If the WINDCATS keyword is not used, the default wind speed categories are defined by the upper bound of the first five categories as follows (the sixth category is assumed to have no upper bound): 1.54, 3.09, 5.14, 8.23, and 10.8 m/s. The O3VALUES keyword may be repeated as many times as necessary to input all of the ozone values and repeat values may be used for the numerical inputs.

The order of inputs specified for the hour-of-day/day-of-week options (HRDOW, SHRDOW, SHRDOW7, etc.) are by hour-of-day, then season or month, if applicable, and then by day-of-week. For the HRDOW/SHRDOW/MHRDOW options, the days of the week are specified in the order of Weekdays (M-F), Saturdays, and Sundays. For the HRDOW7/SHRDOW7/ MHRDOW7 options, the days of the week are specified in the order of Mondays, Tuesdays, etc., through Sundays. Section 3.3.11 below includes an example illustrating the order of inputs for these options for the EMISFACT keyword.

Ozone concentrations specified on the O3VALUES keyword are assumed to be in units of PPB unless the OZONUNIT keyword is specified.

The syntax of the OZONUNIT keyword is as follows:

<b>Syntax:</b>	CO OZONUNIT OzoneUnits
<b>Type:</b>	Optional, Non-repeatable

where the OzoneUnits parameter specifies the units as parts-per-billion (PPB), parts-per-million (PPM), or micrograms/cubic-meter (UG/M3). Units specified on the CONCUNIT keyword are only applied to ozone concentrations input through O3VALUES keyword, which assumes default units of PPB if the OZONUNIT keyword is not specified. Ozone concentrations specified in units of PPB or PPM are converted to UG/M3 based on reference temperature (25 C) and pressure (1013.25 mb).

Hourly ozone concentrations can be input through the optional OZONEFIL keyword. The syntax of the OZONEFIL keyword is as follows:

<b>Syntax:</b>	CO OZONEFIL O3FileName (O3Units) (O3Format) (w/o sectors) or CO OZONEFIL SECT $x$ O3FileName (O3Units) (O3Format), where $x \leq 6$ (w/ sectors)
<b>Type:</b>	Optional, Non-repeatable

where the O3FileName parameter is the filename for the hourly ozone concentration file, the optional O3Units parameter specifies the units of the ozone data (PPM, PPB, or UG/M3, with UG/M3 as the default), and the optional O3Format parameter specifies the Fortran format to read the ozone data. If sector-varying ozone concentrations are being used, based on the CO O3SECTOR keyword, then the applicable sector ID needs to be specified, e.g., 'SECT1' indicates that values are specified for the first downwind sector. The O3FileName can be up to 200 characters in length based on the default parameters in AERMOD. Double quotes (“”) at the beginning and end of the filename can also be used as field delimiters to allow filenames with embedded spaces.

The hourly ozone file must include the year, month, day, and hour, followed by the ozone concentration, in that order (unless specified differently through the O3Format parameter). The year can be specified as either a 2-digit or 4-digit year. If an optional Fortran format is specified using the O3Format parameter, the year, month, day, and hour variables must be read as integers using the Fortran 'I' format specifier, and the ozone concentration must be read as a real variable, using the Fortran 'F,' 'E,' or 'D' format specifiers, e.g., (4I2, F8.3). Note that ozone values that do not include decimal places can be read as F $x$ .0, where  $x$  is the length of the data field. However, ozone values that do not include decimal places may be read incorrectly if the O3Format specified for reading the data includes decimal places. For example, a value of '1234' would be interpreted as '123.4' if a format of F4.1 was used. The O3Format parameter must include the open and close parentheses as shown in the example and may also include embedded spaces if double quotes (“”) are used to delimit the field. A warning message will be generated if the specified format does not meet these requirements, and AERMOD may also issue a fatal error message when reading the file in cases where real variables are read with an integer format, or vice versa.

If the optional O3Format parameter is missing, then the model will read the ozone data using a Fortran 'free' format, i.e., assuming commas or spaces separate the data fields, and that the fields are in the order given above. The date sequence in the ozone data file must match the date sequence in the hourly meteorological data files. As with the OZONEVAL keyword, if units of PPM or PPB are used, then the

model will convert the concentrations to micrograms/cubic-meter based on reference temperature (25 C) and pressure (1013.25 mb).

Values of ozone concentrations in the ozone data file that are less than zero or greater than or equal to 900.0 will be regarded as missing. If background ozone values have been specified using the OZONEVAL and/or O3VALUES keyword, then the appropriate value will be used to substitute for missing ozone data from the ozone file. If no OZONEVAL or O3VALUES keywords are used, then the model will assume full conversion of NO to NO<sub>2</sub> for hours with missing ozone data.

AERMOD will apply a minimum ozone value for NO conversion during stable hours, based on the maximum minimum of 40 ppb and the maximum hourly ozone from the previous 24-hours of ozone data. This minimum ozone restriction can be turned off with the NOMINO3 keyword. As with all NO<sub>2</sub> options, this option shall be used in agreement with the appropriate reviewing authority.

NOTE: The OLM method for estimating NO<sub>2</sub> concentrations, outlined by Cole and Summerhays (1979), assumes NO conversion to NO<sub>2</sub> by first dividing total NO<sub>x</sub> into a thermal NO<sub>2</sub> component directly emitted from a stack, with the remaining NO<sub>x</sub> assumed as NO and available for reaction with O<sub>3</sub>. If ambient O<sub>3</sub> is greater than the portion of NO<sub>x</sub> assumed as NO, all NO is converted to NO<sub>2</sub>, otherwise, the amount of NO converted to NO<sub>2</sub> is limited to available O<sub>3</sub>. AERMOD, for OLM processing, only incorporates user-defined, background ozone values in concentration calculations for hours that are “ozone-limited”, when sufficient atmospheric ozone is not present for NO<sub>x</sub> chemistry reactions. Determination of ozone-limited hours is dependent on the relative values of background ozone concentrations to NO<sub>2</sub> emissions multiplied by the in-stack NO<sub>2</sub>/NO<sub>x</sub> ratio, described in Section 3.2.5.4, defined by the user. It is possible, therefore, to define scenarios that will result in an absence of ozone-limited hours. Users interested in evaluating concentrations sensitivities to background ozone should consider the potential that modification of the background ozone concentration may not appear to impact output concentrations if relatively low in-stack NO<sub>2</sub>/NO<sub>x</sub> and/or emissions rates are defined. This behavior does not apply to the AERMOD PVMRM method.

#### 3.2.5.2 Specifying NO<sub>x</sub> background concentrations for the GRSM option

The background NO<sub>x</sub> concentrations for the GRSM option is input similarly to the ozone background concentrations. The background NO<sub>x</sub> concentrations can be input as a single value through the NOXVALUE keyword on the CO pathway, as temporally varying values through the NOX\_VALS keyword on the CO pathway, or as hourly values from a separate data file specified through the NOX\_FILE keyword

on the CO pathway. The user may specify background NO<sub>x</sub> concentrations through the NOXVALUE, NOX\_VALS, or NOX\_FILE keyword in order to use the GRSM option. The NOXVALUE or NOX\_VALS keyword may also be specified with the NOX\_FILE keyword, in which case the value(s) entered on the NOXVALUE or NOX\_VALS keyword will be used to substitute for hours with missing NO<sub>x</sub> background data in the hourly NO<sub>x</sub> data file. Users are strongly encouraged to utilize the NOXVALUE or NOX\_VALS keyword with the NOX\_FILE keyword to substitute for missing NO<sub>x</sub> concentrations in the hourly data file. If no NO<sub>x</sub> input is supplied, GRSM will assume equilibrium with NO<sub>x</sub>. As with background ozone, users can vary background NO<sub>x</sub> concentrations by wind sector. For applications that include sector-varying background NO<sub>x</sub> concentrations, the sectors are defined based on the CO NOXSECTR keyword, as follows:

<b>Syntax:</b>	CO NOXSECTR StartSect1 StartSect2 . . . StartSectN, where $N \leq 6$
<b>Type:</b>	Optional, Non-Repeatable

For applications that include sector-varying background concentration the minimum sector width allowed is 30 degrees and warning messages will be issued for sector widths less than 60 degrees. **Sector-varying background concentrations will be selected based on the flow vector, i.e., the downwind direction, based on the wind direction specified in the surface meteorological data file.**

The syntax of the NOXVALUE keyword is as follows:

<b>Syntax:</b>	CO NOXVALUE NOXValue (NOXUnits) (w/o sectors)
	or CO NOXVALUE SECT <sub>x</sub> NOXValue (NOXUnits), where $x \leq 6$ (w/ sectors)
<b>Type:</b>	Optional, Non-repeatable

where the NOXValue parameter is the background NO<sub>x</sub> concentration in the units specified by the optional NOXUnits parameter (PPM, PPB, or UG/M3), and SECT<sub>x</sub> refers to the user-specified sector defined on the optional NOXSECTR keyword for which the NOXValue inputs are applied. Implement as SECT1 or SECT2 ...or SECT<sub>x</sub> where  $x \leq 6$ , and x is an integer and corresponds to the Nth sector defined by NOXSECTR. If the optional NOXUnits parameter is missing, then the model will assume units of micrograms/cubic-meter (UG/M3) for the background NO<sub>x</sub> values. If units of PPM or PPB are used, then the model will convert the concentrations to micrograms/cubic-meter based on reference temperature (25 C) and pressure (1013.25 mb).

The syntax of the NOX\_VALS keyword is as follows and is similar to the O3VALUES keyword described above in Section 3.2.5.1 for specifying temporally varying ozone background concentrations:

<b>Syntax:</b>	CO NOX_VALS NOXFlag NOXvalues(i), i=1, <i>n</i> (w/o sectors)
	or CO NOX_VALS SECT <sub><i>x</i></sub> NOXFlag NOXvalues(i), i=1, <i>n</i> and <i>x</i> ≤ 6 (w/ sectors)
<b>Type:</b>	Optional, Repeatable

where the SECT<sub>*x*</sub> parameter specifies the applicable downwind sector as defined on the optional NOXSECTR keyword and the parameter NOXFlag is the variable NO<sub>x</sub> concentration flag and must be specified as one of the following secondary keywords (the number in parentheses indicates the number of values required for each option):

- ANNUAL - annual NO<sub>x</sub> value (*n* = 1); equivalent to NOXVALUE keyword in PPB,
- SEASON - NO<sub>x</sub> values vary seasonally (*n* = 4),
- MONTH - NO<sub>x</sub> values vary monthly (*n* = 12),
- HROFDY - NO<sub>x</sub> values vary by hour-of-day (*n* = 24),
- WSPEED - NO<sub>x</sub> values vary by wind speed (*n* = 6),
- SEASHR - NO<sub>x</sub> values vary by season and hour-of-day (*n* = 96),
- HRDOW - NO<sub>x</sub> values vary by hour-of-day, and day-of-week [M-F, Sat, Sun] (*n* = 72),
- HRDOW7 - NO<sub>x</sub> values vary by hour-of-day, and the seven days of the week [M, Tu, W, Th, F, Sat, Sun] (*n* = 168),
- SHRDOW - NO<sub>x</sub> values vary by season, hour-of-day, and day-of-week [M-F, Sat, Sun] (*n* = 288),
- SHRDOW7 - NO<sub>x</sub> values vary by season, hour-of-day, and the seven days of the week [M, Tu, W, Th, F, Sat, Sun] (*n* = 672),
- MHRDOW - NO<sub>x</sub> values vary by month, hour-of-day, and day-of-week [M-F, Sat, Sun] (*n* = 864), and
- MHRDOW7 - NO<sub>x</sub> values vary by month, hour-of-day, and the seven days of the week [M, Tu, W, Th, F, Sat, Sun] (*n* = 2,016).

The NOX values array is the array of NO<sub>x</sub> values, where the number of values is shown above for each NOXFlag option. The seasons are defined in the following order: Winter (Dec., Jan., Feb.), Spring (Mar., Apr., May), Summer (Jun., Jul., Aug.), and Fall (Sep., Oct., Nov.). The wind speed categories used with the WSPEED option may be defined using the ME WINDCATS keyword. If the WINDCATS keyword

is not used, the default wind speed categories are defined by the upper bound of the first five categories as follows (the sixth category is assumed to have no upper bound): 1.54, 3.09, 5.14, 8.23, and 10.8 m/s. The NOX\_VALS keyword may be repeated as many times as necessary to input all the NO<sub>x</sub> values and repeat values may be used for the numerical inputs.

The order of inputs specified for the hour-of-day/day-of-week options (HRDOW, SHRDOW, SHRDOW7, etc.) are by hour-of-day, then season or month, if applicable, and then by day-of-week. For the HRDOW/SHRDOW/MHRDOW options, the days of the week are specified in the order of Weekdays (M-F), Saturdays, and Sundays. For the HRDOW7/SHRDOW7/ MHRDOW7 options, the days of the week are specified in the order of Mondays, Tuesdays, etc., through Sundays. Section 3.3.11 below includes an example illustrating the order of inputs for these options for the EMISFACT keyword.

NO<sub>x</sub> concentrations specified on the NOX\_VALS keyword are assumed to be in units of PPB unless the NOX\_UNIT keyword is specified.

The syntax of the NOX\_UNIT keyword is as follows:

<b>Syntax:</b>	CO NOX_UNIT NOXUnits
<b>Type:</b>	Optional, Non-repeatable

where the NOXUnits parameter specifies the units as parts-per-billion (PPB), parts-per-million (PPM), or micrograms/cubic-meter (UG/M3). Units specified on the CONCUNIT keyword are only applied to ozone concentrations input through NOX\_VALS keyword, which assumes default units of PPB if the NOX\_UNIT keyword is not specified. NO<sub>x</sub> concentrations specified in units of PPB or PPM are converted to UG/M3 based on reference temperature (25 C) and pressure (1013.25 mb).

Hourly NO<sub>x</sub> concentrations can be input through the optional NOX\_FILE keyword. The syntax of the NOX\_FILE keyword is as follows:

<b>Syntax:</b>	CO NOX_FILE NOXFileName (NOXUnits) (NOXFormat) (w/o sectors)
	or CO NOX_FILE SECT <sub>x</sub> NOXFileName (NOXUnits) (NOXFormat), where $x \leq 6$ (w/ sectors)
<b>Type:</b>	Optional, Non-repeatable

where the NOXFileName parameter is the filename for the hourly ozone concentration file, the optional NOXUnits parameter specifies the units of the ozone data (PPM, PPB, or UG/M3, with UG/M3 as the default), and the optional NOXFormat parameter specifies the Fortran format to read the NO<sub>x</sub> data. If sector-varying NO<sub>x</sub> concentrations are being used, based on the CO NOXSECTR keyword, then the applicable sector ID needs to be specified, e.g., 'SECT1' indicates that values are specified for the first downwind sector. The NOXFileName can be up to 200 characters in length based on the default parameters in AERMOD. Double quotes (") at the beginning and end of the filename can also be used as field delimiters to allow filenames with embedded spaces.

The hourly NO<sub>x</sub> file must include the year, month, day, and hour, followed by the NO<sub>x</sub> concentration, in that order (unless specified differently through the NOXFormat parameter). The year can be specified as either a 2-digit or 4-digit year. If an optional Fortran format is specified using the NOXFormat parameter, the year, month, day, and hour variables must be read as integers using the Fortran 'I' format specifier, and the ozone concentration must be read as a real variable, using the Fortran 'F,' 'E,' or 'D' format specifiers, e.g., (4I2, F8.3). Note that NO<sub>x</sub> values that do not include decimal places can be read as Fx.0, where *x* is the length of the data field. However, NO<sub>x</sub> values that do not include decimal places may be read incorrectly if the NOXFormat specified for reading the data includes decimal places. For example, a value of '1234' would be interpreted as '123.4' if a format of F4.1 was used. The NOXFormat parameter must include the open and close parentheses as shown in the example and may also include embedded spaces if double quotes (") are used to delimit the field. A warning message will be generated if the specified format does not meet these requirements, and AERMOD may also issue a fatal error message when reading the file in cases where real variables are read with an integer format, or vice versa.

If the optional NOXFormat parameter is missing, then the model will read the NO<sub>x</sub> data using a Fortran 'free' format, i.e., assuming commas or spaces separate the data fields, and that the fields are in the order given above. The date sequence in the NO<sub>x</sub> data file must match the date sequence in the hourly meteorological data files. As with the NOXVALUE keyword, if units of PPM or PPB are used, then the model will convert the concentrations to micrograms/cubic-meter based on reference temperature (25 C) and pressure (1013.25 mb).

Values of NO<sub>x</sub> concentrations in the NO<sub>x</sub> data file that are less than zero will be regarded as missing. If background NO<sub>x</sub> values have been specified using the NOXVALUE and/or NOX\_VALS keyword, then the appropriate value will be used to substitute for missing NO<sub>x</sub> data from the NO<sub>x</sub> file. If no NOXVALUE

or NOX\_VALS keywords are used, then the model will assume equilibrium of NO<sub>x</sub> with NO<sub>2</sub> predicted from GRSM based on NO<sub>x</sub> emissions and hourly ozone for hours with missing NO<sub>x</sub> data.

### 3.2.5.3 Specifying the ambient equilibrium NO<sub>2</sub>/NO<sub>x</sub> ratio (PVMRM, OLM, TTRM/TTRM2)

The PVMRM option for modeling conversion of NO to NO<sub>2</sub> incorporate a default NO<sub>2</sub>/NO<sub>x</sub> ambient equilibrium ratio of 0.90. Beginning with version 11059 of AERMOD, a default equilibrium ratio of 0.90 has also been incorporated in the OLM option, as well as the TTRM option beginning with version 21112. A NO<sub>2</sub>/NO<sub>x</sub> equilibrium ratio other than 0.90 can be specified for the PVMRM, OLM, or TTRM/TTRM2 option through the optional NO2EQUIL keyword on the CO pathway. The syntax of the NO2EQUIL keyword is as follows:

<b>Syntax:</b>	CO NO2EQUIL NO2Equil
<b>Type:</b>	Optional, Non-repeatable

where the NO2Equil parameter is the NO<sub>2</sub>/NO<sub>x</sub> equilibrium ratio and must be between 0.10 and 1.0, inclusive. Note the NO2EQUIL option is invalid for GRSM simulations given that GRSM calculates the NO<sub>2</sub>/NO<sub>x</sub> conversion equilibrium ratio explicitly.

### 3.2.5.4 Specifying the default in-stack NO<sub>2</sub>/NO<sub>x</sub> ratio (PVMRM, OLM, TTRM/TTRM2, GRSM)

The PVMRM, OLM, TTRM/TTRM2, and GRSM options for modeling conversion of NO to NO<sub>2</sub> require that an in-stack NO<sub>2</sub>/NO<sub>x</sub> ratio be specified. Based on guidance issued June 28, 2010 (EPA, 2010b), regarding the 1-hour NO<sub>2</sub> NAAQS, AERMOD has been modified to require the user to specify in-stack NO<sub>2</sub>/NO<sub>x</sub> ratios for each source under the OLM and PVMRM options, i.e., AERMOD no longer assumes a default in-stack ratio of 0.10 for the OLM or PVMRM option. This requirement has been carried forward with the addition of the TTRM/TTRM2 and GRSM options.

The in-stack NO<sub>2</sub>/NO<sub>x</sub> ratio can be specified for the PVMRM, OLM, TTRM/TTRM2, or GRSM option by using either the CO NO2STACK keyword to specify a default value to be used for all sources, or by using the SO NO2RATIO keyword to specify a value on a source-by-source basis. The SO NO2RATIO keyword can also be used to override the default value for specific sources if the CO NO2STACK keyword has been specified. The syntax of the NO2STACK keyword is as follows:

<b>Syntax:</b>	CO NO2STACK NO2Ratio
<b>Type:</b>	Optional, Non-repeatable

where the NO2Ratio parameter is the default in-stack NO<sub>2</sub>/NO<sub>x</sub> ratio that will be used, unless overridden on a source-by-source basis by the SO NO2RATIO keyword (described below). The value of NO2Ratio must be between 0.0 and 1.0, inclusive. Users should note that while CO NO2STACK is an optional keyword, the OLM, PVMRM, TTRM/TTRM2, and GRSM options require the user to specify an in-stack NO<sub>2</sub>/NO<sub>x</sub> ratio for each source, using either the CO NO2STACK or SO NO2RATIO keyword (described in Section 3.3.6.1), or both.

### 3.2.6 Averaging time options

The averaging periods for AERMOD are selected using the AVERTIME keyword on the CO (Control) pathway. The syntax and type of the AVERTIME keyword are summarized below:

<b>Syntax:</b>	CO AVERTIME Time1 Time2 . . . TimeN <u>MONTH</u> <u>PERIOD</u> or <u>ANNUAL</u>
<b>Type:</b>	Mandatory, Non-repeatable

where the parameters Time1 . . . TimeN refer to the user-specified short-term averaging periods of 1, 2, 3, 4, 6, 8, 12, and/or 24 hours, the secondary keyword MONTH refers to monthly averages (for calendar months), the secondary keyword PERIOD refers to the average for the entire data period, and the secondary keyword ANNUAL refers to an annual average. Any of the short-term averaging periods listed above may be selected for a given run. Since the monthly averages are treated as short-term averages, the user can select appropriate output options, such as the second highest values by receptor, on the OU pathway. The location of the PERIOD or ANNUAL keyword in the parameter list is not critical. The order of the short-term averaging periods (including MONTH) is also not critical, although it does control the order of the averaging period result tables in the main output file. Generally, it is recommended that the short-term averaging periods be input in increasing order, unless there is a clear advantage in doing otherwise.

The user may specify either the PERIOD keyword or the ANNUAL keyword, but not both. For concentration calculations for a single year data file, the PERIOD and ANNUAL keywords produce the same results. **However, the ANNUAL average option applies only to complete years of data, and for multi-**

year data files, the ANNUAL average output is based on the average of the ANNUAL values across the years of data processed.

For deposition calculations, the PERIOD keyword will provide a total deposition flux for the full period of meteorological data that is modeled, including multi-year data files, with default units of g/m<sup>2</sup>, whereas the ANNUAL keyword will provide an annualized rate of the deposition flux with default units of g/m<sup>2</sup>/yr.

Use of the ANNUAL average option for meteorological data periods of less than a year will result in a fatal error. For meteorological data periods of longer than a year, if the meteorological data file does not contain complete years of data, any data remaining after the last complete year will be ignored for the ANNUAL average, and a warning message will be generated. The treatment of short-term averages with multiple-year data files is comparable to their treatment when the CO MULTYEAR option is used.

### 3.2.7 Performing multiple year analyses with MULTYEAR option

The MULTYEAR keyword on the CO pathway provides an option for the user to perform a multiple year analysis such as would be needed to determine the "high-sixth-high in five years" design value for determining PM-10 impacts without the need for postprocessing of multiple concentration files, and for multiple year analyses associated with the 24-hour PM2.5 NAAQS and 1-hour NO<sub>2</sub> and SO<sub>2</sub> NAAQS which are based on concentrations averaged across the number of years processed. More information regarding the 24-hour PM2.5 and 1-hour NO<sub>2</sub> and SO<sub>2</sub> NAAQS is provided in Sections 3.2.16 and 3.2.17. Since the multiple year option makes use of the model re-start capabilities described in the Section 3.2.15, the MULTYEAR keyword is not compatible with the SAVEFILE or INITFILE keywords. The model will generate a fatal error message if the user attempts to exercise both options in a single run. The syntax and type of the MULTYEAR keyword is summarized below:

<b>Syntax:</b>	CO MULTYEAR ( <u>H6H</u> ) Savfil (Inifil)
<b>Type:</b>	Optional, Non-repeatable

where the optional H6H field, formerly used to highlight the use of the MULTYEAR option for determining the High-6<sup>th</sup>-High (H6H) 24-hour average for the "pre-1997" PM-10 NAAQS, is no longer required since the "post-1997" PM-10 NAAQS was vacated. A warning message will be generated if the H6H field is included on the MULTYEAR keyword indicating that it is not required. The Savfil parameter specifies the filename for saving the results arrays at the end of each year of processing, and the Inifil parameter specifies the

filename to use for initializing the results arrays at the beginning of the current year. The Inifil parameter is optional and should be left blank for the first year in the multi-year series of runs. The MULTYEAR option works by accumulating the high short-term average results from year to year through the mechanism of the re-start save file. The model may be setup to run in a batch file with several years of meteorological data, and at the end of each year of processing, the short-term average results reflect the cumulative high values for the years that have been processed. The PERIOD average results are given for only the current year, but the model carries the highest PERIOD values from year to year and includes the cumulative highest PERIOD averages in the summary table at the end of the run.

When setting up a batch file to perform a multiple year analysis, the user would first create an input control file for the first year with all the applicable modeling options, the source inventory data, the receptor locations, the meteorology options for the first year and the output file options. To obtain the PM-10 design value, be sure to include the SIXTH highest value on the OU RECTABLE card (see Section 3.7.1). For the CO MULTYEAR card for the first year, the user would only specify the Savfil parameter, and may use a card such as:

```
CO MULTYEAR YEAR1.SAV
```

For the subsequent years, the user could copy the input file created for Year-1 and edit the files to change the year parameters and meteorology filename on the ME pathway (and possibly in the title information) and edit the MULTYEAR cards. For the subsequent years, both the Savfil and Inifil parameters must be specified, with the Savfil for Year-1 becoming the Inifil for Year-2, and so on. The MULTYEAR cards (one for each AERMOD run) might look like this:

```
CO MULTYEAR YEAR1.SAV (First year)
CO MULTYEAR YEAR2.SAV YEAR1.SAV (Second year)
CO MULTYEAR YEAR3.SAV YEAR2.SAV (Third year)
CO MULTYEAR YEAR4.SAV YEAR3.SAV (Fourth year)
CO MULTYEAR YEAR5.SAV YEAR4.SAV (Fifth year)
```

The MULTYEAR keyword option is separate from the ability of the AERMOD model to process a multiple-year meteorological data file in a single model run. The latter capability can be used for applications of the model to long term risk assessments where the average impacts over a long time period are of concern rather than the maximum annual average determined from five individual years. The MULTYEAR option can only

be used when PM10, PM-10, PM25, PM2.5, PM-2.5, PM-25, LEAD, NO2, SO2, or OTHER is specified as the pollutant ID.

### 3.2.8 Urban modeling option

The AERMOD model allows the user to incorporate the effects of increased surface heating from an urban area on pollutant dispersion under stable atmospheric conditions. Beginning with version 06341, multiple urban areas can be specified within the same model run. Multiple areas may be applicable for large domains that encompass more than one identifiable urban area where the separation is large enough to warrant separate treatment of the urban boundary layer effects. Use of the option for multiple urban areas eliminates the need for post-processing for such applications. The urban area(s) are defined using one or more instances of the URBANOPT keyword on the CO pathway. The sources that are to be modeled with urban effects and the urban area that will be applied to each source are identified using the URBANSRC keyword on the SO pathway (see Section 3.3.10). The syntax and type of the URBANOPT keyword are summarized below:

<b>Syntax:</b>	<b><u>For Multiple Urban Areas:</u></b> CO URBANOPT UrbanID UrbPop (UrbName) (UrbRoughness)
	<b><u>For Single Urban Areas:</u></b> CO URBANOPT UrbPop (UrbName) (UrbRoughness)
<b>Type:</b>	Optional, Repeatable for multiple urban areas

where the UrbanID parameter is the alphanumeric urban ID defined by the user (up to eight characters) when multiple urban areas are defined, the UrbPop parameter specifies the population of the urban area, the optional UrbName parameter may be used to identify the name of the urban area, and the optional UrbRoughness parameter may be used to specify the urban surface roughness length. Note the UrbName must be specified if the user wants to specify the urban roughness length. A default value of 1.0 meter will be used for the urban roughness length if the UrbRoughness parameter is omitted. Beginning with version 09292, any value for the urban roughness length other than 1.0 meter will be treated as a non-regulatory option. Caution should be used when specifying a non-default urban roughness length and use of a non-default value should be clearly documented and justified. Note that the syntax of the URBANOPT keyword for single urban areas has not changed from previous versions of AERMOD, so that existing input files will not require modification.

### 3.2.9 Specifying the pollutant type

The POLLUTID keyword is used to identify the type of pollutant being modeled for a particular run. The syntax, type, and order of the POLLUTID keyword are summarized below:

<b>Syntax:</b>	CO POLLUTID Pollut (H1H or H2H or INC)
<b>Type:</b>	Mandatory, Non-repeatable

where the Pollut parameter may be a pollutant name of up to eight characters. Examples include SO2, NOX, CO, PM10, TSP, and OTHER. Some pollutant names, by themselves or in combination with other model options, have special meaning and will affect how AERMOD computes the final results based on the current NAAQS. The parameters H1H, H2H, and INC disable the special processing requirements associated the 1-hr NO<sub>2</sub> and SO<sub>2</sub> NAAQS and the 24-hr PM<sub>2.5</sub> NAAQS. Specifying one of these keywords will allow for modeling PM<sub>2.5</sub> 24-hr increments which are based on the H2H value, and also allow evaluating NO<sub>2</sub> options in AERMOD based on incomplete years of field measurements. The pollutants names with special meaning that will affect how AERMOD computes the results include:

- PM10 (or PM-10) with the multi-year option for generating the high-sixth-high in five years (see Section 3.2.16.2),
- PM25 (or PM-2.5, PM2.5, or PM-25) (see Section 3.2.16.1),
- NO2 when computing 1-hour averages (See Sections 3.2.7 and 3.2.17),
- NO2 is required when using the OLM, PVMRM, TTRM/TTRM2, or GRSM option for simulating the conversion of NO to NO<sub>2</sub> (see Section 3.2.2.7),
- SO2 when computing 1-hour averages (see Sections 3.2.7 and 3.2.17),
- SO2 triggers the use of a 4-hour half-life for SO<sub>2</sub> decay for urban applications under both the regulatory default options and non-default options(see Sections 3.2.2.1 and 3.2.10), and
- The MULTYEAR option can only be used when PM10, PM-10, PM25, PM2.5, PM-2.5, PM-25, LEAD, NO2, SO2, or OTHER is specified as the pollutant ID.

### 3.2.10 Modeling with exponential decay

The model provides the option to use exponential decay of the pollutant being modeled. Two keywords are available for this purpose, the HALFLIFE and DCAYCOEF keywords. The syntax, type, and order of these keywords are summarized below:

<b>Syntax:</b>	CO HALFLIFE Haflif CO DCAYCOEF Decay
<b>Type:</b>	Optional, Non-repeatable

where the Haflif parameter is used to specify the half life for exponential decay in seconds, and the parameter Decay is used to specify the decay coefficient in units of  $s^{-1}$ . The relationship between these parameters is  $DECAY = 0.693/HAFLIF$ .

Only one of these keywords may be specified in a given run. If more than one is encountered, a non-fatal warning message is generated, and the first specification is used in the modeling.

### 3.2.11 Flagpole receptor height option

The FLAGPOLE keyword specifies that receptor heights above local ground level (i.e., flagpole receptors) are allowed on the REceptor pathway. The FLAGPOLE keyword may also be used to specify a default flagpole receptor height other than 0.0 meters. The syntax and type of the FLAGPOLE keyword are summarized below:

<b>Syntax:</b>	CO FLAGPOLE (Flagdf)
<b>Type:</b>	Optional, Non-repeatable

where Flagdf is an optional parameter to specify a default flagpole receptor height. If no parameter is provided, then a default flagpole receptor height of 0.0 meters is used. Any flagpole receptor heights that are entered on the Receptor pathway will override the default value but are ignored if the FLAGPOLE keyword is not present on the Control pathway, and a non-fatal warning message is generated.

### 3.2.12 Plume Rise from Aircraft Emissions

An ALPHA option to simulate aircraft emissions was added to AERMOD beginning with version 23132. Aircraft emissions from jet engines experience plume rise from both momentum and buoyancy but are commonly modeled as AREA and VOLUME source types in AERMOD which do not account for either momentum or buoyancy. The aircraft plume rise ALPHA option extends the formulation of AREA (including AREAPOLY, AREACIRC, and LINE) and VOLUME source types with additional input parameters based on the work of Pandey, et. al. (2023). The option can be applied to AREA (including AREAPOLY, AREACIRC, and LINE) and VOLUME source types identified as aircraft sources by

specifying the primary keyword ARCFTOPT in the CO pathway. Aircraft sources are identified on the SO pathway with the primary keyword ARCFTSRC followed by a list of source IDs and/or a range of source IDs (see Section 3.3.18). The syntax for ARCFTOPT is summarized below:

<b>Syntax:</b>	CO ARCFTOPT (AirportID)
<b>Type:</b>	Optional, Non-Repeatable

Where AirportID is an optional alphanumeric character string that can be included to identify the airport at which the sources are located. The current implementation of aircraft plume rise requires that an additional seven aircraft parameters be supplied to AERMOD using an hourly varying emissions input file. The additional aircraft parameter variables are read from the hourly emissions file by AERMOD in the following order:

- MFUEL: Fuel burn rate (g/s)
- THRUST: Aircraft thrust (newtons)
- VAA: Aircraft speed (m/s)
- AFR: Air-fuel ratio
- BYPR: Bypass ratio (> 0 for turbofan and -999 for shaft-based engines)
- RPWR: Rated power (kW) (-99999 for turbofan and > 0 for shaft-based)
- SRCANGLE: Landing/takeoff angle with the ground (degrees) (airborne sources)

Note that AERMOD will issue a fatal error if ARCFTOPT and ARCFTSRC are specified and the aircraft parameters are missing from the hourly emissions file, or if the hourly emissions file is missing altogether.

### 3.2.13 To run or not to run

Because of the improved error handling and the "defensive programming" that has been employed in the design of the AERMOD model, the model will read through all of the inputs in the control file regardless of any errors or warnings that may be encountered. If a fatal error occurs in processing of the control file information, then further model calculations will be aborted. Otherwise, the model will attempt to run. Because of the great many options available in the AERMOD model, and the potential for wasted resources if a large run is performed with some incorrect input data, the RUNORNOT keyword has been included on the Control pathway to allow the user to specify whether to RUN the model and perform all of the

calculations, or NOT to run and only process the input control file commands and summarize the setup information. The NOT option allows the user to check the syntax of the model keywords without performing possible time-consuming model calculations. The syntax and type of the RUNORNOT keyword are summarized below:

<b>Syntax:</b>	CO RUNORNOT <u>RUN</u> or <u>NOT</u>
<b>Type:</b>	Mandatory, Non-repeatable

### 3.2.14 Generating an input file for EVENT processing

The EVENTFIL keyword can be included on the CO pathway to generate an input file for EVENT processing. The syntax and type of the EVENTFIL keyword are summarized below:

<b>Syntax:</b>	CO EVENTFIL (Evfile) (Evopt)
<b>Type:</b>	Optional, Non-repeatable

where the optional Evfile parameter specifies the name of the EVENT input file to be generated (the maximum length of the file name is set by the ILEN\_FLD parameter in MODULE MAIN1), and the optional parameter, Evopt, specifies the level of detail to be used in the EVENT output file. Valid inputs for the Evopt parameter are the secondary keywords of SOCONT and DETAIL (see the EVENTOUT keyword on the OUput pathway, Section 3.7.2). The default filename used if no parameters are specified is EVENTS.INP, and the default for the level of detail is DETAIL. If only one parameter is present, then it is taken to be the Evfile, and the default will be used for Evopt.

The primary difference between routine AERMOD and EVENT processing is in the treatment of source group contributions. The AERMOD model treats the source groups independently. EVENT processing is designed to provide source contributions to specific events such as the design concentrations determined from AERMOD or user specified events. The user may specify the "events" to process using the Event pathway, which lists specific combinations of receptor location, source group, and averaging period. By specifying the EVENTFIL keyword, an input control file will be generated that can be used directly for EVENT processing. The events included in the generated EVENT processing input file are the design concentrations defined by the RECTABLE keyword and the threshold violations identified by the MAXIFILE keyword on the OU pathway.

### 3.2.15 The model re-start capability

The AERMOD model has an optional capability to store intermediate results into an unformatted file, so that the model run can be continued later in case of a power failure or a user interrupt. This re-start option is controlled by the SAVEFILE and INITFILE keywords on the CO pathway. The syntax and type of these keywords are summarized below:

<b>Syntax:</b>	CO SAVEFILE (Savfil) (Dayinc) (Savfl2) CO INITFILE (Inifil)
<b>Type:</b>	Optional, Non-repeatable

The SAVEFILE keyword instructs the model to save the intermediate results to a file and controls the save options. All three parameters for this keyword are optional. If the user specifies only the Savfil parameter, then the intermediate results are saved to the same file (and overwritten) each time. If the user specifies both the Savfil and the Savfl2 parameters, then the model alternates between the two files for storing intermediate results. The latter approach requires additional disk space to handle two storage files. However, selecting two files avoids the potential problem like a power failure or interrupt that might occur while the temporary file is open, and the intermediate results are being copied to it. In such a case, the temporary results file would be lost.

The optional Dayinc parameter allows the user to specify the number of days between successive dumps. The default is to dump values at the end of each day, i.e., Dayinc = 1. For larger modeling runs, where the SAVEFILE option is most useful, the additional execution time required to implement this option is very small compared to the total runtime. To be most effective, it is recommended that results be saved at least every 5 days.

If no parameters are specified for the SAVEFILE keyword, then the model will store intermediate results at the end of each day using a default filename of TMP.FIL.

The INITFILE keyword works in conjunction with the SAVEFILE keyword and instructs the model to initialize the results arrays from a previously saved file. The optional parameter, Inifil, identifies the unformatted file of intermediate results to use for initializing the model. If no Inifil parameter is specified, then the model assumes the default filename of TMP.FIL. If the file doesn't exist or if there are any errors encountered in opening the file, then a fatal error message is generated, and processing is halted.

Note: It is important to note that if both the SAVEFILE and INITFILE keywords are used in the same model run, then different filenames must be specified for the Savfil and Inifil parameters. Otherwise, the model will encounter an error in opening the files, and further processing will be halted.

### 3.2.16 Processing for particulate matter (PM) NAAQS

#### 3.2.16.1 Processing for fine particulate matter (PM-2.5)

A NAAQS for fine particulate matter, with aerodynamic particle diameters of 2.5 microns or less (PM-2.5), was promulgated in 1997, and the 24-hour standard was revised in December 2006. For attainment demonstrations, the PM-2.5 standard is based on a 3-year average of the 98<sup>th</sup> percentile 24-hour average and a 3-year average of the annual mean concentration at each ambient monitor. EPA issued new recommendations in May 2014 (EPA, 2014b) regarding appropriate modeling procedures for use in modeling demonstrations of compliance with the PM2.5 NAAQS that is intended to supersede the earlier guidance issued in March 2010 (EPA, 2010a). The May 2014 guidance, which addresses the issue of secondary formation of PM2.5 due to precursor emissions, has modified the earlier guidance regarding use of the average of the first-highest 24-hour average concentrations across the number of years modeled to represent the modeled contribution for a cumulative impact assessment and recommends using the average of the eighth-highest (98<sup>th</sup> percentile) of 24-hour concentrations to represent the modeled contribution for a cumulative impact assessment. Use of the first-highest 24-hour average is still appropriate for significant contribution determinations. Note that the use of a 3-year average for monitored design values to determine attainment of the NAAQS does not preempt the requirement in Section 8.3.1.2 of the Guideline (EPA, 2017b) for use of 5 years of National Weather Service (NWS) data, and the 5-year average of modeled impacts serves as an unbiased estimate of the 3-year average for purposes of modeling demonstrations of compliance with the NAAQS.

Based on EPA's May 2014 draft recommendations, the 24-hour modeled contribution to the design value for purposes of modeling demonstrations of compliance with the PM-2.5 NAAQS is based on the highest of the eighth-highest (H8H) concentrations at each receptor, if one year of site-specific meteorological data is input to the model, or the highest of the multi-year average of the eighth-highest (H8H) concentrations at each receptor, if more than one year of meteorological data is input to the model. In other words, the model calculates the eighth-highest 24-hour concentration at each receptor for each year modeled, averages those eighth-highest concentrations at each receptor across the number of years of meteorological data, and then selects the highest, across all receptors, of the N-year averaged eighth-highest values.

Similar to the 24-hour averages, an unbiased estimate of the 3-year average annual mean is simply the annual mean, if only one year of site-specific meteorological data is input to the model, or the multi-year average of the annual means if multiple years of meteorological data are used. The annual design value for PM-2.5 is then based on the highest annual average across the receptor domain for single-year meteorological data input, or the highest of the multi-year averaged annual means across the receptor domain for multi-year meteorological data input.

The special processing of the 24-hour and annual averages for the PM-2.5 NAAQS is triggered by specifying a pollutant ID of 'PM25', 'PM-2.5', 'PM2.5' or 'PM-25' on the CO POLLUTID card. In this case, the model will compute the 24-hour and annual average design values as described in the previous paragraphs. In order for the PM-2.5 processing to work correctly for multiple year periods, the yearly meteorological data files can be concatenated into a single multi-year file for input into the model, or the MULTYEAR option (Section 3.2.7) can be used with separate model runs for each year. There is no requirement to remove the header records between concatenated surface meteorological data files prior to running the model, and multi-year meteorological data files can also be generated by processing multi-year inputs in AERMET. (NOTE: While the MULTYEAR option with separate yearly meteorological data files can be used to determine the modeled design values for PM2.5, the OU MAXDCONT option (see Section 3.7.2.8) to determine contributions from other source groups to the cumulative modeled design value will not work with the MULTYEAR option or with separate meteorological data files for each year.) Processing the average of the individual annual mean values across multiple years for PM-2.5 also requires use of the ANNUAL average option on the AVERTIME keyword, rather than PERIOD average. The PERIOD option computes a single multi-year average concentration for each receptor, which may give slightly different results than the multi-year average of individual ANNUAL mean concentrations due to differences in the number of calms and/or missing data from year to year.

To comply with these processing requirements, the following restrictions are applied to the PM-2.5 NAAQS processing whenever a pollutant ID of 'PM25', 'PM2.5', 'PM-2.5' or 'PM-25' is specified on the CO POLLUTID keyword:

1. The averaging periods on the AVERTIME keyword are limited to the 24-hour and ANNUAL averages. Use of the PERIOD average or use of a short-term average other than 24-hour will result in a fatal error message being generated.
2. The FIRST (or 1ST) highest value should be requested on the RECTABLE keyword for 24-hour averages for estimating modeled PM2.5 contributions for compliance with the

NAAQS. However, the model places no restriction on the ranks requested on the RECTABLE keyword since selection of ranks lower than the FIRST highest may be needed to determine whether a source or group of sources is contributing significantly to modeled violations of the NAAQS.

3. The model will only process meteorological data for periods of record that span complete years, although the meteorological data period does not need to follow calendar years (i.e., the data period does not need to start on January 1, hour 1). If the period of record spans less than one complete year of data, a fatal error message will be generated, and the model run will be unsuccessful. If additional meteorological data remains after the end of the last complete year of data, the remaining data will be ignored, and a non-fatal warning message will be generated specifying the number of hours ignored.
4. The MULTYEAR keyword on the CO pathway can be used to calculate multi-year averages for the PM-2.5 NAAQS; however, the MAXDCONT option will not work with the MULTYEAR. Multiple year analyses are best accomplished by including the multiple years of meteorology in a single data file.
5. Since the 24-hour average design values for PM-2.5 analyses, based on the H1H averaged over N years, may consist of averages over a multi-year period, they are not compatible with the EVENT processor, and the high ranked values generated based on the RECTABLE keyword will not be included in the EVENTFIL. However, if the MAXIFILE option is used to output 24-hour averages exceeding a user-defined threshold, these individual exceedances may be used with the EVENT processor. Therefore, if the EVENTFIL option is used without the MAXIFILE option for PM-2.5 analyses, a non-fatal warning message will be generated, and the EVENTFIL option will be ignored.

#### 3.2.16.2 Processing for particulate matter of 10 microns or less (PM-10)

The 24-hour NAAQS for particulate matter with aerodynamic particle diameters of 10 microns or less (PM-10) is in the form of an expected exceedance value, which cannot be exceeded more than once per year on average over a three year period for purposes of monitored attainment demonstrations. Modeling demonstrations of compliance with the PM-10 NAAQS are based on the High- $N+1$ -High value over  $N$  years, or in the case of five years of NWS meteorological data, the High-6<sup>th</sup>-High (H6H) value over five years. In the AERMOD model, the H6H 24-hour average over five years can be modeled in one of two ways: 1)

running five individual years and combining the results using the CO MULTYEAR option, as described above in Section 3.2.7) using a single five-year meteorological data file and specifying the SIXTH (or 6TH) highest value on the OU RECTABLE card. If applied properly, the 24-hour average results of these two approaches will be equivalent. The special processing consisting of the 99<sup>th</sup> percentile 24-hour value averaged over *N* years for PM-10 in versions of AERMOD prior to 09292, referred to as the “Post-1997” PM-10 option, has been removed since that standard was vacated.

### 3.2.17 Processing for 1-hour NO<sub>2</sub> and SO<sub>2</sub> NAAQS

New 1-hour NAAQS for NO<sub>2</sub> and SO<sub>2</sub> were promulgated in February 2010 and June 2010, respectively. EPA has issued guidance related to dispersion modeling in support of these 1-hour standards (EPA, 2010b; EPA, 2010c; EPA, 2011; EPA, 2014a; and EPA, 2017a). The form of these 1-hour standards is similar, based on a percentile rank from the annual distribution of daily maximum 1-hour values, averaged across the number of years processed. For the 1-hour NO<sub>2</sub> standard, the modeled design value is based on the 98<sup>th</sup>-percentile of the daily maximum 1-hour values, which is represented by the eighth highest of the daily maximum 1-hour values across the year. The 1-hour SO<sub>2</sub> modeled design value is based on the 99<sup>th</sup>-percentile, or fourth highest, of the daily maximum 1-hour values across the year. For typical multi-year modeling analysis based on 5 years of NWS meteorological data, the modeled design value is the 5-year average of the eighth-highest values daily maximum 1-hour values for NO<sub>2</sub>, or fourth-highest values for SO<sub>2</sub>.

The form of these 1-hour standards complicates the process of determining the modeled design value as well as the analyses that may be required to determine whether a particular source or group of sources contributes significantly to any modeled violations of the standards, paired in time and space. Several enhancements have been incorporated into AERMOD, beginning with version 11059, to facilitate the modeling analyses required to demonstrate compliance with these new standards. These enhancements are described in Section 3.7.2. The ability of the model to exercise these options is facilitated by specifying ‘NO2’ or ‘SO2’ as the pollutant ID on the CO POLLUTID keyword, with the following restrictions. Whenever a pollutant ID of ‘NO2’ or ‘SO2’ is specified and 1-hour averages are selected, the options to calculate 1-hour NO<sub>2</sub> or SO<sub>2</sub> design values based on the distribution of daily maximum 1-hour values will be allowed, unless short-term averaging periods other than 1-hour are also specified on the AVERTIME keyword. If other short-term averages are specified, non-fatal warning messages will be generated and the options for processing 1-hour NO<sub>2</sub> or SO<sub>2</sub> design values will be disabled. In that case, the 1-hour modeled design values will be processed the same as other short-term averages, based on the overall distribution of hourly values. Also, if ANNUAL or PERIOD averages are specified on the AVERTIME keyword along with 1-hour averages, a non-fatal warning message will be generated unless the CO MULTYEAR keyword is

specified, since the annual NAAQS for NO<sub>2</sub> and SO<sub>2</sub> is based on the highest PERIOD or ANNUAL average from an individual year, rather than an average across the years modeled. However, the special processing based on daily maximum 1-hour values will be still applied for the 1-hour averages in these cases since the ANNUAL or PERIOD averages may be appropriate if only 1 year of site-specific meteorological data is modeled.

Modeling 1-hour 'SO<sub>2</sub>' or 'NO<sub>2</sub>' for less than a full year without specifying additional short-term averaging periods will result in an error during processing since AERMOD attempts to generate a 1-hour value based on the form of the SO<sub>2</sub> or NO<sub>2</sub> 1-hour standard. When modeling with a dataset that contains less than a full year of data or by restricting the days or hours that are modeled using the STARTEND or DAYRANGE keywords on the ME pathway, the NOCHKD option should be specified on the CO pathway along with the MODELOPT keyword to avoid an error during the processing phase (Refer to sections 3.2.2 and 3.5.4 for information on the use of the NOCHKD option and the STARTEND and DAYRANGE keywords).

### 3.2.18 Debugging output options

The DEBUGOPT keyword on the CO pathway allows the user to request detailed files of intermediate calculation results for debugging purposes. There are several types of debug information that AERMOD can generate. For each type specified, the user can also specify a filename of the file to which the debug output should be written. Filenames are optional with the exception of the DEPOS debug. If omitted, AERMOD will use a default filename. The syntax and type of the DEBUGOPT keyword are summarized below. Listed are the debug types and filename pairs. While multiple types of debugging information can be specified, note that there are some related types in which case only one type within the group can be specified:

<b>Syntax:</b>	CO DEBUGOPT <u>MODEL</u> (Dbgfil)	and/or
	METEOR (Dbmfil)	and/or
	PRIME (Prmfil)	and/or
	AWMADW (AwmaDwfil)	and/or
	PLATFORM (PlatfmDbgfil)	and/or
	DEPOS	and/or
	[AREA (AreaDbFil) or LINE (LineDbFil)]	and/or
	RLINE (RlineDbgFil)	and/or
	BLPDEBUG (BLPDbFil)	and/or
	URBANDB (UrbanDbFil)	and/or
	[PVMRM (Dbpvfil) (and TTRM2) or OLM (OLMfil) (and TTRM2) or ARM2 (ARM2fil) (and TTRM2) or TTRM (TTRMfil) or GRSM (GRSMfil)]	and/or
	SWPOINT (SWfil)	and/or
	HBPDBG (HBPfil)	and/or
	AIRCRAFT (DbARCFTfil)	
	<b>Type:</b>	Optional, Non-repeatable

where the types of debug information and optional filename references include:

- MODEL (Dbgfil): Model type debug data. Default filename: MODEL.DBG.
- METEOR (Dbmfile): Meteorological profile data. Default filename: METEOR.DBG.
- PRIME (Prmfil): PRIME downwash debug data. Default filename: PRIME.DBG.
- AWMADW (Awmafil): AWMA downwash debug data. Default filename: AWMADW.DBG
- PLATFORM (PlatfmDbgfil): Platform downwash debug file. Default filename: PLATFORM.DBG
- DEPOS: Deposition debug information. Only default filenames will be used: GDEP.DAT for gas deposition and PDEP.DAT for particle deposition. If the MODEL debug option is not chosen, a debug file containing wet deposition debug information is also created called DEPOS.DBG. If the MODEL debug option is chosen with the DEPOS debug option, the wet deposition debug information is included in the model debug file.
- AREA (AreaDbFil) or LINE (LineDbFil): Area or Line source debugging data (includes OPENPIT). May only specify one. Default filename: AREA.DBG (same default filename used for AREA, LINE, and OPENPIT sources)
- RLINE (RlineDbgFil): RLINE and RLINEXT source type debug file. Default filename: RLINE.DBG
- BLPDEBUG (BLPDbFil): Debug information for the BUOYLINE source. Default filename: BLPDEBUG.DBG
- URBANDB (UrbanDbFil): Debug information for the urban option (URBANOPT, see Section 3.2.8). This will produce three output files, one for the surface meteorology, two for the profile meteorology. If the filename is specified by the user, then the filename will be used for the

surface meteorology debug file. The same name will be assigned for the two profile debug files with a “1” and “2” appended to the filename, respectively. Default filenames: URBDBUG.DBG, URBDBUG1.DBG, and URBDBUG2.DBG.

- PVMRM (Dbpvfil) (and TTRM2) **or** OLM (OLMfil) (and TTRM2) **or** ARM2 (ARM2fil) (and TTRM2) **or** TTRM (TTRMfil) **or** GRSM (GRSMfil): NO to NO<sub>2</sub> conversion debug data. Default filenames: PVMRM.DBG, OLM.DBG, ARM2.DBG, TTRM.DBG, GRSM.DBG, respectively. May only specify one of PVMRM, OLM, ARM2, TTRM, or GRSM debug options, consistent with the NO<sub>2</sub> conversion option specified with the MODELOPT keyword. The TTRM2 debug option can be paired with PVMRM, OLM, or ARM2 debug options when both options are specified with the MODELOPT keyword. A user-defined filename cannot be specified for the TTRM2 debug option. The TTRM2 debug option will generate three separate debug files named AFTER\_TTRM.DBG, AFTER\_ *option*.DBG, and TTRM2\_MERGE.DBG, where *option* is the NO<sub>2</sub> conversion option with which TTRM2 is paired. (e.g., AFTER\_PVMRM.DBG).
- SWPOINT (SWfil): Sidewash point source type debug information and optional debug filename. Default filename: SWPOINT.DBG
- HBPDBG (HBPfil): Debug information for HBP option and optional debug filename. Default filename: HBP\_DEBUG.DBG.
- AIRCRAFT (DbARCFTfil): Debug information for the aircraft plume rise option (ARCFTOPT) and optional debug filename. Default filename: AIRCRAFT.DBG.

**CAUTION!! Use the DEBUGOPT keyword with extreme CAUTION: it can produce very large files!**

**Note that the model will overwrite the debug files, without warning, if they already exist.**

### 3.2.19 Detailed error listing file

The ERRORFIL keyword on the CO pathway allows the user to request a detailed listing file of all the messages generated by the model. This includes the error and warning messages that are listed as part of the message summaries provided in the main output file and any informational messages (such as occurrences of calm winds) and quality assurance messages that are generated. The syntax and type of the ERRORFIL keyword are summarized below:

<b>Syntax:</b>	CO ERRORFIL (Errfil)
<b>Type:</b>	Optional, Non-repeatable

where the Errfil parameter is the name of the detailed message file. If the optional Errfil parameter is left blank, then the model will use a default filename of ERRORS.LST. A complete description of the error and other types of messages generated by the model is provided in APPENDIX B.

### 3.3 Source pathway inputs and options

The **S**ource pathway contains the keywords that define the source information for a particular model run. The model currently handles six source types identified as point, volume, area sources (including non-buoyant line and open pit sources), non-buoyant line (e.g., roadway sources), buoyant line sources, and a newly added source type to research the sidewash effect from building downwash when the winds are oblique to the face of a building. The input parameters vary depending on the source type. For point sources, the user can also identify building dimensions for nearby structure that cause aerodynamic downwash influences on the source. The user can also identify groups of sources for which the model will combine the results.

The **L**ocation keyword, which identifies the source type and location, must be the first keyword entered for each source. In general, the order of the keywords is not important. However, there are some exceptions such as, the **S**rcGroup keyword must be the last keyword before the **S**o Finished keyword unless the **P**sdcCredit keyword is specified on the **M**odelOpt card, in which case **S**rcGroup is replaced with the **P**sdcGroup keyword. Additional exceptions are discussed in the sections specific to applicable keywords. The user may group all the **L**ocation cards together, then group the source parameter cards together, or they may want to group all input cards for a particular source together. All sources are given a source ID by the user, which is used to link the source parameter inputs to the correct source or sources. The source ID can be any alphanumeric string of up to 12 characters.

The number of sources is allocated dynamically at the time **A**erMod is run. This value, in concert with the other dynamically allocated arrays and input requirements, is limited only by the amount of available memory.

#### 3.3.1 Identifying source types and locations

The **L**ocation keyword is used to identify the source type and the location of each source to be modeled. The **L**ocation card must be the first card entered for each source since it identifies the source type and dictates which parameters are needed and/or accepted. The syntax, type and order of the **L**ocation keyword are summarized below:

<b>Syntax:</b>	<b>When Src typ = POINT, POINTHOR, POINTCAP, VOLUME, AREA, AREAPOLY, AREACIRC, OPENPIT, or SWPOINT</b> SO LOCATION Srcid Src typ Xs Ys (Zs) <b>When Src typ = LINE, RLINE, or BUOYLINE</b> SO LOCATION Srcid Src typ Xs1 Ys1 Xs2 Ys2 (Zs) <b>When Src typ = RLINEXT</b> SO LOCATION Srcid Src typ Xs1 Ys1 Zs1 Xs2 Ys2 Zs2 (Zs)
<b>Type:</b>	Mandatory, Repeatable
<b>Order:</b>	Must be first card for each source input

where the Srcid parameter is the alphanumeric source ID defined by the user (up to 12 characters), Src typ is the source type, which is identified by one of the secondary keywords - POINT, POINTHOR, POINTCAP, VOLUME, AREA, AREAPOLY, AREACIRC, OPENPIT, LINE, RLINE, RLINEXT, BUOYLINE, or SWPOINT. Xs and Ys, are the x and y coordinates of the source location in meters for POINT, POINTHOR, POINTCAP, VOLUME, AREA, AREAPOLY, AREACIRC, OPENPIT, and SWPOINT source types. For the LINE and RLINE source type, Xs1 and Ys1 are the x and y coordinates for the midpoint of one end of the LINE or RLINE source while Xs2 and Ys2 are the x and y coordinates for the midpoint of the other end of the LINE or RLINE source. For the RLINEXT source type, Zs1 and Zs2 are the release heights for the endpoints of the source. For the OPENPIT source type, Zs is the elevation at the top of the pit, and the effective depth is calculated based on the lateral dimensions and volume of the pit.

Beginning with version 19191, the RLINE and RLINEXT source types were added to the SO pathway for roadway sources. Beginning with AERMOD version 24142, the RLINE source type was updated to a regulatory option while the RLINEXT source type is an ALPHA option and requires the ALPHA keyword with the MODELOPT keyword. The original implementation of RLINE and RLINEXT was based on the numerical integration and algorithms in the Research LINE-source model, version 1.2, for near-surface releases (Snyder et al., 2013). The implementation has since been updated to better harmonize the RLINE and RLINEXT source types with AERMOD similar to the POINT, AREA, and VOLUME source types as described in EPA’s related TSD (EPA, 2023). The R-LINE model was formulated for flat terrain, and the original implementation in AERMOD required terrain to be specified as FLAT. Beginning in AERMOD version 23132, RLINE/RLINEXT can account for elevated terrain; however, when modeling for project level transportation conformity and hot-spot analyses, refer to the EPA’s Office of Transportation and Air Quality (OTAQ) for the most up-to-date guidance on how to model roadway sources (<https://www.epa.gov/state-and-local-transportation/project-level-conformity-and-hot-spot-analyses>).

RLINEXT sources require the user to input the offset distance from road centerline, number of lanes, width per lane and initial vertical dispersion for each specified road link. These parameters are discussed in more detail in Section 3.3.2.10. Also, refer to the user's guide for R-LINE Model Version 1.2 (Snyder and Heist, 2013) and EPA's 2023 TSD (EPA, 2023) for detailed information about the original formulation of the RLINE source algorithms as well as the reformulation beginning in AERMOD version 23132.

Beginning with version 15181, the BUOYLINE source type was added to the SO pathway for buoyant line sources. The current implementation is based on the buoyant line source algorithm in the Buoyant Line and Point Source (BLP) dispersion model (Schulman and Scire, 1980) with very little modification and similar limitations. A buoyant line source is, comprised of one or multiple lines. Multiple lines are assumed to be parallel, though each line can have a different length, height, and base elevation. AERMOD will check to see if the lines in a single source are parallel, within a 5° tolerance, to the first line in the source. If an individual buoyant line exceeds the tolerance, AERMOD will issue a warning message, but will continue the model run. The BUOYLINE source type also requires the user to input average values of length, width, height, and separation distance for the set of lines that comprise the buoyant line source. These parameters are discussed in more detail in Section 3.3.2.11. Refer to the BLP user's guide (Schulman and Scire, 1980) for detailed information about the formulation of the buoyant line source algorithm.

Beginning with version 22112, the SWPOINT source type was added to the SO pathway as a research tool to study the sidewash effects of the recirculation cavity that forms on the lee side a building and shifts laterally when the wind is oblique to the face of the building. The SWPOINT source has been added for continued research and development and requires the ALPHA secondary keyword as a model option using the MODELOPT keyword on the CO pathway.

For the BUOYLINE source, the definitions of Xs1, Ys1, Xs2, and Ys2 are similar to the definitions for the LINE source, but there is a subtle difference due to the current implementation of the buoyant line source algorithm in AERMOD. When specifying a buoyant line source, the LOCATION keyword and parameters should be repeated for each individual line that comprises the buoyant line source. BUOYLINE should be specified as the source type (Srctyp), and each line should be given a unique source ID (Srcid). **Note that the order that the individual lines are entered using the LOCATION keyword in the control file is important.** Again, as in BLP, AERMOD assumes all of the buoyant lines are parallel. As noted above, AERMOD performs a check to see if the lines are within an allowable tolerance, currently 5°, and issues a warning message if a line exceeds this tolerance. For lines that are not oriented exactly north-south but are angled either southeast-to-northwest or southwest-to-northeast, the individual lines should be entered

in the order of their location from south to north. In other words, the southernmost line should be defined first in the control file, followed by the adjacent line to the north and so on, ending with the northernmost line. For an individual line, the most westerly endpoint should be entered first followed by the easterly endpoint where  $X_{s1}$  and  $Y_{s1}$  are the x and y coordinates of the most westerly endpoint of the line, and  $X_{s2}$  and  $Y_{s2}$  are the x and y coordinates of the most easterly endpoint of the line.  $Z_s$  is the optional elevation of the source above sea-level and is applicable for all source types.

**In the case where the buoyant lines are parallel to the Y axis**, the order that the lines should be entered is dependent on which endpoint is entered first, the southern or northern endpoint of the lines. **If the southern endpoint is entered first, the lines should be entered in the order of the easternmost line to the westernmost line. If the northern endpoint is entered first, lines should be ordered west to east.** The convention used for the first line should be used for all subsequent lines.

The three area source types (AREA, AREACIRC, and AREAPOLY), as well as the LINE source type use the same numerical integration algorithm for estimating impacts from area sources and are merely different options for specifying the shape of the area source. The AREA source keyword may be used to specify a rectangular-shaped area source with arbitrary orientation; the AREAPOLY source keyword may be used to specify an area source as an irregularly shaped polygon of up to 20 sides; and the AREACIRC source keyword may be used to specify a circular-shaped area source (modeled as an equal-area polygon of 20 sides). The LINE source type option allows users to specify line-type sources based on a start point and end point of the line and the width of the line, as an alternative to the current AREA source type for rectangular sources. The LINE source type utilizes the same routines as the AREA source type and will give identical results for equivalent source inputs. The LINE source type also includes an optional initial sigma-z parameter on the SRCPARAM keyword to account for initial dilution of the emissions. AREA, AREAPOLY, AREACIRC, LINE, and OPENPIT source types do not, by default, include the horizontal meander component in AERMOD. AREAMNDR was added in 23132 as an ALPHA option on the CO pathway which incorporates meander into the AREA, AREAPOLY, AREACIRC, and LINE sources if specified. Since the LINE source type utilizes the AREA source algorithms, the runtime optimizations associated with the FASTAREA option will also apply to LINE sources if included. The AREAMNDR option will not add meander to the AREA, AREAPOLY, AREACIRC, or LINE sources if the FASTAREA option has been included.

The RLINE and RLINEXT source types use the numerical integration algorithms described in Snyder et. al. 2013, intended mainly for roadway sources. Beginning with version 19191, the RLINE and

RLINEXT source types were added as an option to the SO pathway. Initial sigma-z (vertical dispersion/dilution) and width are specified using the SRCPARAM keyword on the SO pathway for an RLINE and RLINEXT source. The RLINEXT source requires an additional distance from the centerline parameter on the SRCPARAM keyword, used in the barrier and depressed roadway algorithms. The RLINE and RLINEXT source types contain a horizontal meander component for roadway sources.

The OPENPIT source algorithm can be used to model particulate or gaseous emissions from open pits, such as surface coal mines and rock quarries. The OPENPIT algorithm uses an effective area for modeling pit emissions, based on meteorological conditions, and then utilizes the numerical integration area source algorithm to model the impact of emissions from the effective area sources. A complete technical description of the OPENPIT source algorithm is provided in the ISC3 Model User's Guide - Volume II (EPA, 1995b).

Note that the source elevation,  $Z_s$ , is an optional parameter. If the default option to include elevated terrain effects is used and the source elevation is omitted, a warning message will be generated, and the source elevation will be given a value of 0.0. The source elevation is not used by the model if the non-default FLAT terrain option is used. While the default units of  $Z_s$  are meters, the user may also specify source elevations to be in feet by adding the SO ELEVUNIT FEET card immediately following the SO STARTING card. The x (east-west) and y (north-south) coordinates are for the center of the source for POINT, POINTHOR, POINTCAP, VOLUME, AREACIRC, SWPOINT sources, for one of the vertices of the source for AREA, AREAPOLY, and OPENPIT sources, and the endpoints for RLINE, RLINEXT, and BUOYLINE sources. The source coordinates may be input as Universal Transverse Mercator (UTM) coordinates or may be referenced to a user-defined origin.

Certain types of non-buoyant line sources can be handled in AERMOD using a string of volume sources, an elongated area source, or a roadway source. The volume source algorithms are most applicable to line sources with some initial plume depth, such as conveyor belts and rail lines. Section 1.2.2 of the ISC Model User's Guide - Volume II (EPA, 1995b) provides technical information on how to model a line source with multiple volume sources. The use of the AERMOD area source algorithm for elongated rectangles would be most applicable to near ground level line sources, such as a viaduct. The area source algorithm is applied identically to both AREA and LINE source types and AERMOD should produce the same results for an elongated area source defined as either an AREA or LINE source type.

The source ID entered on the LOCATION card identifies that source for the remainder of the SO pathway inputs. Since the model accepts alphanumeric strings of up to 12 characters for the source ID, the

sources can be identified with descriptive names, such as STACK1, STACK2, BOILER3, SLAGPILE, etc. This may also be useful if line sources are being modeled as multiple volume or areas, as discussed above. Since they are part of the same physical source, they can be given names that will identify them as being related, such as LINE1A, LINE1B, LINE1C, etc.

It should be noted that not all NO<sub>2</sub> conversion options have been implemented for all source types in AERMOD. Table 3-2 summarizes which NO<sub>2</sub> conversion options have been implemented for each of the AERMOD source types and which options have not.

### 3.3.2 Specifying source release parameters

The main source parameters are input on the SRCPARAM card, which is a mandatory keyword for each source being modeled. Since the input parameters vary depending on the source type, the different source types handled by the AERMOD model are discussed separately.

#### 3.3.2.1 POINT, POINTHOR, and POINTCAP source inputs

The AERMOD POINT source algorithms are used to model releases from stacks and isolated vents, as well as other kinds of sources. The syntax, type and order for the SRCPARAM card for POINT, POINTHOR, and POINTCAP sources are summarized below:

<b>Syntax:</b>	SO SRCPARAM Srcid Ptemis Stkhgt Stktmp Stkvel Stkdia
<b>Type:</b>	Mandatory, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

where the Srcid parameter is the same source ID that was entered on the LOCATION card for a particular source, and the other parameters are as follows:

- Ptemis - point emission rate in g/s,
- Stkhgt - release height above ground in meters,
- Stktmp - stack gas exit temperature in degrees K,
- Stkvel - stack gas exit velocity in m/s, and
- Stkdia - stack inside diameter in meters.

An example of a valid SRCPARAM input card for a point source is given below:

SO SRCPARAM	STACK1	16.71	35.0	444.0	22.7	2.74
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where the source ID is STACK1, the emission rate is 16.71 g/s, the release height is 35.0 m, the exit temperature is 444.0 K, the exit velocity is 22.7 m/s, and the inside stack diameter is 2.74 m. All the parameters must be present on the input card.

If a value of 0.0 is input for the exit temperature, AERMOD will adjust the exit temperature for each hour to match the ambient temperature. This option allows the user to model a plume that is released at ambient temperature. The user may also model a plume with an exit temperature that exceeds the ambient temperature by a fixed amount by entering a negative value for exit temperature equal in magnitude to the temperature difference. The model will add the absolute value of a negative exit temperature to the ambient temperature for each hour to obtain the exit temperature used in computing the buoyancy flux of the plume. The AERMOD model does not include algorithms to model plumes that are released at temperatures below ambient temperature. Such releases should be modeled with a dense gas model.

AERMOD model uses direction-specific building dimensions for POINT, POINTHOR, and POINTCAP sources subject to building downwash. Building dimensions for these source types are entered on the BUILDHGT, BUILDWID, BUILDLEN, XBADJ, and YBADJ cards described below in Section 3.3.9. Offshore platform dimensions for these source types are entered for each source ID using the PLATFORM keyword as described below in Section 3.3.16.

### 3.3.2.2 VOLUME source inputs

The AERMOD VOLUME source algorithms are used to model releases from a variety of industrial sources, such as building roof monitors, multiple vents, and conveyor belts. Beginning with AERMOD version 23132, the input parameters for VOLUME (and AREA) source types were expanded to characterize aircraft emissions to account for the effects of buoyancy and momentum (see Section 3.2.12). The additional parameters are required to be input as hourly data in the hourly emissions file (see Section 3.3.12). Thus, aircraft sources can only be modeled as a VOLUME source using an hourly emissions file that includes the non-aircraft VOLUME source parameters described in Section 3.3.12, as well as the extended set of parameters required to characterize the aircraft source as a VOLUME source as described in Section 3.3.12. The syntax, type, and order for the SRCPARAM card for VOLUME sources are summarized below:

<b>Syntax:</b>	SO SRCPARAM Srcid Vlemis Relhgt Syinit Szinit
<b>Type:</b>	Mandatory, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

where the Srcid parameter is the same source ID that was entered on the LOCATION card for a particular source, and the other parameters are as follows:

- Vlemis - volume emission rate in g/s,
- Relhgt - release height (center of volume) above ground, in meters,
- Syinit - initial lateral dimension of the volume in meters, and
- Szinit - initial vertical dimension of the volume in meters.

Table 3-3, which is explained in more detail in Section 1.2.2 of the ISC Model User's Guide - Volume II, summarizes the suggested procedures to be used for estimating the initial lateral and vertical dimensions for various types of volume and line sources.

**Table 3-3. Summary of Suggested Procedures for Estimating Initial Lateral Dimensions  $\sigma_{yo}$  and Initial Vertical Dimensions  $\sigma_{zo}$  for Volume and Line Sources**

Type of Source	Procedure for Obtaining Initial Dimension	
(a) Initial Lateral Dimension ( $\sigma_{yo}$ )		
Single Volume Source	$\sigma_{yo} =$	length of side divided by 4.3
Line Source Represented by Adjacent Volume Sources (see Figure 1-8 (a) in EPA, 1995a)	$\sigma_{yo} =$	length of side divided by 2.15
Line Source Represented by Separated Volume Sources (see Figure 1-8(b) in EPA, 1995a)	$\sigma_{yo} =$	center to center distance divided by 2.15
(b) Initial Vertical Dimension ( $\sigma_{zo}$ )		
Surface-Based Source ( $h_e \sim 0$ )	$\sigma_{zo} =$	vertical dimension of source divided by 2.15
Elevated Source ( $h_e > 0$ ) on or Adjacent to a Building	$\sigma_{zo} =$	building height divided by 2.15
Elevated Source ( $h_e > 0$ ) not on or Adjacent to a Building	$\sigma_{zo} =$	vertical dimension of source divided by 4.3

### 3.3.2.3 AREA source type

The AERMOD area source algorithm is used to model low level or ground level releases with no plume rise (e.g., storage piles, slag dumps, and lagoons). The AERMOD model uses a numerical integration approach for modeling impacts from area sources. When the FASTAREA or FASTALL option is specified, the area source integration routine is optimized to reduce model runtime. This is accomplished by incorporation of a three-tiered approach using the Romberg numerical integration, a 2-point Gaussian Quadrature routine for numerical integration, or a point source approximation based on the location of the receptor relative to the source. In the regulatory default mode, the Romberg numerical integration is utilized for all receptors.

The AERMOD model includes various options for specifying the shape of an area source: the AREA source type may be used to specify rectangular areas that may also have a rotation angle specified relative to a north-south orientation; the LINE source type is a simplified representation of an elongated area source and does not utilize a rotation angle; the AREAPOLY source type may be used to specify an area source as an irregularly-shaped polygon of up to 20 sides; the AREACIRC source keyword may be used to specify a circular-shaped area source (modeled as an equal-area polygon of 20 sides); and the OPENPIT source type can be used to model open rectangular pits such as surface coal mines and rock quarries. The OPENPIT source type also includes an optional rotation angle. The source parameter inputs for each of the area source types is described below.

### 3.3.2.4 AREA source inputs

The rotation angle for rectangular AREA sources is specified relative to the vertex used to define the source location on the SO LOCATION card (e.g., the southwest corner). The syntax, type and order for the SRCPARAM card for AREA sources are summarized below:

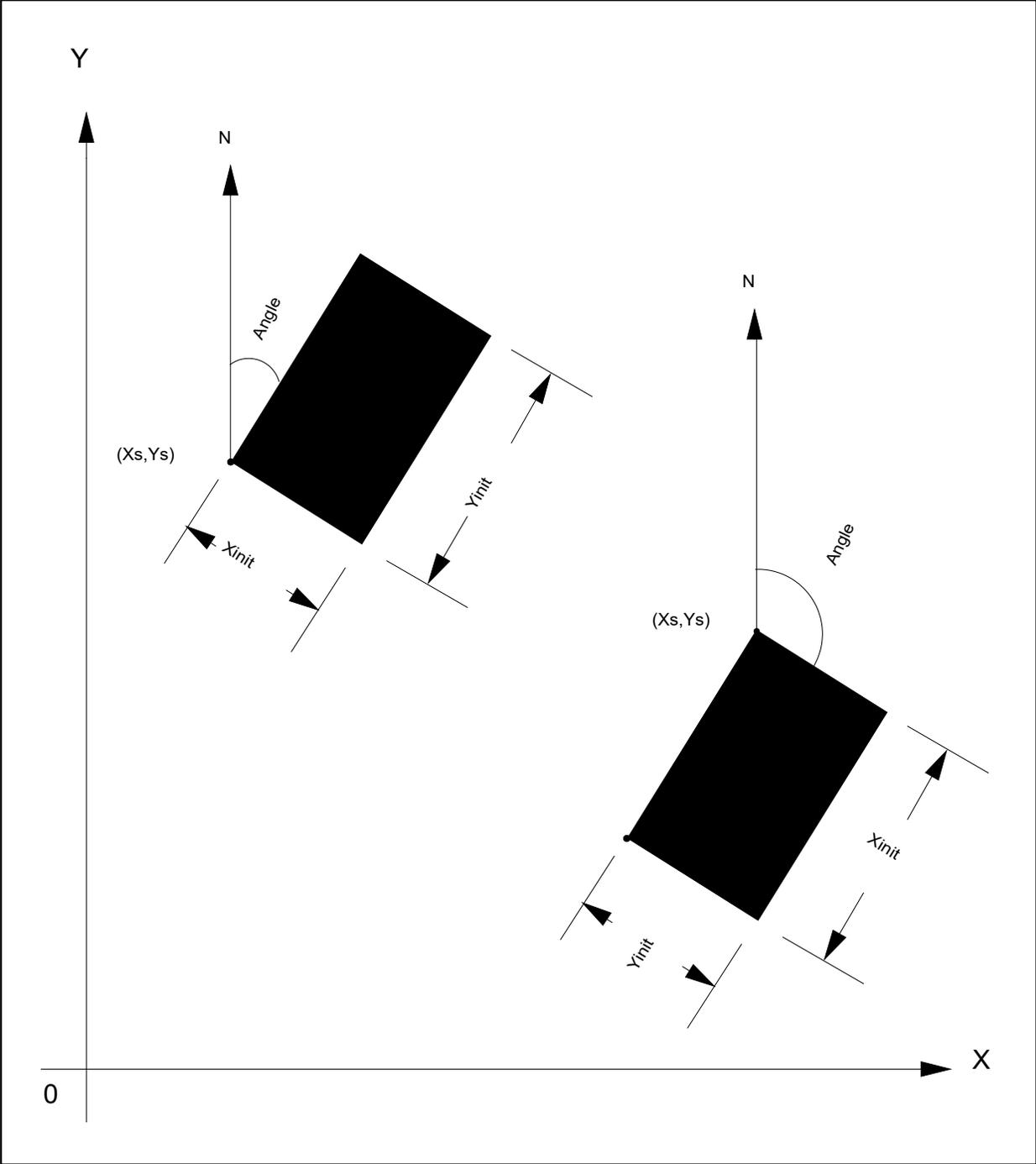
<b>Syntax:</b>	SO SRCPARAM Srcid Aremis Relhgt Xinit (Yinit) (Angle) (Szinit)
<b>Type:</b>	Mandatory, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

where the Srcid parameter is the same source ID that was entered on the LOCATION card for a particular source, and the other parameters are as follows:

- Aremis - area emission rate in  $\text{g}/(\text{s}\cdot\text{m}^2)$ ,
- Relhgt - release height above ground in meters,
- Xinit - length of X side of the area (in the east-west direction if Angle is 0 degrees) in meters,
- Yinit - length of Y side of the area (in the north-south direction if Angle is 0 degrees) in meters (optional),
- Angle - orientation angle for the rectangular area in degrees from North, measured positive in the clockwise direction (optional), and
- Szinit - initial vertical dimension of the area source plume in meters (optional).

It should be noted that the emission rate for the area source is an emission rate per unit area, which is different from the point and volume source emission rates, which are total emissions for the source.

If the optional Yinit parameter is omitted, then the model assumes that the area is a square, i.e., Yinit = Xinit. If the optional Angle parameter is omitted, then the model assumes that the area is oriented in the north-south and east-west directions, i.e., Angle = 0.0. If the Angle parameter is input, and the value does not equal 0.0, then the model will rotate the area clockwise around the vertex defined on the SO LOCATION card for this source. Figure 3-1 illustrates the relationship between the Xinit, Yinit, and Angle parameters and the source location, (Xs,Ys), for a rotated rectangle. The Xinit dimension is measured from the side of the area that is counterclockwise along the perimeter from the vertex defined by (Xs,Ys), while the Yinit dimension is measured from the side of the area that is clockwise from (Xs,Ys). The Angle parameter is measured as the orientation relative to North of the side that is clockwise from (Xs,Ys), i.e., the side with length Yinit. The Angle parameter may be positive (for clockwise rotation) or negative (for counterclockwise rotation), and a warning message is generated if the absolute value of Angle is greater than 180 degrees. The selection of the vertex to use for the source location is not critical, as long as the relationship described above for the Xinit, Yinit, and Angle parameters is maintained.



**Figure 3-1. Relationship of Area Source Parameters for Rotated Rectangle**

By making the Yinit and Angle parameters optional, the area source input data for the previous versions of the ISC model can be used with the AERMOD model. The aspect ratio (i.e., length/width) for area sources should generally be less than about 100 to 1. If this is exceeded, then the model will generate a non-fatal warning message, and the user should consider subdividing the area to achieve a 100 to 1 aspect ratio (or less) for all subareas.

The optional Szinit parameter may be used to specify an initial vertical dimension to the area source plume, similar to the use of the Szinit parameter for volume sources. This parameter may be important when the area source algorithm is used to model mechanically generated emission sources, such as mobile sources. In these cases, the emissions may be turbulently mixed near the source by the process that is generating the emissions, and therefore occupy some initial depth. For more passive area source emissions, such as evaporation or wind erosion, the Szinit parameter may be omitted, which is equivalent to using an initial sigma-z of zero.

An example of a valid SRCPARAM input card for a rectangular area source is given as

SO SRCPARAM	SLAGPILE	0.00155.0	50.0	100.0	30.0
-------------	----------	-----------	------	-------	------

where the source ID is SLAGPILE, the emission rate is 0.0015 g/(s-m<sup>2</sup>), the release height is 5.0 m, the X-dimension is 50.0 m, the Y-dimension is 100.0 m, and the orientation angle is 30.0 degrees clockwise from North.

Since the numerical integration algorithm can handle elongated areas with aspect ratios of up to 100 to 1, the AERMOD area source algorithm may be useful for modeling certain types of line sources. User's now have the option of specifying a line-type source as either AREA or LINE. There are no restrictions on the placement of receptors relative to area sources for the AERMOD model. Receptors may be placed within the area and at the edge of an area. The AERMOD model will integrate over the portion of the area that is upwind of the receptor. However, since the numerical integration is not performed for portions of the area that are closer than 1.0 meter upwind of the receptor, caution should be used when placing receptors within or adjacent to areas that are less than a few meters wide. More technical information about the application of the AERMOD area source algorithm is provided in Sections 1.2.3 and 2.2.3 of the ISC Model User's Guide - Volume II (EPA, 1995b).

Beginning with AERMOD version 23132, the input parameters for AREA (and VOLUME) source types were expanded to characterize aircraft emissions to account for the effects of buoyancy and momentum (see Section 3.2.12). The additional parameters are required to be input as hourly values in the hourly emission rate file (see Section 3.3.12). Thus, aircraft sources can only be modeled using an hourly emissions file that includes the standard non-aircraft AREA source parameters described in Section 3.3.12, as well as the extended set of parameters required to characterize the aircraft source as an AREA source as described in Section 3.3.12.

### 3.3.2.5 AREAPOLY source inputs

The AREAPOLY source type may be used to specify an area source as an arbitrarily- shaped polygon of between 3 and 20 sides (the number of sides allowed may be increased by modifying the NVMAX parameter in MODULE MAIN1). This source type option provides the user with considerable flexibility for specifying the shape of an area source. The syntax, type and order for the SRCPARAM card for AREAPOLY sources are summarized below:

<b>Syntax:</b>	SO SRCPARAM Srcid Aremis Relhgt Nverts (Szinit)
<b>Type:</b>	Mandatory, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

where the Srcid parameter is the same source ID that was entered on the LOCATION card for a particular source, and the other parameters are as follows:

- Aremis - area emission rate in  $g/(s \cdot m^2)$ ,
- Relhgt - release height above ground in meters,
- Nverts - number of vertices (or sides) of the area source polygon,
- Szinit - initial vertical dimension of the area source plume in meters (optional).

As with AREA sources, the emission rate for the source is an emission rate per unit area, which is different from the point and volume source emission rates, which are total emissions for the source. The locations of the vertices are specified by use of the AREAVERT keyword, which applies only to AREAPOLY sources.

The syntax, type and order for the AREAVERT keyword used for AREAPOLY sources are summarized below:

<b>Syntax:</b>	SO AREAVERT Srcid Xv(1) Yv(1) Xv(2) Yv(2) ... Xv(i) Yv(i)
<b>Type:</b>	Mandatory for <u>AREAPOLY</u> sources, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

where the Xv(i) and Yv(i) are the x-coordinate and y-coordinate values of the vertices of the area source polygon. There must be Nverts pairs of coordinates for the area source, where Nverts is the number of vertices specified for that source on the SRCPARAM card. The first vertex, Xv(1) and Yv(1), must also match the coordinates given for the source location on the LOCATION card, Xs and Ys. The remaining vertices may be defined in either a clockwise or counter-clockwise order from the point used for defining the source location.

Receptors may be placed within the area and at the edge of an area. The AERMOD model will integrate over the portion of the area that is upwind of the receptor. However, since the numerical integration is not performed for portions of the area that are closer than 1.0 meter upwind of the receptor, caution should be used when placing receptors within or adjacent to areas that are less than a few meters wide.

### 3.3.2.6 AREACIRC source inputs

The AREACIRC source type may be used to specify an area source as a circular shape. The model will automatically generate a regular polygon of up to 20 sides to approximate the circular area source. The polygon will have the same area as that specified for the circle. The syntax, type and order for the SRCPARAM card for AREACIRC sources are summarized below:

<b>Syntax:</b>	SO SRCPARAM Srcid Aremis Relhgt Radius (Nverts) (Szinit)
<b>Type:</b>	Mandatory, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

where the Srcid parameter is the same source ID that was entered on the LOCATION card for a particular source, and the other parameters are as follows:

- Aremis - area emission rate in  $g/(s \cdot m^2)$ ,
- Relhgt - release height above ground in meters,
- Radius - radius of the circular area in meters,
- Nverts - number of vertices (or sides) of the area source polygon (optional, 20 sides will be used if omitted),
- Szinit - initial vertical dimension of the area source plume in meters (optional).

As with AREA sources, the emission rate for the source is an emission rate per unit area, which is different from the point and volume source emission rates, which are total emissions for the source.

### 3.3.2.7 OPENPIT source inputs

The AERMOD model accepts rectangular pits with an optional rotation angle specified relative to a north-south orientation and the vertex used to define the source location on the SO LOCATION card (e.g., the southwest corner). The syntax, type and order for the SRCPARAM card for OPENPIT sources are summarized below:

<b>Syntax:</b>	SO SRCPARAM Srcid Opemis Relhgt Xinit Yinit Pitvol (Angle)
<b>Type:</b>	Optional, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

where the Srcid parameter is the same source ID that was entered on the LOCATION card for a particular source, and the other parameters are as follows:

- Opemis - open pit emission rate in  $g/(s \cdot m^2)$ ,
- Relhgt - average release height above the base of the pit in meters,
- Xinit - length of X side of the open pit (in the east-west direction if Angle is 0 degrees) in meters,
- Yinit - length of Y side of the open pit (in the north-south direction if Angle is 0 degrees) in meters,
- Pitvol - volume of open pit in cubic meters, and
- Angle - orientation angle for the rectangular open pit in degrees from North, measured positive in the clockwise direction (optional).

The same emission rate is used for both concentration and deposition calculations in the AERMOD model. It should also be noted that the emission rate for the open pit source is an emission rate per unit area

as with the other area source types. This is different from the point and volume source emission rates, which are total emissions for the source. The Relhgt parameter cannot exceed the effective depth of the pit, which is calculated by the model based on the length, width, and volume of the pit. A Relhgt of 0.0 indicates emissions that are released from the base of the pit.

If the optional Angle parameter is input, and the value does not equal 0.0, then the model will rotate the open pit clockwise around the vertex defined on the SO LOCATION card for this source. The relationship between the Xinit, Yinit, and Angle parameters and the source location, (Xs,Ys), for a rotated pit is the same as for rectangular area sources. The Xinit dimension is measured from the side of the area that is counterclockwise along the perimeter from the vertex defined by (Xs,Ys), while the Yinit dimension is measured from the side of the open pit that is clockwise along the perimeter from (Xs,Ys). Unlike the area source inputs, the Yinit parameter is not optional for open pit sources. The Angle parameter is measured as the orientation relative to North of the side that is clockwise from (Xs,Ys), i.e., the side with length Yinit. The Angle parameter may be positive (for clockwise rotation) or negative (for counterclockwise rotation), and a warning message is generated if the absolute value of Angle is greater than 180 degrees. The selection of the vertex to use for the source location is not critical, as long as the relationship described above for the Xinit, Yinit, and Angle parameters is maintained.

The aspect ratio (i.e., length/width) of open pit sources should be less than 10 to 1. However, since the pit algorithm generates an effective area for modeling emissions from the pit, and the size, shape and location of the effective area is a function of wind direction, an open pit cannot be subdivided into a series of smaller sources. Aspect ratios of greater than 10 to 1 will be flagged by a warning message in the output file, and processing will continue. Since open pit sources cannot be subdivided, the user should characterize irregularly-shaped pit areas by a rectangular shape of equal area. **Receptors should not be located within the boundaries of the pit; concentration and/or deposition at such receptors will be set to zero.** Such receptors will be identified during model setup and will be flagged in the summary of inputs.

An example of a valid SRCPARAM input card for an open pit source is given below:

```
SO SRCPARAM NORTHFIT 1.15E-4 0.0 150.0 500.0 3.75E+6 30.0
```

where the source ID is NORTHFIT, the emission rate is 1.15E-4 g/(s-m<sup>2</sup>), the release height is 0.0 m, the X-dimension is 150.0 m, the Y-dimension is 500.0 m, the pit volume is 3.75E+6 cubic meters (corresponding to an effective pit depth of about 50 meters) and the orientation angle is 30.0 degrees clockwise from North.

Note, that unlike the ISC model formulation for OPENPIT sources, particle information (diameter, mass fraction, and density) are not needed by AERMOD except when modeling with particle deposition or depletion.

### 3.3.2.8 LINE source inputs

The syntax, type and order for the SRCPARAM card for LINE sources are summarized below:

<b>Syntax:</b>	SO SRCPARAM Srcid Lnemis Relhgt Width (Szinit)
<b>Type:</b>	Mandatory, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

where the Srcid parameter is the same source ID that was entered on the LOCATION card for a particular source, and the other parameters are as follows:

- Lnemis - line source emission rate in  $g/(s \cdot m^2)$ ,
- Relhgt - average release height above ground in meters,
- Width - width of the source in meters (with a minimum width of 1m),
- Szinit - initial vertical dimension of the line source in meters (optional).

As noted above, the LINE source type option in AERMOD uses the same algorithms as used for the AREA source type for rectangular sources and will give identical results for equivalent source definitions. The LINE source emission rate is in  $g/(s \cdot m^2)$  and the model assumes that emissions are uniformly distributed across the dimensions of the LINE source. As with the AREA source type, the LINE source type does not include the horizontal meander component that is incorporated for POINT and VOLUME sources unless the AREAMNDR and ALPHA keywords have been specified. Also, as with the AREA source type, the LINE source type will estimate concentrations (and/or deposition) at receptors located within the dimensions of the source.

### 3.3.2.9 RLINE source inputs

The AERMOD RLINE source algorithm is used to model near-surface releases from mobile sources and can be used to represent a travelled roadway with either single or multiple lanes of traffic. The AERMOD model simulates mobile source emissions using Romberg numerical integration of point sources,

with the number of points included in the integration determined by error analysis. Beginning with version 24142, the RLINE source type has been updated to a regulatory option and can be used with the DFAULT option.

RLINE was originally formulated as a flat terrain model, and in the original implementation, AERMOD required that the FLAT MODELOPT flag was specified. If FLAT and ELEV were both used, Zs for all RLINE sources needed to be = 0.0 or = 'FLAT'. Beginning with version 23132, the RLINE source type can account for terrain elevations. **However, when modeling for project level transportation conformity and hot-spot analyses, refer to the EPA's Office of Transportation and Air Quality (OTAQ) for current guidance on how to model and configure roadway sources (<https://www.epa.gov/state-and-local-transportation/project-level-conformity-and-hot-spot-analyses>).**

The syntax, type, and order for the SRCPARAM card for RLINE sources are summarized below:

<b>Syntax:</b>	SO SRCPARAM Srcid Lnemis Relhgt Width (Szinit)
<b>Type:</b>	Mandatory, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

where the Srcid parameter is the same source ID that was entered on the LOCATION card for a particular source, and the other parameters are as follows:

- Lnemis<sup>3</sup> - line source emission rate in g/s/m<sup>2</sup>,
- Relhgt - average release height above ground in meters,
- Width - width of the source in meters (with a minimum width of 1m),
- Szinit - initial vertical dimension of the line source in meters (optional).

Notice these are identical to the LINE source type above, thus allowing the user to use the RLINE dispersion calculations by simply changing the source type from LINE to RLINE. The RLINE source emission rate is in grams/second/meter<sup>2</sup>, and the model assumes that emissions are uniformly distributed. If the keyword RLEMCONV is used on the SO pathway, then the emission units for all RLINE sources should be in g/hr/link (see Section 3.3.13).

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<sup>3</sup> Alternatively, the user may specify emissions units of grams per link per hour for the RLINE and RLINE source types using the RLEMCONV keyword on the SO pathway (See Section 3.3.13.)

### 3.3.2.10 RLINEXT source inputs

Like the RLINE source type, the RLINEXT source type is used to model near-surface releases from mobile sources and can be used to represent a travelled roadway with either single or multiple lanes of traffic. Unlike RLINE, RLINEXT source type is a non-regulatory ALPHA option. The RLINEXT source type cannot be used with the DFAULT option and requires use of the non-regulatory ALPHA flag with the Control pathway MODELOPT keyword. RLINE and RLINEXT sources use the same dispersion calculations, but the parameter requirements to characterize each of the source types are different. Prior to version 23132, AERMOD also required that the FLAT MODELOPT flag was specified when using the RLINEXT source. If FLAT and ELEV were both used, Zs for all RLINEXT sources needed to be = 0.0 or = 'FLAT'. Beginning with version 23132, the RLINEXT source type can process terrain elevations as does the RLINE source type. **However, when modeling for project level transportation conformity and hot-spot analyses, refer to the EPA's Office of Transportation and Air Quality (OTAQ) for current guidance on how to model and configure roadway sources (<https://www.epa.gov/state-and-local-transportation/project-level-conformity-and-hot-spot-analyses>).**

The syntax, type, and order for the SRCPARAM card for RLINEXT sources are summarized below:

<b>Syntax:</b>	SO SRCPARAM Srcid Rlemis DCL Width Szinit
<b>Type:</b>	Mandatory, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

where the Srcid parameter is the same source ID that was entered on the LOCATION card for a particular source, and the other parameters are as follows:

- Rlemis<sup>3</sup> - roadway source emission rate in g/s/m,
- DCL - distance from the roadway centerline to the center of the source (e.g., the center of the lane of traffic for a one-lane source) in meters,
- Width - width for each source in meters (e.g., for a one lane source, Width would be the width of the lane),
- Szinit - initial vertical dimension of the line source in meters.

All parameters are required for an RLINEXT source type, however, the user may enter "0" for any unused parameters. The RLINEXT source emission rate is in grams/second/meter and the model assumes

that emissions are uniformly distributed across the dimensions of the RLINEXT source. If the keyword RLEMCONV is used on the SO pathway, then the emission units for all RLINEXT sources should be in g/hr/link (see Section 3.3.13).

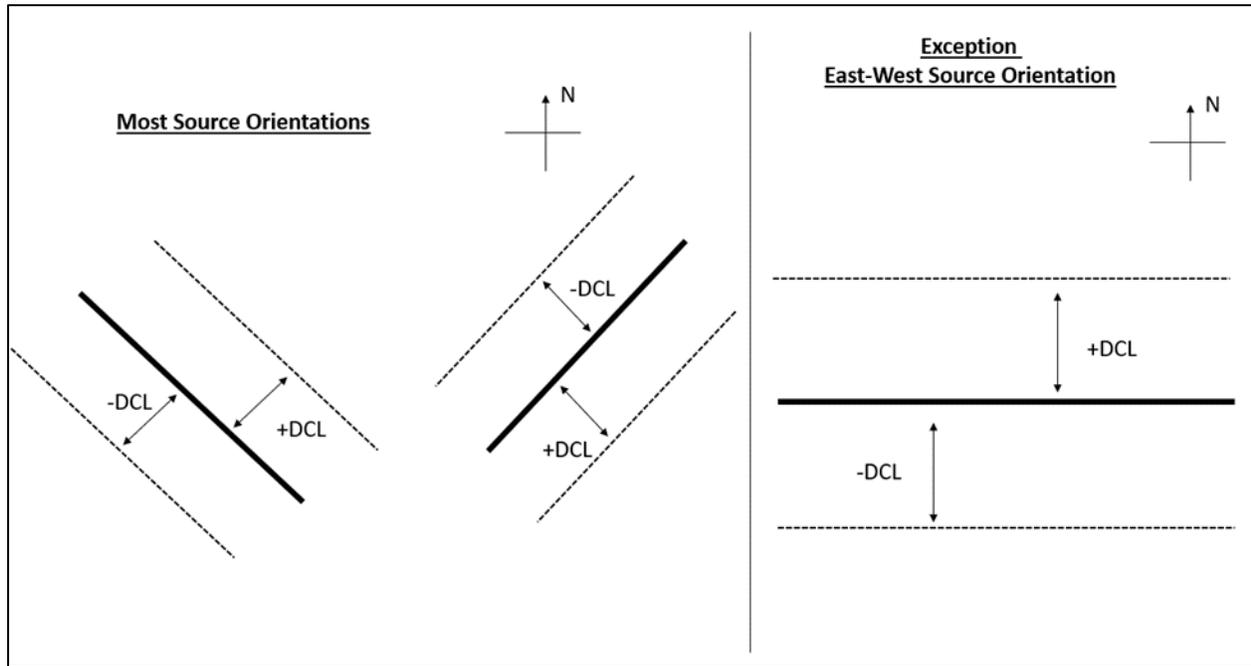
The distance from the centerline (DCL) parameter determines the offset from the roadway centerline for a source representing a single lane of traffic, as shown in Figure 3-2. For example, in the case of a multi-lane, divided highway with traffic travelling in the northbound and southbound directions, the centerline would be defined as the midpoint of the highway median. The DCL would be the perpendicular distance from the midpoint of the median to the midpoint of each source, i.e., middle distance between source end points. If a source is one lane, the DCL would be the distance from the midpoint of the median to the center of the lane. A positive DCL value indicates the source is to the east of the median for a north-south oriented source, or to the north of the median for an east-west oriented source. A negative DCL value means the source is to the west of the median for a north-south oriented source, or to the south of the median for an east-west oriented source.

Most Orientations	(+DCL) Source <b>East</b> of median	(-DCL) Source <b>West</b> of median
Exception: East-West Orientation	(+DCL) Source <b>North</b> of median	(-DCL) Source <b>South</b> of median

DCL can be 0 for lanes of traffic with defined source coordinates, unless the user includes the RDEPRESS keyword, explained below, in which case DCL must represent the distance from the roadway centerline for each individual source. In the multi-lane, divided highway example where each lane is a unique source, each source would have a DCL reflecting the distance from the midpoint of the median to the middle of the individual lane of traffic, with the easternmost-lane having the largest-magnitude positive DCL value and the westernmost-lane having the largest-magnitude negative DCL value.

It should be noted that use of the RDEPRESS keyword requires that all RLINEXT sources have coordinates reflecting the roadway centerline coordinates, and not coordinates representing the individual lane of traffic. DCL with the RDEPRESS keyword must, therefore, define the distance of each source to a

common location. The user may apply similar source characterization to RLINEXT sources without the use of RDEPRESS, so that DCL defines the location of each lane from a common set of coordinates.



**Figure 3-2. Definition of DCL for RLINEXT sources. Dashed lines represent lanes of a roadway with an offset (DCL) from the median (solid line).**

The Width parameter specifies the width of the RLINEXT source (e.g., the width of a lane or multiple lanes, depending on how the source is defined). A warning message is issued if Width is less than zero.

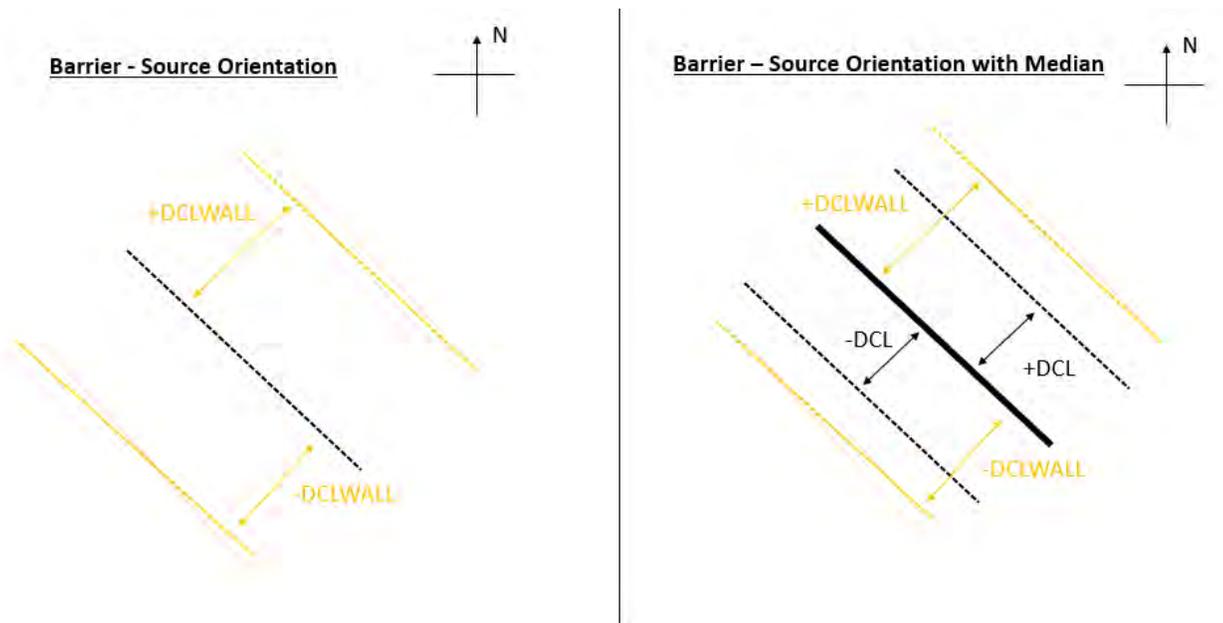
Optionally, RLINEXT sources can also contain source configurations to represent solid barriers or a depressed location. A roadside barrier is specified with the RBARRIER keyword. The syntax, type, and order for the RBARRIER card for RLINEXT sources are summarized below:

<b>Syntax:</b>	SO RBARRIER Srcid Htwall DCLwall (Htwall2 DCLwall2)
<b>Type:</b>	Optional, Repeatable
<b>Order:</b>	Must follow the SRCPARAM card for each source input

where the Srcid parameter is the same source ID that was entered on the LOCATION card for a particular source, and the other parameters are as follows:

- Htwall - height of the solid barrier (wall) in meters,
- DCLwall - the distance from the centerline of the source to the barrier (wall) in meters,
- Htwall2 - height of a second solid barrier (wall) in meters, if present,
- DCLwall2 - the distance from the centerline of the source to the second barrier (wall) in meters.

RBARRIER inputs should be on opposite sides of the RLINEXT source (DCLwall and DCLwall2). If two RBARRIERs are input that are on the same side of the source, a warning will be issued, the closest of the two barriers will be kept and the other will be ignored.



**Figure 3-3. Definition of DCLWALL for RLINEXT sources. Dashed black lines represent roadway sources and dashed orange lines represent barriers with an offset (DCLWALL). The solid line in the right-hand panel represents the median**

From Figure 3-2, the DCL is defined and the DCLWALL is defined when there is a median. This median DCL is subtracted from the DCLWALL within the RLINE barrier processing, so only the relative distance between each source and wall (barrier) is used when estimating concentrations.

A roadside located in a depression is specified with the RDEPRESS keyword. The syntax, type and order for the RDEPRESS card for RLINEXT sources are summarized below

<b>Syntax:</b>	SO RDEPRESS Srcid Depth Wtop Wbottom
<b>Type:</b>	Optional, Repeatable
<b>Order:</b>	Must follow the SRCPARAM card for each source input

where the Srcid parameter is the same source ID that was entered on the LOCATION card for a particular source, and the other parameters are as follows:

- Depth: depth of the depression in meters (should be negative),
- Wtop: width of the top of the depression containing the RLINE source in meters,
- Wbottom: width of the bottom of the depression containing the RLINE source in meters (must be less than, or equal to, Wtop).

The barrier and depressed roadway source configurations can only be used if the ALPHA flag is present with the MODELOPT keyword in the CO pathway.

Roadside barrier configurations are specified by the height of the barrier (Htwall) and the distance from the centerline to the wall (DCLwall). Currently, there is no limit to the Htwall parameter, but a fatal error message is issued if the height of the barrier is less than zero. If a second barrier is specified with Htwall2 and DCLwall2, this barrier should be on the opposite side of the roadway from barrier 1. Positive values of DCLwall (and DCLwall2) indicate barriers east of the roadway centerline (or north if the roadway runs directly east-west). Negative values indicate barriers west of the roadway centerline (or south if the roadway runs directly east-west).

Depressed roadway dimensions are specified by the Depth parameter, defining the depth of the roadway relative to surrounding terrain, in meters, and the Wtop and Wbottom parameters, defining the widths of the depression top and depression bottom, respectively. The Depth parameter must be a negative value, reflecting a lower elevation than the surrounding terrain. A fatal error is issued if the Depth parameter is greater than zero. A fatal error is issued if either the Wtop or Wbottom parameters are less than zero, or if the specified Wbottom parameter is greater than the Wtop parameter for the source. Wbottom can, however, have a greater value than the width of the roadway, if the inclusion of shoulders or other areas are considered within the depression.

### 3.3.2.11 BUOYLINE source inputs

The syntax, type and order for the SRCPARAM, BLPINPUT, and BLPGROUP cards for a BUOYLINE source are summarized below:

<b>Syntax:</b>	SO SRCPARAM Srcid Blemis Relhgt
<b>Type:</b>	Optional, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each line input

where the Srcid parameter is the same source ID that was entered on the LOCATION card for a particular line within the buoyant line source, and the other parameters are as follows:

- Blemis - buoyant line emission rate in g/(s) for the individual line,
- Relhgt - average release height of the individual line above ground in meters. Since the original BLP model was developed for elevated sources, a minimum release height of 2.0 m is enforced for the individual buoyant lines when AERMOD processes the buoyant line sources. If a release height less than 2.0 m is detected, AERMOD changes the height to 2.0 meters, issues a warning message, and continues processing.

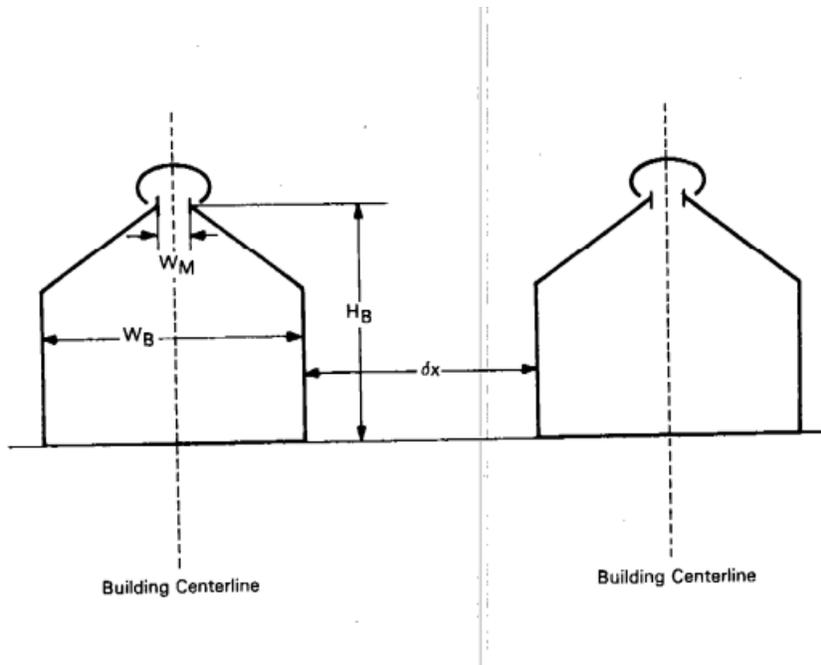
The buoyant line source also requires the user to enter average values representative of a buoyant line source as a whole and not for the individual lines that comprise the buoyant line source.

As of version 21112, the user can specify multiple buoyant line groups (i.e., multiple buoyant line sources) each comprised of individual buoyant lines. Each buoyant line source group (previously referred to as a buoyant line source) requires the user to enter average values representative of the group using the BLPINPUT keyword. The average parameters are applied to the buoyant line group by associating each individual buoyant line with a buoyant line group using the BLPGROUP keyword (described below) through the BLPGrpID. The BLPGrpID is optional on the BLPINPUT keyword *if only one buoyant line group is modeled*. Allowing BLPGrpID to be optional when a single buoyant line group is being modeled lets legacy control files run with AERMOD. These are entered as parameters on the BLPINPUT keyword:

<b>Syntax:</b>	SO BLPINPUT BLPGrpID Blavgblen Blavgbhgt Blavgbwid Blavglwid Blavgbsep Blavgfprm
<b>Type:</b>	Mandatory, Repeatable
<b>Order:</b>	BLPINPUT keywords must appear before the BLPGROUP keywords  The order of the BLPINPUT records and their associated buoyant lines (as defined on the BLPGROUP keywords and linked through the BLPGrpIDs) must be in the same order as the lines on the SO LOCATION records

where the parameters are defined as follows (the order shown is the same as the input in BLP with the variable names used in BLP shown in parentheses):

- BLPGrpID: buoyant line group ID,
- Blavgblen (L): average building length (m),
- Blavgbhgt (HB): average building height (m),
- Blavgbwid (WB): average building width (m),
- Blavglwid (WM): average line source width (m) (of the individual lines),
- Blavgbsep (DX): average building separation (m) (between the individual lines),
- Blavgfprm (FPRIME): average buoyancy parameter ( $m^4/s^3$ ).



When multiple buoyant line groups are in a model run, the order of the individual buoyant lines associated with the BLPINPUT keywords (as defined on the BLPGROUP keywords and linked via the

BLPGrpIDs) in the control file must be in the order of the individual buoyant lines defined by the SO LOCATION keywords. For example, assume a model run consists of SO LOCATION records for a 3-line buoyant line group followed by the SO LOCATION records for a 2-line buoyant line group (i.e., five total individual buoyant lines in two BL groups). The BLPINPUT records for the 3-line group must be specified before the BLPINPUT record for the 2-line group in the control file. If they are in the opposite order, AERMOD will issue an error message and fail to run.

The user should use caution in defining the average buoyancy parameter (FPRIME) above. This parameter should be calculated as in Equation 2-47 of the BLP user guide (Schulman and Scire, 1980), also shown below. The FPRIME parameter is dependent on BUOYLINE parameters listed above and additional source parameters that are not input to AERMOD such as the line source exit velocity and difference in exit and ambient temperatures.

$$FPRIME = \frac{g L W_m w (T_s - T_a)}{T_s}$$

Where:

FPRIME = average line source buoyancy parameter (m<sup>4</sup>/s<sup>3</sup>)

g = acceleration of gravity (9.81 m/s<sup>2</sup>)

L = line source length (m)

W<sub>m</sub> = line source width (m)

w = exit velocity (m/s)

T<sub>s</sub> = exit temperature (°K)

T<sub>a</sub> = ambient air temperature (°K)

Selection and computation of FPRIME should be done with caution and sufficiently justified before being used in an AERMOD BUOYLINE application. Also note, FPRIME should be computed for each line in a BUOYLINE and averaged for all lines in a BUOYLINE source and source group, as suggested in the BLP user guide (Schulman and Scire, 1980).

The BLPGROUP keyword associates one or more individual buoyant lines with a buoyant line group and a corresponding BLPINPUT keyword. To process two or more buoyant line sources this keyword is mandatory; for modeling a single buoyant line source the keyword is optional, i.e., when omitted all individual lines are treated as a single buoyant line source.

Syntax:	SO BLPGROUP BLPGrpID SrcID (or SrcRng) or SO BLPGROUP <u>ALL</u>
Type:	Mandatory, Repeatable
Order:	BLPGROUP keywords must appear after the BLPINPUT keywords

where BLPGrpID identifies a group individual buoyant lines to be treated as a single buoyant line source and the Srcid or Srcrng identifies the group of buoyant lines to be included in the BLP group. As with the SO SRCGROUP card, individual source IDs and source ranges may be used on the same record, and if more than one input record is needed to define the sources for a particular BLP group, then additional records may be input by repeating the pathway, keyword and BLPGrpID. A user can also specify a BLPGrpID of ALL, which means that all the individual line sources are to be treated as a single buoyant line source. There must be one, and only one, associated BLPINPUT record for BLPGrpID ALL. Another constraint for the BLPGROUP keyword is that a buoyant line source cannot be associated with more than one BLPGrpID. When using buoyant line sources in event processing the BLPGRP ID must be equivalent to the SRCGROUP ID, and the source IDs in each must be the same.

**Note: The secondary keyword, ALL, is used in different source grouping contexts (e.g., BLPGROUP, SRCGROUP, OLMGROUP). Refer to the appropriate section of this user’s guide to see the usage of the secondary keyword, ALL, for the group of sources to be identified. For SRCGROUP see Section 3.3.15. For OLMGROUP, see Section 3.3.6.2.**

### 3.3.2.12 SWPOINT source inputs

The SWPOINT source type has been added beginning with version 22112 as a research tool to further study the phenomena researchers have coined as “sidewash” which is a lateral shift of the building wake cavity that forms on the lee side a building that occurs when the wind is oblique to one of the longer sides of an elongated building. Yang et al. (2020) investigated the flow structures and concentration fields under oblique wind conditions. A key finding was that the flow is not only entrained downward (downwash) but also directed by the oblique wind along the building leeward surface (sidewash), which creates a sidewash-downwash (S-D) vortex. This S-D vortex causes the plume to shift in the lateral direction. The use of the SWPOINT source type requires the non-regulatory ALPHA flag to be entered as a model option with the MODELOPT keyword on the CO pathway. The syntax, type and order for the SRCPARAM cards for a SWPOINT source are summarized below:

<b>Syntax:</b>	SO SRCPARAM Srcid Swemis Stkhgt Bw Bl Bh Ba
<b>Type:</b>	Optional, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each line input

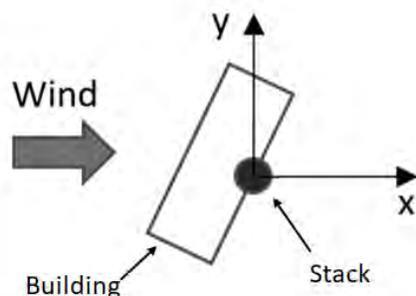
where the Srcid parameter is the same source ID that was entered on the LOCATION card for a particular SWPOINT source, and the other parameters are as follows:

Swemis	Sidewash point source emission rate in g/s,
Stkhgt	Release height above ground in meters,
Bw	Building width in meters,
Bl	Building length in meters,
Bh	Building height in meters, and
Ba	Building angle in decimal degrees measured clockwise where north is 0 degrees.

As a research tool, the SWPOINT source has a number of limitations in the implementation in version 23132 that need to be highlighted for the user who uses the SWPOINT source type to investigate and study the sidewash effect. These limitations include the following:

- Produces downwind concentrations from short stacks assumed to be centered along the leeward side of elongated buildings. Refer to Figure X below for an illustration of the assumed stack location with respect to the building and wind flow orientation.
- Model concentrations are limited to the building wake cavity. Impacts at receptors outside or in the transition zone from the building wake cavity are not calculated.
- Terrain impacts are not considered.
- Plume rise due to mechanical and thermal buoyancy is not considered.
- Building representation is assumed to be rectangular.
- PRIME downwash is not applied.
- SWPOINT sources have not been configured for use with EVENT processing, NO<sub>x</sub>-to-NO<sub>2</sub> conversion methods, or the MAXDCONT source culpability processing.

- Stack top wind speeds below approximately 2 m/s have been shown to cause anomalously high concentrations. This parameter is quite sensitive and currently can shift from reasonable predicted concentrations to values several orders of magnitude with the adjustment of a few tenths of a meter per second.



**Figure 3-4. Fixed Stack location with respect to Building and Wind Flow Orientation**

### 3.3.3 Specifying gas deposition parameters

#### 3.3.3.1 Source parameters for gas deposition (dry and/or wet)

The input of source parameters for dry and wet deposition of gaseous pollutants is controlled by the GASDEPOS keyword on the SO pathway. The gas deposition variables may be input for a single source or may be applied to a range of sources.

The syntax, type, and order for the GASDEPOS keyword are summarized below:

<b>Syntax:</b>	SO GASDEPOS Srcid (or Srcrng) Da Dw rcl Henry
<b>Type:</b>	Optional, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

where the Srcid or Srcrng identify the source or sources for which the inputs apply, the parameter Da is the diffusivity in air for the pollutant being modeled ( $\text{cm}^2/\text{s}$ ), Dw is the diffusivity in water for the pollutant being modeled ( $\text{cm}^2/\text{s}$ ), rcl is the cuticular resistance to uptake by lipids for individual leaves ( $\text{s}/\text{cm}$ ), and Henry is the Henry's Law constant ( $\text{Pa m}^3/\text{mol}$ ). Values of the physical parameters for several common pollutants may be found in the appendices to the ANL report (Wesely, et. al, 2002).

As of version 21112, optional default gas deposition parameters (Da, Dw, rcl, Henry) are included for elemental mercury, divalent mercury, dioxins, polycyclic aromatic hydrocarbons (PAH),  $\text{SO}_2$ , and  $\text{NO}_2$ . There are two requirements to use the default gas deposition parameters. First, the POLLUTID keyword

must be set to a specific value, depending on the pollutant (see below). Second, the deposition parameter must be set to a value of 0 in the GASDEPOS keyword. If each parameter is to be a default value, a 0 must be entered for each parameter. The user can also specify a mix of default versus user-entered parameters. For example, the user can specify a value for diffusivity in air with the user entered value and a default value of diffusivity in water by entering a 0. If any default values are used for a particular source, the user will receive a message in the ERRORFIL.

The pollutants, POLLUTID, and default gas deposition parameters used are:

<b>Pollutant</b>	<b>POLLUTID</b>	<b>Diffusivity in air (Da)</b>	<b>Diffusivity in water (Dw)</b>	<b>Cuticular resistance (rcI)</b>	<b>Henry's Law (Henry)</b>
Elemental Mercury	HG0	0.055	6.4E-6	100000	719
Divalent Mercury	HGII	0.045	5.2E-6	100000	0.000072
Dioxin (as TCDD)	TCDD	0.05196	4.39E-6	9.67	1.46
PAH (as BaP)	BAP	0.0513	4.44E-6	0.441	0.046
SO <sub>2</sub>	SO2	0.1122	1.83E-5	732	72
NO <sub>2</sub>	NO2	0.1361	1.4E-5	12000	8444

Note, that for elemental mercury, the third character of the POLLUTID is a zero, not a capital O. The POLLUTID for SO<sub>2</sub> and NO<sub>2</sub> contains a capital O and not a zero.

### 3.3.3.2 Option for specifying the deposition velocity for gas dry deposition

An optional keyword is available on the Control (CO) pathway to allow the user to specify the dry deposition velocity for gaseous emissions. A single dry deposition velocity can be input for a given model run and is used for all sources of gaseous pollutants. Selection of this option will by-pass the algorithm for computing deposition velocities for gaseous pollutants and should only be used when sufficient data to run the algorithm are not available. Results of the AERMOD model based on a user-specified deposition velocity should be used with extra caution.

The syntax and type of the GASDEPVD keyword are summarized below:

<b>Syntax:</b>	CO GASDEPVD Uservd
<b>Type:</b>	Optional, Non-repeatable

where the parameter Uservd is the gaseous dry deposition velocity (m/s). A non-fatal warning message is generated by the model if a value of Uservd greater than 0.05 m/s (5 cm/s) is input by the user. When the GASDEPVD keyword is used, the GDSEASON, GDLANUSE, and GASDEPRF keywords for the CO pathway, and the GASDEPOS keyword for the SO pathway, are no longer applicable and cannot be used in the same model run. As a result, gas wet deposition processes (DEPOS, WDEP, and WETDPLT) cannot be simulated with the GASDEPVD option is used.

### 3.3.4 Specifying source parameters for particle deposition

The AERMOD model includes two methods for handling dry and/or wet deposition of particulate emissions. Method 1 is used when a significant fraction (greater than about 10 percent) of the total particulate mass has a diameter of 10 µm or larger, or when the particle size distribution is known. The particle size distribution must be known reasonably well in order to use Method 1. Method 2 may be used when the particle size distribution is not well known and when a small fraction (less than 10 percent of the mass) is in particles with a diameter of 10 µm or larger. The deposition velocity for Method 2 is calculated as the weighted average of the deposition velocity for particles in the fine mode (i.e., less than 2.5 µm in diameter) and the deposition velocity for the coarse mode (i.e., greater than 2.5 µm but less than 10 µm in diameter). As described in Section 3.2.2.2, use of the Method 2 option is considered a non-DEFAULT option and cannot be used when the DEFAULT keyword is specified.

#### 3.3.4.1 Specifying particle inputs for Method 1

The input of source variables for particle deposition using Method 1 is controlled by three keywords on the SO pathway, PARTDIAM, MASSFRAX, and PARTDENS. These inputs are comparable to the particulate inputs used in the ISCST3 model (EPA,1995a). The particle variables may be input for a single source or may be applied to a range of sources.

The syntax, type and order for these three keywords are summarized below:

<b>Syntax:</b>	SO PARTDIAM Srcid (or Srcrng) Pdiam(i), i=1,Npd SO MASSFRAX Srcid (or Srcrng) Phi(i), i=1,Npd SO PARTDENS Srcid (or Srcrng) Pdens(i), i=1,Npd
<b>Type:</b>	Optional, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

where the Srcid or Srcrng identify the source or sources for which the inputs apply, and where the Pdiam array consists of the mass-mean aerodynamic particle diameter (microns) for each of the particle size categories, the Phi array is the corresponding mass fractions (between 0 and 1) for each of the categories, and the Pdens array is the corresponding particle density (g/cm<sup>3</sup>) for each of the categories.

The number of particle size categories for a particular source is Npd. The user does not explicitly tell the model the number of categories being input, but if continuation cards are used to specify particle size variables, all inputs of a keyword for a particular source or source range must be contiguous, and the number of categories must agree for each of the three keywords input for a particular source. As many continuation cards as needed may be used to define the inputs for a particular keyword. The model checks the inputs to ensure that the mass fractions sum to 1.0 (within 2 percent) for each source input and issues a warning message if that range is exceeded. The model also ensures that mass fractions for each particle size category are within the proper range (between 0 and 1), and issues fatal error messages for any value exceeded that range.

#### 3.3.4.2 Specifying particle inputs for Method 2

The Method 2 particle information is input through the METHOD\_2 keyword on the SO pathway. The syntax, type, and order for the METHOD\_2 keyword are summarized below:

<b>Syntax:</b>	SO METHOD_2 Srcid (or Srcrng) FineMassFraction Dmm
<b>Type:</b>	Optional, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

where the Srcid or Srcrng identify the source or sources for which the inputs apply, the parameter FineMassFraction is the fraction (between 0 and 1) of particle mass emitted in the fine mode, less than 2.5 microns, and Dmm is the representative mass-mean aerodynamic particle diameter in microns. Estimated values of fine particle fractions and mass mean diameters for various pollutants are provided in Appendix B of the ANL report (Wesely, et al, 2002).

As of version 21112, optional default Method 2 particle deposition parameters (FineMassFraction and Dmm) are included for arsenic, cadmium, lead, mercury, and polycyclic aromatic hydrocarbons (PAH). There are two requirements to use the default Method 2 particle deposition parameters. First, the POLLUTID keyword must be set to a specific value, depending on the pollutant (see below). Second, the deposition parameter must be set to a value of 0 in the METHOD\_2 keyword. If each parameter is to be a default value, a 0 must be entered for each parameter. The user can also specify a mix of default versus user-entered parameters. For example, the user can specify a value for fine mass fraction with the user entered value and a default value of mean particle diameter by entering a 0. If any default values are used for a particular source, the user will receive a message in the ERRORFIL.

The pollutants, POLLUTID, and default Method 2 particle deposition parameters used are:

Pollutant	POLLUTID	Fine mass fraction	Mean particle diameter (Dmm)
Arsenic	AS	0.75	0.5
Cadmium	CD	0.70	0.6
Lead	PB	0.75	0.5
Mercury	HG	0.80	0.4
PAH (as POC)	POC	0.90	0.1

### 3.3.5 Specifying Emission and Output Units

Since the AERMOD model allows for both concentration and deposition to be output in the same model run, the EMISUNIT keyword (see Section 3.3.13) cannot be used to specify emission unit factors if more than one output type is being generated. The AERMOD model therefore allows for concentration and deposition units to be specified separately through the CONCUNIT and DEPOUNIT keywords, respectively. The syntax and type of the CONCUNIT keyword are summarized below:

<b>Syntax:</b>	SO CONCUNIT Emifac Emilbl Conlbl
<b>Type:</b>	Optional, Non-repeatable

where the parameter Emifac is the factor to convert emission rate input units to the desired output units, Emilbl is the label for the emission input units (up to 40 characters), and Conlbl is the output unit label (up to

40 characters) for concentration calculations. The default conversion is from g/s to  $\mu\text{g}/\text{m}^3$  and the value is  $1 \times 10^6$ . The conversion from g/s to  $\text{mg}/\text{m}^3$  would simply be  $1 \times 10^3$  and the conversion from g/s to ppb is simply the grams/ $\text{m}^3$  to ppb conversion factor for the pollutant. The syntax and type of the DEPUNIT keyword are summarized below:

<b>Syntax:</b>	SO DEPUNIT Emifac Emilbl Deplbl
<b>Type:</b>	Optional, Non-repeatable

where the parameter Emifac is the factor to convert emission rate input units to the desired output units, Emilbl is the label for the emission input units (up to 40 characters), and Deplbl is the output unit label (up to 40 characters) for deposition calculations. The default conversion is g/s to  $\text{g}/\text{m}^2$  and the value is 3600. To convert to units such as  $\text{ng}/\text{m}^2$ , the conversion would be  $3.6 \times 10^{12}$  ( $3600 * 1 \times 10^9$ ) where  $1 \times 10^9$  is the conversion from g to nanograms.

### 3.3.6 Source input parameters for NO<sub>2</sub> conversion options

It should be noted that not all NO<sub>2</sub> conversion options have been implemented for all source types in AERMOD. Table 3-2 summarizes which NO<sub>2</sub> conversion options have been implemented for each of the AERMOD source types and which options have not.

#### 3.3.6.1 Specifying in-stack NO<sub>2</sub>/NO<sub>x</sub> ratios by source for PVMRM, OLM, TTRM/TTRM2, and GRSM

As noted above, the PVMRM, OLM, TTRM/TTRM2, and GRSM options for modeling NO<sub>2</sub> conversion require in-stack NO<sub>2</sub>/NO<sub>x</sub> ratios to be specified for each source, i.e., AERMOD no longer assumes a default in-stack ratio of 0.10 for the OLM option. The user can specify in-stack NO<sub>2</sub>/NO<sub>x</sub> ratios through the optional NO2RATIO keyword on the SO pathway. The syntax of the NO2RATIO keyword is as follows:

<b>Syntax:</b>	SO NO2RATIO SrcID or SrcRange NO2Ratio
<b>Type:</b>	Optional, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

where the SrcID or SrcRange identify the source or sources for which the inputs apply, and where the NO2Ratio parameter specifies the in-stack ratio. In this way, the user can specify a single in-stack NO<sub>2</sub>/NO<sub>x</sub> ratio for a group of stacks. For example, the following input:

SO NO2RATIO STACK1-STACK10 0.15
---------------------------------

will apply the in-stack ratio of 0.15 to sources with IDs falling within the range STACK1 to STACK10. Any value specified on the SO NO2RATIO card will override the default ratio, if any, specified on the CO NO2STACK card. Users should note that while SO NO2RATIO is an optional keyword, the PVMRM and OLM options require the user to specify an in-stack NO<sub>2</sub>/NO<sub>x</sub> ratio for each source, using either the CO NO2STACK (Section 3.2.5.4) or SO NO2RATIO cards, or both.

### 3.3.6.2 Specifying combined plumes for OLM

The OLM option for modeling NO<sub>2</sub> conversion includes an option for specifying which sources are to be modeled as combined plumes, i.e., where the NO<sub>x</sub> within the plumes competes for the available ambient ozone. Sources which are not specified for modeling as combined plumes will be modeled as individual plumes, i.e., where all of the ambient ozone is available for conversion of NO to NO<sub>2</sub>. The selection of individual or combined plume option for OLM is specified through the OLMGROUP keyword on the SO pathway. The syntax of the OLMGROUP card is as follows:

<b>Syntax:</b>	SO OLMGROUP OLMGrpID SrcID's and/or SrcRange's or SO OLMGROUP <u>ALL</u>
<b>Type:</b>	Optional, Repeatable (except for OLMGROUP ALL)
<b>Order:</b>	Must follow the LOCATION card for each source input; OLMGROUP ALL must follow the LOCATION card for all sources

where OLMGrpID identifies a group to be treated as a combined plume with OLM, and the SrcID's and/or SrcRange's identify the sources to be included in the OLM group. As with the SO SRCGROUP card, individual source IDs and source ranges may be used on the same record, and if more than one input card is needed to define the sources for a particular OLM group, then additional records may be input by repeating the pathway, keyword and OLM group ID. A user can also specify an OLMGrpID of ALL, which means that OLM will be applied on a combined plume basis to all sources. However, unlike the SO SRCGROUP card, the results will not be output for a specific OLM group unless the same group of sources is also identified on a SRCGROUP card. Another constraint for the OLMGROUP keyword is that a source cannot be included in more than one OLM group.

**Note: The secondary keyword, ALL, is used in different source grouping contexts (e.g., BLPGROUP, SRCGROUP, OLMGROUP). Refer to the appropriate section of this user's guide to see**

**the usage of the secondary keyword, ALL, for the group of sources to be identified. For SRCGROUP see Section 3.3.15. For BLPGROUP, see Section 3.3.2.11.**

If a source is not selected for an OLMGROUP card, then OLM will be applied to that source as an individual plume. Other than the similarity in syntax, there is no connection in the model between the groups defined on the OLMGROUP card and groups defined on the SRCGROUP card. The OLMGROUP card relates to how the results are processed within the model for the OLM option, and the SRCGROUP card simply controls how source impacts are grouped in the model outputs.

If the user identifies one or more groups of sources to apply OLM on a combined plume basis using the OLMGROUP card, the model will still need to calculate the concentration for individual plumes within the OLM group in order for the model to sum the results for the sources listed on the SRCGROUP card(s). The individual source concentrations are calculated by applying the ratio of the combined concentration for the OLM group with and without OLM to each source within the OLM group.

### 3.3.6.3 Specifying ambient NO<sub>2</sub>/NO<sub>x</sub> ratios for the ARM2 option

The ARM2 option in AERMOD is based on applying an ambient ratio of NO<sub>2</sub>/NO<sub>x</sub> to a modeled NO<sub>x</sub> concentration to estimate ambient NO<sub>2</sub> concentrations. The ARM2 option applies an ambient ratio to the 1-hr modeled NO<sub>x</sub> concentrations based on a formula derived empirically from ambient monitored ratios of NO<sub>2</sub>/NO<sub>x</sub>. The default upper and lower limits on the ambient ratio applied to the modeled NO<sub>x</sub> concentration are 0.9 and 0.5, respectively. These limits can be modified using the optional ARMRATIO on the CO pathway as follows:

<b>Syntax:</b>	CO ARMRATIO ARM2_Min ARM2_Max
<b>Type:</b>	Optional, Non-Repeatable

When the regulatory DFAULT keyword is included on the MODELOPT line, the allowed range for the ARM2 ratio represented by ARM2\_Min and ARM2\_Max is 0.5 to 0.9, respectively. When the DFAULT keyword is not included, the allowed range is extended to a lower limit greater than 0 to an upper limit of 1.0.

### 3.3.7 Modeling NO<sub>2</sub> increment credits with PVMRM

Due to the ozone limiting effects of the PVMRM option, the predicted concentrations of NO<sub>2</sub> are not linearly proportional to the emission rate. Therefore, the approach of modeling NO<sub>2</sub> increment consumption with PSD credits through the use of a negative emission rate for credit sources cannot be used with the PVMRM option. However, the ALPHA PSDCREDIT option allows modeling PSD increment credits for NO<sub>2</sub> when the PVMRM option is specified. The PSDCREDIT option is currently implemented as an ALPHA option and requires that the PVMRM and ALPHA options be specified on the CO MODELOPT card (see Section 3.2.2). **As an ALPHA option, PSDCREDIT requires additional testing and evaluation before it should be considered for use in a regulatory application.** The PSDCREDIT option utilizes a the PSDGROUP keyword, described below, to identify which sources consume or expand increment. This option is not valid if the OLM, TTRM/TTRM2, or GRSM option is specified, and no comparable option is available for modeling increment credits with the any of those options. The user should check with the appropriate reviewing authority for further guidance on modeling increment credits for NO<sub>2</sub>.

A general discussion of concepts related to modeling increment consumption is provided below, followed by a description of inputs required to use the ALPHA PSDCREDIT option for PVMRM.

#### 3.3.7.1 Increment consuming and baseline sources

Increment is the maximum allowable increase in concentration of a pollutant above a baseline concentration for an area defined under the Prevention of Significant Deterioration (PSD) regulations. The PSD baseline area can be an entire State or a subregion of a State such as a county or group of counties. Increment consumption is the additional air quality impact above a baseline concentration.

The baseline concentration is the ambient concentration of the pollutant that existed in the area at the time of the submittal of the first complete permit application by any source in that area subject to PSD regulations. A baseline source is any source that existed prior to that first application and the baseline date is the date of the PSD application. This baseline date is referred to as the minor source baseline date in PSD regulations. By definition, baseline sources do not consume increment. However, any baseline source that retires from service after the baseline date expands the increment available to new sources. Therefore, a PSD modeling analysis performed for a new source may need to account for this increment expansion. Such an analysis may therefore involve identification of three groups of sources: 1) increment-consuming sources; 2) retired (increment-expanding) baseline sources; and 3) existing, non-retired, baseline sources.

### 3.3.7.2 Calculating increment consumption under the PSDCREDIT option

Calculating increment consumption under the PSDCREDIT option in AERMOD is not a simple arithmetic exercise involving the three groups of sources defined above. Since the amount of ozone available in the atmosphere limits the conversion of NO to NO<sub>2</sub>, interactions of plumes from the existing and retired baseline sources with those from the increment consuming sources must be considered as part of the calculation of net increment consumption. Without the PSDCREDIT option, properly accounting for the potential interaction of plumes among the different source categories would require post-processing of results from multiple model runs. Internal “post”-processing algorithms have been incorporated in AERMOD under the PSDCREDIT option to account for the apportioning of the three groups of sources to properly calculate increment consumption from a single model run.

Define the following three source groupings for the discussion that follows:

- A** = increment-consuming sources;
- B** = non-retired baseline sources; and
- C** = retired baseline, increment-expanding sources.

The calculation of the amount of increment consumption by the **A** sources cannot simply be estimated by modeling the **A** sources alone because of the possible interaction of those plumes with the plumes from **B** sources. The PVMRM algorithm is designed to account for such plume interactions and calculate the total NO to NO<sub>2</sub> conversion in the combined plumes based on the amount of ozone available. Therefore, the total increment consumption by the **A** sources is given by the difference between (1) the total future impact of increment consuming sources and non-retired baseline sources (**A+B**) and (2) the total current impact (**B**), which can be expressed as  $(\mathbf{A+B}) - (\mathbf{B})$ . Here (**A+B**) represents the value that would be compared against the National Ambient Air Quality Standard (NAAQS) for NO<sub>2</sub> during PSD review of the **A** sources.

In a case where some of the baseline sources have been retired from service (**C** sources), the PSD regulations allow the consideration of increment expansion when assessing compliance with the PSD increment. However, the amount of increment expansion cannot be estimated by simply modeling the **C** sources alone because of the possible interaction of those plumes with the plumes from **B** sources. Therefore, the total increment expansion, i.e., PSD credit, is calculated as the difference between (1) the total impact prior to the retirement of **C** sources, i.e., (**B+C**), and (2) the total impact from existing (non-retired) baseline sources (**B**), which can be expressed as  $(\mathbf{B+C}) - (\mathbf{B})$ .

Finally, the net increment consumption is given by the difference between total increment consumption and the total increment expansion, or

$$[(\mathbf{A}+\mathbf{B}) - (\mathbf{B})] - [(\mathbf{B}+\mathbf{C}) - (\mathbf{B})] \quad \text{(Equation 1)}$$

Note that in the absence of any increment expansion, the net increment consumption is equal to the total increment consumption  $[(\mathbf{A}+\mathbf{B}) - (\mathbf{B})]$ , as described above.

These expressions of net increment consumption and expansion cannot be interpreted as algebraic equations. Instead, the terms within parentheses represent the results of separate model runs that account for the combined effects of NO<sub>x</sub> conversion chemistry on specific groups of sources. The expression shown in Equation 1 above represents four model simulations:  $(\mathbf{A}+\mathbf{B})$ ,  $(\mathbf{B})$ ,  $(\mathbf{B}+\mathbf{C})$ , and  $(\mathbf{B})$  again. In this case, the two  $(\mathbf{B})$  terms do cancel each other, and we are left with:

$$[(\mathbf{A}+\mathbf{B})] - [(\mathbf{B}+\mathbf{C})] \quad \text{(Equation 2)}$$

The expression presented in Equation 2 summarizes how the net increment consumption calculation is performed under the PSDCREDIT option. Under this option, AERMOD first models the **A** and **B** groups together, then models the **B** and **C** groups together, and finally computes the difference to obtain the desired result, i.e., the value to compare to the PSD increment standard. For AERMOD to perform the special processing associated with this option, the user must define which sources belong to each of the groupings defined above. The next section describes how this is accomplished.

### 3.3.7.3 Specifying source groups under the PSDCREDIT option

The PSDCREDIT option introduces limitations on grouping sources to calculate increment consumption as described in the previous section. A new keyword, PSDGROUP, is used to group the sources to correctly calculate the increment consumption. The syntax, type, and order are similar to the regular SRCGROUP keyword and are summarized below:

<b>Syntax:</b>	SO PSDGROUP Grpid Srcid's and/or Srcrng's
<b>Type:</b>	Mandatory for PSDCREDIT option, Repeatable
<b>Order:</b>	Must follow the last keyword in the SO pathway before FINISHED

If the PSDCREDIT model option is specified, the PSDGROUP keyword must be used. The SRCGROUP keyword cannot be used with the PSDCREDIT option since results from other groupings beyond these three do not have any meaning when the PSDCREDIT option is invoked, and sources are allocated to the calculation of increment consumption. Special source groups for outputting model results are defined within AERMOD for the PSDCREDIT option, as described in the next section.

Only the following special PSD group ID's can be used. Failure to use these group ID's will result in a fatal error message during setup processing by AERMOD. The group ID's are:

- INCRCONS – increment-consuming sources (group **A** above); these can be new sources or modifications to existing sources;
- NONRBASE – existing, non-retired baseline sources (group **B** above); and
- RETRBASE – retired (increment-expanding or PSD credit) baseline sources (group **C** above).

It is important to note that the source emission inputs for sources included in the RETRBASE PSD group must be entered as positive numbers, unlike other types of PSD credit modeling where negative emissions are input to simulate the impact of the credit sources on the increment calculation. The increment-expanding contribution from RETRBASE sources is accounted for within the AERMOD model under the PSDCREDIT option.

The group ID's can appear in any order, but these are the only three that can be specified. If there are no retired baseline sources (i.e., no baseline sources are retired), the keyword RETRBASE can be omitted. Likewise, if there are no non-retired baseline sources (i.e., all baseline sources have been retired), the NONRBASE keyword can be omitted. The special group ID 'ALL' that can be used with the SRCGROUP keyword **cannot** be used with the PSDGROUP keyword. As with the SRCGROUP keyword for non-PSDCREDIT applications, the group IDs are repeatable, and they must be the last keyword before FINISHED on the SO pathway when the PSDCREDIT option is specified.

Source ranges, which are described in more detail in Section 3.3.9, are input as two source IDs separated by a dash, e.g., STACK1-STACK10. Individual source IDs and source ranges may be used on the same card. If more than one input card is needed to define the sources for a particular group, then additional cards may be input, repeating the pathway, keyword and group ID. A source can appear in only one of these source groups and must be assigned to one of the groups.

The requirements for specifying sources and source groups under the PSDCREDIT option are summarized below:

- The SRCGROUP keyword cannot be used with the PSDCREDIT option;
- Special PSD group ID's must be used with the PSDGROUP keyword;
- The group ID ALL is not allowed when the PSDCREDIT option is specified;
- A source must appear in one, and only one, of the PSDGROUPs; and
- Emission rates for increment-expanding (RETRBASE) sources must be entered as positive values.

#### 3.3.7.4 Model outputs under the PSDCREDIT option

Unlike the regular SRCGROUP keyword, the PSDGROUP keyword does not define how the source impacts are grouped for model output. As described in the previous sections, the PSDGROUP keyword defines the different categories of sources needed, in order to properly account for NO<sub>x</sub> conversion chemistry under the PVMRM option.

The model outputs under the PSDCREDIT option in AERMOD are based on demonstrating compliance with the air quality standards, i.e., the NAAQS and PSD increment for NO<sub>2</sub>. As a result, AERMOD uses hardcoded "SRCGROUP" names of 'NAAQS' and 'PSDINC' to label these two types of outputs. The results output under the 'NAAQS' source group label are based on the calculation of (A+B) as described above in Section 3.3.7.2. The results reported under the 'PSDINC' source group label are based on the expression presented above in Equation 2.

#### 3.3.8 Background concentrations

Beginning with version 11059, users can specify uniform or temporally varying background concentrations using the BACKGRND keyword on the SO pathway and beginning with version 13350 users can vary background concentrations by wind sector. Background concentrations can be included with any source group to estimate cumulative ambient impacts. Background concentrations can be specified using a range of options, similar to those available with the EMISFACT keyword for source emissions, or on an hourly basis from a separate data file.

### 3.3.8.1 Defining background concentration sectors

For applications where multiple ambient monitors outside of the modeling domain are available and representative of background concentrations within the modeling domain depending on the wind direction, the user may define sector-varying background concentrations. The sectors are defined based on the SO BGSECTOR keyword, as follows:

<b>Syntax:</b>	SO BGSECTOR StartSect1 StartSect2 . . . StartSectN, where $N \leq 6$
<b>Type:</b>	Optional, Non-Repeatable

3.3.8.2 For applications that include sector-varying background concentration the minimum sector width allowed is 30 degrees and warning messages will be issued for sector widths less than 60 degrees. Sector-varying background concentrations will be selected based on the flow vector, i.e., the downwind direction, based on the wind direction specified in the surface meteorological data file. During periods of specific wind directions, the associated user input sector-varying background concentrations will be applied to the entire modeling domain (i.e., all receptors). Specifying the background concentration

For applications that do not include sector-varying background concentrations, the syntax of the BACKGRND keyword is as follows:

<b>Syntax:</b>	SO BACKGRND BGflag BGvalue(i), $i=1,n$ and/or SO BACKGRND <u>HOURLY</u> BGfilnam (BGformat)
<b>Type:</b>	Optional, Repeatable

where the BGflag parameter is the variable background concentration flag, BGvalue is the array of background concentration values associated with BGflag, HOURLY indicates use of an hourly background file, BGfilnam is the filename for the hourly background data, and BGformat is the optional Fortran format of the hourly background file ('free' format is used by default). The BGfilnam can be up to 200 characters in length based on the default parameters in AERMOD. Double quotes (") at the beginning and end of the filename can also be used as field delimiters to allow filenames with embedded spaces.

For applications that include sector-varying background concentrations, the syntax of the BACKGRND keyword is as follows:

<b>Syntax:</b>	SO BACKGRND SECTx BGflag BGvalue(i), $i=1$ , and $x \leq 6$ and/or SO BACKGRND SECTx <u>HOURLY</u> BGfilnam (BGformat), where $x \leq 6$
----------------	---

<b>Type:</b> Optional, Repeatable
-----------------------------------

where the SECTx parameter identifies the applicable sector as defined on the SO BGSECTOR keyword. Implement as SECT1 or SECT2 ...or SECTx where  $x \leq 6$ , and x is an integer and corresponds to the Nth sector defined by BGSECTOR. The other parameters are as defined above.

The HOURLY background file must include the year, month, day, and hour, followed by the background concentration, in that order (unless specified differently through the BGformat parameter). The year can be specified as either a 2-digit or 4-digit year. If an optional Fortran format is specified using the BGformat parameter, the year, month, day, and hour variables must be read as integers using the Fortran I format, and the background concentration must be read as a real variable, using the Fortran F, E, or D format, e.g., (4I2,F8.3). Note that background values that do not include decimal places can be read as Fx.0, where x is the length of the data field. The BGformat parameter must include the open and close parentheses as shown in the example and may also include embedded spaces if double quotes (“”) are used to delimit the field. A warning message will be generated if the specified format does not meet these requirements, and AERMOD may also issue a fatal error message when reading the file in cases where real variables are read with an integer format, or vice versa.

If the optional BGformat parameter is missing, then the model will read the background data using a Fortran ‘free’ format, i.e., assuming commas or spaces separate the data fields, and that the fields are in the order given above. The date sequence in the background data file must also match the date sequence in the hourly meteorological data files.

Note that the HOURLY option and an option to specify values based on the BGflag parameter can both be specified in the same model run. This allows the user to specify background concentrations on a temporally varying basis, such as SEASHR, that can be used to substitute for missing values in an hourly background file. **NOTE: AERMOD will issue a fatal error message and abort processing if missing data are encountered in an HOURLY background file unless the user provides other temporally varying background concentrations (e.g., SEASHR, etc.) to substitute for missing data.** Background concentration units can be specified using the BACKUNIT keyword, described below. If the BACKUNIT keyword is omitted, default units of PPB are assumed for background NO<sub>2</sub> and SO<sub>2</sub>, PPM for CO, and UG/M3 for all other pollutants. Background concentrations specified in units of PPB or PPM are converted to UG/M3 based on reference temperature (25 C) and pressure (1013.25 mb).

To include background concentrations with a particular source group, the reserved “source ID” of BACKGROUND (or BACKGRND) can be included on the SRCGROUP keyword, including source group ALL. **NOTE: AERMOD will NOT automatically include background concentrations in source group ALL, but the user can specify that background be included in results for group ALL by including the BACKGROUND (or BACKGRND) keyword after ‘ALL’ on the SRCGROUP keyword.** Users can also include the NOBACKGROUND (or NOBACKGRND) keyword after ‘ALL’ on the SRCGROUP keyword to explicitly indicate that BACKGROUND is NOT included with group ‘ALL.’ The contribution of background concentrations can also be tracked separately by including a source group with BACKGROUND as the only “source ID.” **NOTE: The source of background concentrations and the method used to incorporate background concentrations in a cumulative impact assessment involves several considerations and should be documented and justified on a case-by-case basis.**

Background concentrations specified with the BACKGRND keyword are combined with source impacts on a temporally paired basis to estimate cumulative ambient impacts. However, since modeled concentrations are not calculated for hours with calm or missing meteorological data, background concentrations are also omitted for those hours. This may result in the background contribution being lower than expected for short-term averages of 3-hours up to 24-hours for periods when the denominator used to calculate the multi-hour average is adjusted in accordance with EPA’s calms policy (see Section 8.4.6.2 of the Guideline, EPA, 2017b), which is implemented within the AERMOD model. Section 8.4.6.2 of the Guideline states:

“Model predicted concentrations for 3-, 8-, and 24-hour averages should be calculated by dividing the sum of the hourly concentrations for the period by the number of valid or non-missing hours. If the total number of valid hours is less than 18 for 24-hour averages, less than 6 for 8-hour averages, or less than 3 for 3- hour averages, the total concentration should be divided by 18 for the 24-hour average, 6 for the 8-hour average, and 3 for the 3-hour average. For annual averages, the sum of all valid hourly concentrations is divided by the number of non-calm hours during the year.”

For example, if 12 hours out of a 24-hour period are calm or missing, the calms policy dictates that the 24-hour average concentration would be based on the sum of the 12 non-calm/non-missing hours divided by 18. The contribution from background concentrations would also be based on the sum of background values for the 12 non-calm/non-missing hours, divided by 18. If background was specified as uniform during that 24-hour period, then the contribution from background would appear to be 33.3% lower than expected (i.e., 12/18).

The BGflag parameter must be specified as one of the following secondary keywords (the number in parentheses indicates the number of values required for each option):

- ANNUAL - annual background value (n=1),
- SEASON - background values vary seasonally (n=4),
- MONTH - background values vary monthly (n=12),
- HROFDY - background values vary by hour-of-day (n=24),
- WSPEED - background values vary by wind speed (n=6),
- SEASHR - background values vary by season and hour-of-day (n=96),
- HRDOW - background values vary by hour-of-day, and day-of-week [M-F, Sat, Sun] (n=72),
- HRDOW7 - background values vary by hour-of-day, and the seven days of the week [M, Tu, W, Th, F, Sat, Sun] (n=168),
- SHRDOW - background values vary by season, hour-of-day, and day-of-week [M-F, Sat, Sun] (n=288),
- SHRDOW7 - background values vary by season, hour-of-day, and the seven days of the week [M, Tu, W, Th, F, Sat, Sun] (n=672),
- MHRDOW - background values vary by month, hour-of-day, and day-of-week [M-F, Sat, Sun] (n=864), and
- MHRDOW7 - background values vary by month, hour-of-day, and the seven days of the week [M, Tu, W, Th, F, Sat, Sun] (n=2,016).

The seasons are defined in the following order: Winter (Dec., Jan., Feb.), Spring (Mar., Apr., May), Summer (Jun., Jul., Aug.), and Fall (Sep., Oct., Nov.).<sup>4</sup> The wind speed categories used with the WSPEED option may be defined using the ME WINDCATS keyword. If the WINDCATS keyword is not used, the default wind speed categories are defined by the upper bound of the first five categories as follows (the sixth category is assumed to have no upper bound): 1.54, 3.09, 5.14, 8.23, and 10.8 m/s. The BACKGRND keyword may be repeated as many times as necessary to input all of the background values and repeat values may be used for the numerical inputs, e.g., 12\*25.6 can be used to specify a value of 25.6 for 12 adjacent “cells” within the array of values.

---

4 Note that the seasons are based on northern hemisphere seasons. For applications in the southern hemisphere using the seasonal factors (SEASHR, SHRDOW, and SHRDOW7), background concentrations that would be associated with the southern hemisphere winter, for example, should be assigned to the summer seasonal background concentrations input to AERMOD. Similarly, spring southern hemisphere concentrations should be assigned to the fall season background concentrations input to AERMOD.

### 3.3.8.3 Specifying background concentration units

Background concentration units can be specified on the optional BACKUNIT keyword on the SO pathway. The syntax of the BACKUNIT keyword is as follows:

<b>Syntax:</b>	SO BACKUNIT BGUnits
<b>Type:</b>	Optional, Non-repeatable

where the BGUnits parameter specifies the units as parts-per-billion (PPB), parts-per-million (PPM), or micrograms/cubic-meter (UG/M3). Units specified on the BACKUNIT keyword are applied to HOURLY and temporally varying background values if both are included in the same model run. If the BACKUNIT keyword is omitted, default units of PPB are assumed for background NO<sub>2</sub> and SO<sub>2</sub>, PPM for CO, and UG/M3 for all other pollutants. Background

concentrations specified in units of PPB or PPM are converted to UG/M3 based on reference temperature (25 C) and pressure (1013.25 mb). NOTE: When using the BACKUNIT keyword, PPB and PPM may only be used with the NO<sub>2</sub>, SO<sub>2</sub>, and CO POLLUTID. AERMOD will issue a fatal error if PPB and PPM are used with any other pollutant types. Use micrograms/cubic-meter (UG/M3) when specifying any other pollutant type.

### 3.3.9 Specifying building downwash information

As noted above, the AERMOD model include algorithms to model the effects of buildings downwash on emissions from nearby or adjacent point sources. The building downwash algorithms do not apply to volume or area sources. For a technical description of the building downwash algorithms in AERMOD, the user is referred to Schulman, et. al. (2000). The AERMOD model uses direction-specific information for all building downwash cases.

There are five keywords that are used to specify building downwash information: BUILDHGT, BUILDWID, BUILDLN, XBADJ, YBADJ. The syntax, type and order for the BUILDHGT keyword, used to input direction specific building heights, are summarized below:

<b>Syntax:</b>	SO BUILDHGT Srcid (or Srcrng) Dsbh(i),i=1,36 (16 for LT)
<b>Type:</b>	Optional, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

where the Srcid parameter is the same source ID that was entered on the LOCATION card for a particular source. The user also has the option of specifying a range of sources (the Srcrng parameter) for which the building heights apply, instead of identifying a single source. This is accomplished by two source ID character strings separated by a dash, e.g., STACK1-STACK10. Since the model reads the source range as a single input field there must not be any spaces between the source IDs. The model then places the building heights that follow (the Dsbh(i) parameter) into the appropriate arrays for all Srcid's that fall within that range, including STACK1 and STACK10.

When comparing a source ID to the range limits for a Srcrng parameter, the model separates the source IDs into three parts: an initial alphabetical part, a numerical part, and then the remainder of the string. Each part is then compared to the corresponding parts of the source range, and all three parts must satisfy the respective ranges for the source ID to be included. If there is no numeric part, then the ID consists of only one alphabetical part. If the ID begins with a numeric character, then the initial alphabetical part defaults to a single blank. If there is no trailing alphabetical part, then the third part also defaults to a single blank part. If the trailing part consists of more than one alphabetical or numeric field, it is all lumped into one-character field. For example, the source ID 'STACK2' consists of the parts 'STACK' plus '2' plus a single trailing blank, ' '. By comparing the separate parts of the source IDs, it can be seen that STACK2 falls between the range 'STACK1-STACK10.' For a three-part example, it can also be seen that VENT1B falls within the range of VENT1A-VENT1C. However, VENT2 does not fall within the range of VENT1A to VENT3B, since the third part of VENT2 is a single blank, which does not fall within the range of A to C. This is because a blank character will precede a normal alphabetical character. Normally, the source ranges will work as one would intuitively expect for simple source names. Most importantly, for names that are made up entirely of numeric characters, the source ranges will be based simply on the relative numerical values. The user is strongly encouraged to check the summary of model inputs to ensure that the source ranges were interpreted as expected and to avoid using complex source names in ranges, such as AA1B2C-AB3A3C. Since the order of keywords within the SO pathway is quite flexible, it is also important to note that the building heights will only be applied to those sources that have been defined previously in the input file.

Following the Srcid or the Srcrng parameter, the user inputs 36 direction-specific building heights (Dsbh parameter) in meters, beginning with the 10-degree flow vector (wind blowing toward 10 degrees

from north), and incrementing by 10 degrees in a clockwise direction. Some examples of building height inputs are presented below:

```
SO BUILDHGT STACK1 34. 34. 34. 34. 34. 34. 34. 34. 34. 34. 34. 34. 34.
SO BUILDHGT STACK1 34. 34. 34. 34. 34. 34. 34. 34. 34. 34. 34. 34. 34.
SO BUILDHGT STACK1 34. 34. 34. 34. 34. 34. 34. 34. 34. 34. 34. 34. 34.

SO BUILDHGT STACK1 36*34.0

SO BUILDHGT STACK1-STACK10 33*34.0 3*0.0

SO BUILDHGT STACK1 35.43 36.45 36.37 35.18 32.92 29.66 25.50 20.56
SO BUILDHGT STACK1 15.00 20.56 25.50 29.66 32.92 35.18 36.37 36.45
SO BUILDHGT STACK1 35.43 33.33 35.43 36.45 0.00 35.18 32.92 29.66
SO BUILDHGT STACK1 25.50 20.56 15.00 20.56 25.50 29.66 32.92 35.18
SO BUILDHGT STACK1 36.37 36.45 35.43 33.33
```

The first example illustrates the use of repeat cards if more than one card is needed to input all of the values. The values are processed in the order in which they appear in the input file and are identified as being repeat cards by repeating the Srcid parameter. The first and second examples produce identical results within the model. The second one illustrates the use of a repeat value that can simplify numerical input in some cases. The field "36\*34.0" is interpreted by the model as "repeat the value 34.0 a total of 36 times." This is also used in the third example where the building height is constant for directions of 10 degrees through 330 degrees, and then is set to 0.0 (e.g., the stack may be outside the region of downwash influence) for directions 340 through 360. The third example also uses a source range rather than a single source ID. The last example illustrates building heights which vary by direction and shows that the number of values on each card need not be the same. For improved readability of the input file, the user may want to put the numerical inputs into "columns," but there are no special rules regarding the spacing of the parameters on this keyword.

The BUILDWID keyword is used to input direction-specific building widths for downwash analyses. The syntax for this keyword, which is very similar to the BUILDHGT keyword, is summarized below, along with the type and order information:

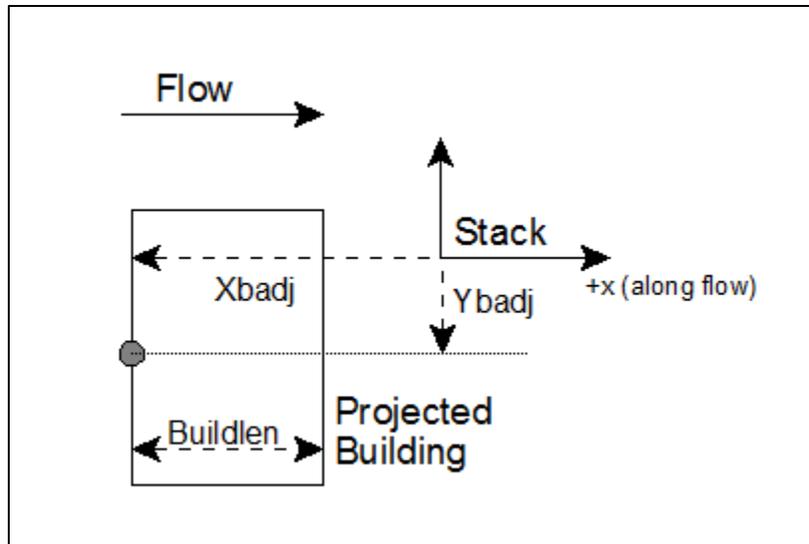
<b>Syntax:</b>	SO BUILDWID Srcid (or Srcrng) Dsbw(i),i=1,36	(16 for LT)
<b>Type:</b>	Optional, Repeatable	
<b>Order:</b>	Must follow the LOCATION card for each source input	

For a description of the Srcid and Srcrng parameters, and for a discussion and examples of the numeric input options, refer to the BUILDHGT keyword above. The Dsbw(i) parameter contains the 36 direction-specific building widths. The directions proceed in a clockwise direction, beginning with the 10-degree flow vector.

The BUILDLEN keyword is used to input direction-specific along-flow building lengths for downwash analyses. Figure 3-3 shows the relationship of the projected building to this dimension. The syntax for this keyword, which is very similar to the BUILDHGT keyword, is summarized below, along with the type and order information:

<b>Syntax:</b>	SO BUILDLEN Srcid (or Srcrng) Dsbl(i),i=1,36
<b>Type:</b>	Optional, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

For a description of the Srcid and Srcrng parameters, and for a discussion and examples of the numeric input options, refer to the BUILDHGT keyword above. The Dsbl(i) parameter contains the 36 direction-specific building lengths. The directions proceed in a clockwise direction, beginning with the 10-degree flow vector. Figure 3-3 shows the relationship of the projected building to these distances.



**Figure 3-5. Schematic Diagram Identifying New Building Data for Prime Downwash**

The XBADJ and YBADJ keywords are used to input direction-specific along-flow and across-flow distances from the stack to the center of the upwind face of the projected building, respectively. Figure 3-2 shows the relationship of the projected building to these distances. The syntax for these keywords, which is very similar to the BUILDHGT keyword, are summarized below, along with the type and order information:

<b>Syntax:</b>	SO XBADJ Srcid (or Srcrng) Xbadj(i),i=1,36
<b>Type:</b>	Optional, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

<b>Syntax:</b>	SO YBADJ Srcid (or Srcrng) Ybadj(i),i=1,36
<b>Type:</b>	Optional, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

For a description of the Srcid and Srcrng parameters, refer to the BUILDHGT keyword above. The Xbadj(i) parameter contains the 36 direction-specific along-flow distances from the stack to the center of the upwind face and the Ybadj(i) parameter contains the 36 direction-specific across-flow distances from the stack to the center of the upwind face. The directions proceed in a clockwise direction, beginning with the 10-degree flow vector.

### 3.3.10 Specifying urban sources

As discussed in Section 3.2.8, the AERMOD model allows the user to incorporate the effects of increased surface heating from an urban area on pollutant dispersion under stable atmospheric conditions. The user specifies the parameters for one or more urban areas on the CO URBANOPT card (see Section 3.2.8), and identifies which sources are to be modeled with urban effects and the urban area that will apply to each source affected using the SO URBANSRC card. If a source is not included on the URBANSRC card, it will be modeled without the urban effects. The syntax, type and order for the URBANSRC keyword are summarized below:

	<b><u>For Multiple Urban Areas:</u></b> SO URBANSRC UrbanID SrcID's and/or SrcRng's
<b>Syntax:</b>	<b><u>For Single Urban Areas:</u></b> SO URBANSRC SrcID's and/or SrcRng's or SO URBANSRC ALL (to specify all sources as URBAN)
<b>Type:</b>	Optional, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

where the UrbanID parameter is the alphanumeric urban ID (up to eight characters) defined by the user on the CO URBANOPT keyword when multiple urban areas are defined, and the SrcID's and SrcRng's are the individual source IDs and/or source ID ranges that are to be modeled with urban effects. Source ranges are described in more detail in Section 3.3.9. As with the URBANOPT keyword, the syntax of the URBANSRC keyword for applications with single urban areas has not changed from the previous version of AERMOD, so that existing input files will not require modification. However, beginning with version 12060, users can specify that all sources are to be treated as urban sources by specifying 'ALL' on the SO URBANSRC keyword for applications with a single urban area. Since the URBANSRC ALL option is identified during the pre-SETUP phase, there are no restrictions on the order of the URBANSRC ALL keyword within the SO pathway.

### 3.3.11 Specifying variable emission factors (EMISFACT)

The AERMOD model provides the option of specifying variable emission rate factors for individual sources or for groups of sources. The syntax, type and order of the EMISFACT keyword are summarized below:

<b>Syntax:</b>	SO EMISFACT SrcID or SrcRange Qflag Qfact(i), i=1,n
<b>Type:</b>	Optional, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

where the SrcID parameter is the same source ID that was entered on the LOCATION card for a particular source. The user also has the option of using the SrcRange parameter for specifying a range of sources for which the emission rate factors apply, instead of identifying a single source. This is accomplished by two source ID character strings separated by a dash, e.g., STACK1-STACK10. The use of the SrcRange parameter is explained in more detail in the description of the BUILDHGT keyword (see Section 3.3.9).

The parameter Qflag is the variable emission rate flag, and must be specified as one of the following secondary keywords (the number in parentheses indicates the number of values required for each option):

- SEASON - emission rates vary seasonally (n=4),
- MONTH - emission rates vary monthly (n=12),
- HROFDY - emission rates vary by hour-of-day (n=24),
- WSPEED - emission rates vary by wind speed (n=6),
- SEASHR - emission rates vary by season and hour-of-day (n=96),
- HRDOW - emission rates vary by hour-of-day, and day-of-week [M-F, Sat, Sun] (n=72),
- HRDOW7 - emission rates vary by hour-of-day, and the seven days of the week [M, Tu, W, Th, F, Sat, Sun] (n=168),
- SHRDOW - emission rates vary by season, hour-of-day, and day-of-week [M-F, Sat, Sun] (n=288),
- SHRDOW7 - emission rates vary by season, hour-of-day, and the seven days of the week [M, Tu, W, Th, F, Sat, Sun] (n=672),
- MHRDOW - emission rates vary by month, hour-of-day, and day-of-week [M-F, Sat, Sun] (n=864), and
- MHRDOW7 - emission rates vary by month, hour-of-day, and the seven days of the week [M, Tu, W, Th, F, Sat, Sun] (n=2,016).

The Qfact array is the array of factors, where the number of factors is shown above for each Qflag option. The seasons are defined in the following order: Winter (Dec., Jan., Feb.), Spring (Mar., Apr., May), Summer (Jun., Jul., Aug.), and Fall (Sep., Oct., Nov.).<sup>5</sup> The wind speed categories used with the WSPEED

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<sup>5</sup> Note that the seasons are based on northern hemisphere seasons. For applications in the southern hemisphere using the seasonal factors (SEASHR, SHRDOW, and SHRDOW7), emission factors that would be associated with the

option may be defined using the ME WINDCATS keyword. If the WINDCATS keyword is not used, the default wind speed categories are defined by the upper bound of the first five categories as follows (the sixth category is assumed to have no upper bound): 1.54, 3.09, 5.14, 8.23, and 10.8 m/s. The EMISFACT card may be repeated as many times as necessary to input all of the factors and repeat values may be used for the numerical inputs. Examples for the more recent HRDOW and MHRDOW options are presented below, with column headers to indicate the order in which values are to be input:

---

southern hemisphere winter, for example, should be assigned to the summer seasonal emission factors input to AERMOD. Similarly, spring southern hemisphere emission factors should be assigned to the fall season emission factors input to AERMOD.

```

SO EMISFACT STK1 HRDOW  enter 24 hourly scalars for each of the "days", first for Weekdays
                        (Monday-Friday), then for Saturdays, and finally for Sundays, e.g.,
** Weekdays:          Hrs:  1-5   6   7-17  18   19-24
SO EMISFACT STK1 HRDOW  5*0.3  0.5  11*1.0  0.5  6*0.3
** Saturdays:         Hrs:  1-5   6   7-17  18   19-24
SO EMISFACT STK1 HRDOW  5*0.3  0.5  11*1.0  0.5  6*0.3
** Sundays:           Hrs:  1-5   6   7-17  18   19-24
SO EMISFACT STK1 HRDOW  5*0.3  0.5  11*1.0  0.5  6*0.3

SO EMISFACT STK1 HRDOW7 enter 24 hourly scalars for each of the "days",
                        first for Mondays, then for Tuesdays, ..., then for Saturdays,
                        and finally for Sundays, e.g.,
** Mondays:           Hrs:  1-5   6   7-17  18   19-24
SO EMISFACT STK1 HRDOW7 5*0.3  0.5  11*1.0  0.5  6*0.3
** Tuesdays:         Hrs:  1-5   6   7-17  18   19-24
SO EMISFACT STK1 HRDOW7 5*0.3  0.5  11*1.0  0.5  6*0.3
.
.
** Saturdays:         Hrs:  1-5   6   7-17  18   19-24
SO EMISFACT STK1 HRDOW7 5*0.3  0.5  11*1.0  0.5  6*0.3
** Sundays:           Hrs:  1-5   6   7-17  18   19-24
SO EMISFACT STK1 HRDOW7 5*0.3  0.5  11*1.0  0.5  6*0.3

SO EMISFACT STK1 MHRDOW enter 24 hourly scalars for each of the twelve months, first for Weekdays
                        (Monday-Friday), then for Saturdays, and finally for Sundays, e.g.,
** Weekdays          JAN    FEB    MAR    APR    MAY    JUN    . . .  NOV    DEC
SO EMISFACT STK1 MHRDOW 24*1.0 24*0.8 24*0.6 24*0.8 24*1.0 24*0.8      24*0.6 24*0.8
** Saturdays:
SO EMISFACT STK1 MHRDOW 24*1.0 24*0.8 24*0.6 24*0.8 24*1.0 24*0.8      24*0.6 24*0.8
** Sundays:
SO EMISFACT STK1 MHRDOW 24*1.0 24*0.8 24*0.6 24*0.8 24*1.0 24*0.8      24*0.6 24*0.8

SO EMISFACT STK1 MHRDOW7 enter 24 hourly scalars for each of the twelve months,
                        first for Mondays, then for Tuesdays, ..., then for Saturdays,
                        and finally for Sundays, e.g.,
** Mondays            JAN    FEB    MAR    APR    MAY    JUN    . . .  NOV    DEC
SO EMISFACT STK1 MHRDOW7 24*1.0 24*0.8 24*0.6 24*0.8 24*1.0 24*0.8      24*0.6 24*0.8
** Tuesdays          JAN    FEB    MAR    APR    MAY    JUN    . . .  NOV    DEC
SO EMISFACT STK1 MHRDOW7 24*1.0 24*0.8 24*0.6 24*0.8 24*1.0 24*0.8      24*0.6 24*0.8
.
.
** Saturdays:
SO EMISFACT STK1 MHRDOW7 24*1.0 24*0.8 24*0.6 24*0.8 24*1.0 24*0.8      24*0.6 24*0.8
** Sundays:
SO EMISFACT STK1 MHRDOW7 24*1.0 24*0.8 24*0.6 24*0.8 24*1.0 24*0.8      24*0.6 24*0.8

```

### 3.3.12 Specifying an hourly emission rate file (HOUREMIS)

The source (SO) pathway includes an option for inputting hourly emission rates for the AERMOD model, controlled by the HOUREMIS keyword. AERMOD currently allows for a single hourly emission file to be used with each model run. The syntax, type and order for this keyword are summarized below:

<b>Syntax:</b>	SO HOUREMIS Emifil Srcid's (and/or Srcrng's)
<b>Type:</b>	Optional, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

where the Emifil parameter specifies the filename for the hourly emission file, and Srcid or Srcrng identify the source or sources for which hourly emission rates are included. The Emifil filename can be up to 200 characters in length based on the default parameters in AERMOD. Double quotes (“”) at the beginning and end of the filename can also be used as field delimiters to allow filenames with embedded spaces. Source ranges, which are described in more detail in Section 3.3.9, are input as two source IDs separated by a dash, e.g., STACK1-STACK10. The user may include more than one HOUREMIS card in a control file, if needed to specify additional sources, but there can be only one hourly emissions file, and therefore the filename must be the same on all HOUREMIS cards.

The format of each record of the hourly emissions file includes a pathway and keyword (SO HOUREMIS), followed by the Year, Month, Day, Hour, Source ID, and emission rate (in the appropriate units). For POINT/POINTHOR/POINTCAP sources, an hourly stack gas exit temperature (K) and stack gas exit velocity (m/s) are also required. Beginning with version 09292, the release heights and initial dispersion coefficients can also be varied on an hourly basis for AREA, AREAPOLY, AREACIRC, LINE, and VOLUME sources using the HOUREMIS option.

As discussed in Sections 3.2.12, 3.3.2.2, 3.3.2.4, and 3.3.18, the ALPHA option ARCFTOPT was added to AERMOD beginning in version 23132 to account for plume rise associated with aircraft emissions due to momentum and buoyancy when modeling aircraft as AREA (including AREAPOLY, AREACIRC, and LINE) and/or VOLUME source types. To characterize an aircraft source requires additional source parameters beyond those required for non-aircraft AREA and VOLUME source types. The additional aircraft source parameters **must be specified in an hourly emission rate file**. In addition to the required hourly emission rate for AREA and VOLUME source types, the following aircraft parameters must be included for each hour and aircraft source in the hourly emission rate file, appended to each record, in the following order:

- MFUEL: Fuel burn rate (g/s)
- THRUST: Aircraft thrust (newtons)

- VAA: Aircraft speed (m/s)
- AFR: Air-fuel ratio
- BYPR: Bypass ratio (> 0 for turbofan and -999 for shaft-based engines)
- RPWR: Rated power (kW) (-99999 for turbofan and > 0 for shaft-based)
- SRCANGLE: Landing/takeoff angle with the ground (degrees) (airborne sources)

The parameters listed above must be included each hour in the hourly emission rate file for all AREA and VOLUME sources identified as an aircraft source with the ARCFTSRC keyword. These parameters must not be included for any AREA or VOLUME source that is not identified as an aircraft source. If AERMOD determines there are too many or too few parameters a fatal error message will be issued, and processing will not complete.

Beginning with version 19191, release heights and initial dispersion can be varied for RLINE and RLINEXT sources. The user selects this enhanced option by including the additional source parameters in the hourly emissions file. AERMOD determines whether hourly release heights and initial dispersion coefficients are being used based on the first HOUREMIS record for each source, and these additional parameters must be included on all HOUREMIS records unless the emissions are missing, which is indicated by leaving the emission rate and all fields beyond the source ID blank.

**When hourly emissions are specified for a buoyant line source, each of the individual lines (BUOYLINE sources) that comprise the buoyant line source must be represented in the hourly emissions file for every hour, and the buoyancy ( $\text{m}^4/\text{s}^3$ ) of each line must be specified after the hourly emission rate.** The buoyancy of each line can vary within an hour and from hour to hour. AERMOD computes an average buoyancy of the buoyant line source for each hour using the buoyancy values specified for each individual line that comprises the buoyant line source.

The hourly emissions file is processed using the same routines used to process the control file, therefore each of the parameters must be separated by at least one space, but otherwise the format is flexible. It is also not necessary to include the SO HOUREMIS on each line, as long as the parameters (Year, Month, etc.) do not begin before column 13. The data in the hourly emission file must also include the exact same dates as are included in the meteorological input files, and the source IDs must correspond to the source IDs defined on the SO LOCATION cards and be in the same order as defined in the 'aermod.inp' file.

The model will check for a date mismatch between the hourly emissions file and the meteorological data files. However, it is not necessary to process the entire hourly emissions file on each model run, i.e., the correct emissions data will be read if the ME DAYRANGE or the ME STARTEND cards (see Section 3.5.4) are used, as long as all the dates (including those that are processed and those that are skipped) match the meteorological data files.

An example of several lines from an hourly emissions file for two point sources is provided below:

SO	HOUREMIS	88	8	16	1	STACK1	52.5	382.60	12.27
SO	HOUREMIS	88	8	16	1	STACK2	44.3	432.33	22.17
SO	HOUREMIS	88	8	16	2	STACK1	22.3	377.88	9.27
SO	HOUREMIS	88	8	16	2	STACK2	42.2	437.68	19.67
SO	HOUREMIS	88	8	16	3	STACK1	51.5	373.72	11.87
SO	HOUREMIS	88	8	16	3	STACK2	41.3	437.28	18.77
SO	HOUREMIS	88	8	16	4	STACK1	36.0	374.83	9.63
SO	HOUREMIS	88	8	16	4	STACK2	43.7	437.68	18.23

The use of hourly varying release heights and initial dispersion coefficients for VOLUME and AREA sources is illustrated in the following example:

SO	HOUREMIS	88	3	1	1	VOL1	500.0	2.0	2.0	2.0
SO	HOUREMIS	88	3	1	1	AREA1	5.000	2.0	2.0	
SO	HOUREMIS	88	3	1	2	VOL1	500.0	2.0	2.0	3.0
SO	HOUREMIS	88	3	1	2	AREA1	5.000	2.0	3.0	
SO	HOUREMIS	88	3	1	3	VOL1	500.0	2.0	2.0	4.0
SO	HOUREMIS	88	3	1	3	AREA1	5.000	2.0	4.0	

For POINT/POINTHOR/POINTCAP sources, the model will use the stack release height and stack inside diameter defined on the SO SRCPARAM card, but will use the emission rate, exit temperature and exit velocity from the hourly emission file. As noted above regarding VOLUME and AREA sources, if the emission rate, exit temperature and exit velocity are not included for a particular hour, i.e., any or all of those fields are blank, the model will interpret emissions data for that hour as missing and will set the parameters to zero. Since the emission rate will be zero, there will be no calculations made for that hour and that source.

### 3.3.13 Adjusting the emission rate units for output

The default emission rate units for the AERMOD model are grams per second (g/s) for POINT/POINTHOR/POINTCAP, VOLUME, and BUOYLINE sources, grams per second per meter (g/s/m) for RLINEXT sources, and grams per second per square meter (g/s/m<sup>2</sup>) for AREA, LINE, OPENPIT, and RLINE sources. By default, the model converts these input units to output units of micrograms per cubic meter (µg/m<sup>3</sup>) for concentration calculations. This is accomplished by applying a default emission rate unit factor of 1.0E06 for concentration.

The EMISUNIT keyword on the SO pathway allows the user to specify a different unit conversion factor, and to specify the appropriate label for the output units for either concentration calculations. The syntax and type of the EMISUNIT keyword are summarized below:

<b>Syntax:</b>	SO EMISUNIT Emifac Emilbl Conlbl
<b>Type:</b>	Optional, Non-repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

where the parameter Emifac is the emission rate unit factor, Emilbl is the label for the emission units (up to 40 characters), and Conlbl is the output unit label (up to 40 characters) for concentration calculations. For example, to produce output concentrations in milligrams per cubic meter, assuming input units of grams per sec, the following card could be input:

```
SO EMISUNIT 1.0E3 GRAMS/SEC MILLIGRAMS/M**3
```

since there are 1.0E3 milligrams per gram. The emission rate unit factor applies to all sources for a given run. Since the model uses one or more spaces to separate different fields on the input control file commands, it is important that there not be any spaces within the label fields on this card. Thus, instead of entering 'GRAMS PER SECOND' for the emission label, a label of 'GRAMS/SECOND', or 'GRAMS-PER-SECOND' or an equivalent variation should be used.

For the RLINE or RLINEXT source types, an additional keyword was introduced in version 19191 to allow alternate units of grams per link per hour. These alternate units can be used if the keyword RLEMCONV (RLine EMISSION CONVersion) is used on the SO card. This keyword has no additional inputs, but when present, emissions for all RLINE and RLINEXT sources are assumed to be in grams per

link per hour. The model converts such units internally to its native units for each source and the computation proceeds as normal. The syntax and type of the RLEMCONV keyword are summarized below:

<b>Syntax:</b>	SO RLEMCONV
<b>Type:</b>	Optional, Non-repeatable
<b>Order:</b>	Can be present anywhere on the SO card

### 3.3.14 Including source data from an external file

The user has the option of including source data from an external file by using the INCLUDED keyword on the source (SO) pathway. A SO INCLUDED card may be placed anywhere within the source pathway, after the STARTING card and before the FINISHED card (i.e., the SO STARTING and SO FINISHED cards cannot be included in the external file). The data in the included file will be processed as though it were part of the control file. The syntax and type of the INCLUDED keyword are summarized below:

<b>Syntax:</b>	SO INCLUDED Incfil
<b>Type:</b>	Optional, Repeatable

where the Incfil parameter is a character field of up to 200 characters that identifies the filename for the included file. The contents of the included file must be valid control file commands for the source pathway. If an error is generated during processing of the included file, the error message will report the line number of the included file (see APPENDIX B). If more than one INCLUDED file is specified for the source pathway, the user will first need to determine which file the error occurred in. If the starting column of the main control input file is shifted from column 1 (see Section 2.4.8), then the control file commands in the included file must be offset by the same amount.

### 3.3.15 Using source groups

The AERMOD model allows the user to group contributions from particular sources together. Several source groups may be setup in a single run, and they may, for example, be used to model impacts from the source being permitted, the group of increment consuming PSD sources, and the group of all sources for comparison to a NAAQS in a single run. There is always at least one source group in a run, which may consist of all sources, so the SRCGROUP keyword has been made mandatory in the AERMOD

model unless the PSDGROUP is specified, which is mandatory when using the PSDCREDIT keyword with the PVMRM NO to NO<sub>2</sub> conversion option (See Section 3.3.7). The SRCGROUP keyword cannot be used when the PSDGROUP keyword is used. The syntax, type and order of the SRCGROUP keyword are summarized below:

<b>Syntax:</b>	SO SRCGROUP Grpid Srcid's and/or Srcrng's
<b>Type:</b>	Mandatory (conditional), Repeatable
<b>Order:</b>	Must be the last keyword in the SO pathway before FINISHED

where the Grpid parameter is an alphanumeric string of up to eight characters that identifies the group name. The Srcid's and Srcrng's are the individual source IDs and/or source ranges that make up the group of sources. Source ranges, which are described in more detail in the description of the BUILDHGT keyword (Section 3.3.9), are input as two source IDs separated by a dash, e.g., STACK1-STACK10. Individual source IDs and source ranges may be used on the same card. If more than one input card is needed to define the sources for a particular group, then additional cards may be input, repeating the pathway, keyword and group ID.

A special group ID has been reserved for use in specifying the group of all sources. When Grpid = ALL, the model will automatically setup a source group called ALL that includes all sources modeled for that particular run. If desired, the user can setup a group of all sources with a different group ID by explicitly specifying all sources on the input card(s).

**Note: The secondary keyword, ALL, is used in different source grouping contexts (e.g., BLPGROUP, SRCGROUP, OLMGROUP). Refer to the appropriate section of this user's guide to see the usage of the secondary keyword, ALL, for the group of sources to be identified. For BLPGROUP see Section 3.3.2.11. For OLMGROUP, see Section 3.3.6.2.**

The number of source groups is allocated dynamically at the time AERMOD is run. This value, in concert with the other dynamically allocated arrays and input requirements, is limited only by the amount of available memory.

As discussed in Sections 1.2.9 and 3.2.14, it is sometimes important for a user to know the contribution of a particular source to the total result for a group. These source contribution analyses are

facilitated for short-term averages by the use the EVENT processing capabilities in the AERMOD model. EVENT processing uses the same source groups that are identified by AERMOD (when the input file is generated using the CO EVENTFIL option), but the model is structured in a way that it retains individual source results for particular events. Refer to the sections noted above for a more complete description of EVENT processing and its uses.

With respect to buoyant line sources, note that the SRCGROUP keyword treats the individual lines (BUOYLINE) that comprise a buoyant line source as if they are individual sources. A SRCGROUP can consist of all or a subset of the individual lines by specifying the source IDs from the LOCATION keyword for those lines that should make up the SRCGROUP.

**Note that when modeling with Tier 2 or Tier 3 NO<sub>2</sub> conversion and using source groups, the conversion mechanism will be based on the total NO<sub>x</sub> at each receptor for all sources rather than the NO<sub>x</sub> concentration just for each source group.**

### 3.3.16 Specifying platform downwash information (POINT, POINTHOR, POINTCAP sources ONLY)

The Offshore and Coastal Dispersion (OCD) Model is the EPA's preferred model for estimating near field air pollutant impacts from overwater emission sources, for both deep water and shoreline applications. The original platform downwash algorithms were developed by Petersen (1984) and adapted when implemented into OCD by Hanna and Dicristofaro (1988). The platform downwash algorithms from OCD were integrated into AERMOD for POINT/POINTHOR/POINTCAP source types ONLY.

The SRCPARAM input for stack height is used with inputs via a new PLATFORM keyword to simulate a platform's influence on the dispersion from a POINT or POINTHOR or POINTCAP source. When the PLATFORM keyword is included in the AERMOD control file, platform downwash will be applied to the source identified by the source ID. The syntax, type, and order for the PLATFORM keyword are summarized below:

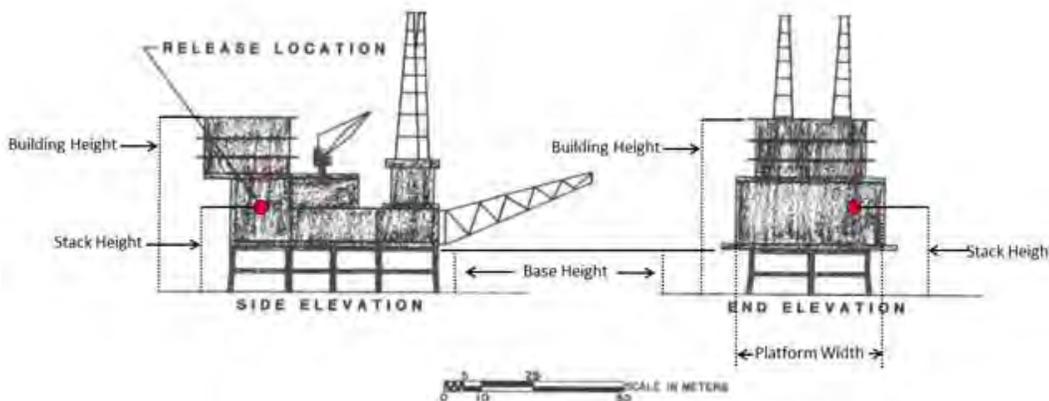
<b>Syntax:</b>	SO PLATFORM Srcid Zelp Hb Wb
<b>Type:</b>	Optional, Repeatable
<b>Order:</b>	Must follow the LOCATION card for each source input

where the Srcid parameter is the same source ID that was entered on the LOCATION card for a particular POINT/POINTHOR/POINTCAP source, and the other parameters are as follows:

Zelp - Base height (in meters) defined as the height of the bottom of the platform above the sea surface. NOTE: This input is consistent with the input for OCD, but this input is not currently used in the AERMOD implementation of platform downwash specific algorithms, because the full height of the source as defined for the POINT/POINTHOR/POINTCAP source is used, no adjustment is made for the height of the platform.

Hb - Total height (in meters), above the sea surface, of the tallest solid or “influential” building (i.e., the sum of the height of the base of the platform above the sea surface and the height of the building above the base of the platform)

Wb - The **lesser of the two distances (in meters)** from outer edges of the leftmost and rightmost buildings on top of the platform that can influence downwash when comparing the side and end views of the platform as shown in Figure 3-7. The platform downwash influence is not adjusted for platform dimension normal to the wind, the influence will be identical for all wind directions.



**Figure 3-6. New platform parameter figure with correct parameter definitions. Adapted from Petersen (1984)**

All parameters are required for a POINT or POINTHOR or POINTCAP source located on a platform. POINT or POINTHOR or POINTCAP sources located on a platform are NOT subject to the PRIME building downwash options. An ERROR message will occur if the same source ID is used with the building downwash keywords.

3.3.17 Specifying highly buoyant point sources for HBP option (POINT, POINTHOR, POINTCAP sources ONLY)

Beginning with version 23132, HBP, specified with the MODELOPT keyword in the CO pathway (see Section 3.2.2), was added as an ALPHA option for highly buoyant plumes that penetrate the top of the convective mixed layer (Weil, 2020; Warren et. al., 2022). The HBP option is only applicable to POINT, POINTHOR, and POINTCAP source types. When the HBP option is specified with the MODELOPT keyword, the sources to which the HBP option should be applied must be identified using the HBPSRCID keyword on the SO pathway.

<b>Syntax:</b>	SO HBPSRCID	Srcid's	and/or	Srcrng's
		or		
	SO HBPSRCID	ALL		
<b>Type:</b>	Mandatory (conditional), Repeatable			

where the Srcid's and Srcrng's are the individual source IDs and/or source ranges that make up the group of sources. Source ranges, which are described in more detail in the description of the BUILDHGT keyword (Section 3.3.9), are input as two source IDs separated by a dash, e.g., STACK1-STACK10. Individual source IDs and source ranges may be used on the same card. If more than one input card is needed to define the sources for a particular group, then additional cards may be input, repeating the pathway (SO), keyword (HBPSRCID), and source IDs and/or ranges. The secondary keyword ALL can be entered in the place of specific source IDs or ranges to apply the HBP option to all POINT, POINTHOR, and POINTCAP source types. Any source types other than POINT, POINTHOR, and POINTCAP that are included in the model simulation and specified with the HBPSRCID keyword, either by source ID or by specifying ALL, will be ignored. In that case, AERMOD will generate an informational message to indicate the non-POINT source type that was ignored.

3.3.18 Specifying aircraft sources (AREA and VOLUME sources ONLY)

As discussed in Section 3.2.12, the ALPHA option ARCFTOPT was added to AERMOD version 23132 to account for plume rise from aircraft emissions when aircraft are modeled as either VOLUME or AREA source types. Because additional parameters are required to characterize an aircraft source, all aircraft sources must be identified in the AERMOD control file using the ARCFTSRC primary keyword in the SO pathway, followed by a list of source IDs or ranges of source IDs. The syntax for the ARCFTSRC keyword is shown here

<b>Syntax:</b>	SO ARCFTSRC Srcid's and/or Srcrng's or SO ARCFTSRC ALL
<b>Type:</b>	Mandatory (conditional), Repeatable

where the Srcid parameter is the same source ID that was entered on the LOCATION card for a particular source. The user also has the option of specifying a range of sources (the Srcrng parameter) instead of identifying a single source or a list of single sources.

Source ranges, which are described in more detail in the description of the BUILDHGT keyword (Section 3.3.9), are input as two source IDs separated by a dash, e.g., STACK1-STACK10. Individual source IDs and source ranges may be used on the same card. If more than one input card is needed to identify all aircraft sources, then additional cards may be input, repeating the pathway, keyword, and group ID. The secondary keyword ALL can be entered in the place of specific source IDs or ranges to apply the AIRCFTOPT option to all AREA and VOLUME source types. Source types other than AREA and VOLUME sources that are included in the model simulation and specified with the ARCFTSRC keyword, either by source ID or by specifying ALL, will be ignored. The ARCFTSRC keyword is mandatory when the AIRCFTOPT keyword is included in the CO pathway as described in Section 3.2.12. Failure to identify aircraft sources in the SO pathway with the ARCFTSRC keyword will generate a fatal error and processing will stop.

### 3.4 Receptor pathway inputs and options

The REceptor pathway contains keywords that define the receptor information for a particular model run. The RE pathway contains keywords that allow the user to define Cartesian grid receptor networks and/or polar grid receptor networks, with either uniform or non-uniform grid spacing, as well as discrete receptor locations referenced to a Cartesian or a polar system. The number of receptors and receptor networks are allocated dynamically at the time AERMOD is run. This value, in combination with the other dynamically allocated arrays and input requirements, is limited only by the amount of available memory.

All of the receptor options in AERMOD allow the user to input terrain elevations and hill height scales for each receptor, both of which are needed when applying AERMOD in an elevated terrain situation. To facilitate the generation of hill height scales for AERMOD, a terrain preprocessor, called AERMAP, has been developed (EPA, 2004c). The AERMAP terrain preprocessor, which can process U.S. Geological Survey (USGS) Digital Elevation Model (DEM) data and data from the National Elevation Dataset (NED), may also be used to generate the terrain elevations for the receptor locations. The AERMAP program

generates an output file that contains the receptor pathway data for AERMOD in the format described below. This file may be cut and pasted into the AERMOD control file or included as an external file using the RE INCLUDED card (see Section 3.4.4).

The default units for receptor elevations for the AERMOD model are in meters; however, the user may specify receptor elevations to be in units of feet by adding the RE ELEVUNIT FEET card immediately after the RE STARTING card. Since the AERMAP terrain preprocessor outputs elevations in meters and includes the RE ELEVUNIT METERS card as the first record, the AERMAP data must be placed at the beginning of the receptor pathway.

### 3.4.1 Defining networks of gridded receptors

Two types of receptor networks are allowed by the AERMOD model. A Cartesian grid network, defined through the GRIDCART keyword, includes an array of points identified by their x (east-west) and y (north-south) coordinates. A polar network, defined by the GRIDPOLR keyword, is an array of points identified by direction and distance from a user-defined origin. Each of these keywords has a series of secondary keywords associated with it that are used to define the network, including any receptor elevations for elevated terrain and flagpole receptor heights. The GRIDCART and GRIDPOLR keywords can be thought of as "sub-pathways," since their secondary keywords include a STArt and an ENd card to define the start and end of inputs for a particular network.

#### 3.4.1.1 Cartesian grid receptor networks

Cartesian grid receptor networks are defined by use of the GRIDCART keyword. The GRIDCART keyword may be thought of as a "sub-pathway," in that there are a series of secondary keywords that are used to define the start and the end of the inputs for a particular network, and to select the options for defining the receptor locations that make up the network. The syntax and type of the GRIDCART keyword are summarized below:

<b>Syntax:</b>	RE GRIDCART Netid <u>STA</u>
	<u>XYINC</u> Xinit Xnum Xdelta Yinit Ynum Ydelta
	<u>XPNTS</u> Gridx1 Gridx2 Gridx3 .... Gridxn, and
	or <u>YPNTS</u> Gridy1 Gridy2 Gridy3 .... Gridyn
	<u>ELEV</u> Row Zelev1 Zelev2 Zelev3 ... Zelevn
	<u>HILL</u> Row Zhill1 Zhill2 Zhill3 ... Zhilln
	<u>FLAG</u> Row Zflag1 Zflag2 Zflag3 ... Zflagn
	<u>END</u>
<b>Type:</b>	Optional, Repeatable

where the parameters are defined as follows:

<u>Netid</u>	Receptor network identification code (up to eight alphanumeric characters)
<u>STA</u>	Indicates the <u>STA</u> rt of GRIDCART inputs for a particular network, repeated for each new Netid
<u>XYINC</u>	Keyword identifying uniform grid network generated from x and y increments
Xinit	Starting x-axis grid location in meters
Xnum	Number of x-axis receptors
Xdelta	Spacing in meters between x-axis receptors
Yinit	Starting y-axis grid location in meters
Ynum	Number of y-axis receptors
Ydelta	Spacing in meters between y-axis receptors
<u>XPNTS</u>	Keyword identifying grid network defined by a series of discrete x and y coordinates (used with <u>YPNTS</u> )
Gridx1	Value of first x-coordinate for Cartesian grid (m)
Gridxn	Value of 'nth' x-coordinate for Cartesian grid (m)
<u>YPNTS</u>	Keyword identifying grid network defined by a series of discrete x and y coordinates (used with <u>XPNTS</u> )
Gridy1	Value of first y-coordinate for Cartesian grid (m)
Gridyn	Value of 'nth' y-coordinate for Cartesian grid (m)
<u>ELEV</u>	Keyword to specify that receptor elevations follow (optional)
Row	Indicates which row (y-coordinate fixed) is being input (Row=1 means first, i.e., southmost row) An
Zelev	Array of receptor terrain elevations (m) for a particular Row (default units of meters may be changed to feet by use of RE ELEVUNIT keyword), number of entries per row equals the number of x-coordinates for that network

<u>HILL</u>	Keyword to specify that hill height scales follow (optional)
Row	Indicates which row (y-coordinate fixed) is being input (Row=1 means first, i.e., southmost row) An
Zelev	Array of hill height scales (m) for a particular Row (default units of meters may be changed to feet by use of RE ELEVUNIT keyword), number of entries per row equals the number of x-coordinates for that network
<u>FLAG</u>	Keyword to specify that flagpole receptor heights follow (optional)
Row	Indicates which row (y-coordinate fixed) is being input (Row=1 means first, i.e., southmost row)
Zflag	An array of receptor heights (m) above local terrain elevation for a particular Row (flagpole receptors), number of entries per row equals the number of x-coordinates for that network
<u>END</u>	Indicates the <u>END</u> of GRIDCART inputs for a particular network, repeated for each new Netid

The ELEV, HILL, and FLAG keywords are optional inputs, and are only needed if elevated terrain or flagpole receptor heights are to be used. If elevated terrain is being used, then both the ELEV and HILL inputs are needed for each receptor. If the ELEV and HILL keywords are used and the model is being run with the flat terrain option (see Section 3.2.2), then the elevated terrain height inputs will be ignored by the model, and a non-fatal warning message will be generated. If the elevated terrain option is selected, and no elevated terrain heights are entered, the elevations will default to 0.0 meters, and warning messages will also be generated. The model handles flagpole receptor height inputs in a similar manner.

The order of cards within the GRIDCART subpathway is not important, as long as all inputs for a particular network are contiguous and start with the STA secondary keyword and end with the END secondary keyword. It is not even required that all ELEV cards be contiguous, although the input file will be more readable if a logical order is followed. The network ID is also not required to appear on each control file command (except for the STA card). The model will assume the previous ID if none is entered, similar to the use of continuation cards for pathway and keywords. Thus, the following two examples produce the same 8 X 4 Cartesian grid network:

```

RE GRIDCART CAR1 STA
RE GRIDCART CAR1 XPNTS -500. -400. -200. -100. 100. 200. 400. 500.
RE GRIDCART CAR1 YPNTS -500. -250. 250. 500.
RE GRIDCART CAR1 ELEV 1 10. 10. 10. 10. 10. 10. 10. 10.
RE GRIDCART CAR1 ELEV 2 20. 20. 20. 20. 20. 20. 20. 20.
RE GRIDCART CAR1 ELEV 3 30. 30. 30. 30. 30. 30. 30. 30.
RE GRIDCART CAR1 ELEV 4 40. 40. 40. 40. 40. 40. 40. 40.
RE GRIDCART CAR1 HILL 1 50. 50. 50. 50. 50. 50. 50. 50.
RE GRIDCART CAR1 HILL 2 60. 60. 60. 60. 60. 60. 60. 60.
RE GRIDCART CAR1 HILL 3 70. 70. 70. 70. 70. 70. 70. 70.
RE GRIDCART CAR1 HILL 4 80. 80. 80. 80. 80. 80. 80. 80.
RE GRIDCART CAR1 FLAG 1 10. 10. 10. 10. 10. 10. 10. 10.
RE GRIDCART CAR1 FLAG 2 20. 20. 20. 20. 20. 20. 20. 20.
RE GRIDCART CAR1 FLAG 3 30. 30. 30. 30. 30. 30. 30. 30.
RE GRIDCART CAR1 FLAG 4 40. 40. 40. 40. 40. 40. 40. 40.
RE GRIDCART CAR1 END

RE GRIDCART CAR1 STA
      XPNTS -500. -400. -200. -100. 100. 200. 400. 500.
      YPNTS -500. -250. 250. 500.
      ELEV 1 8*10.
      HILL 1 8*50.
      FLAG 1 8*10.
      ELEV 2 8*20.
      HILL 2 8*60.
      FLAG 2 8*20.
      ELEV 3 8*30.
      HILL 3 8*70.
      FLAG 3 8*30.
      ELEV 4 8*40.
      HILL 4 8*80.
      FLAG 4 8*40.
RE GRIDCART CAR1 END

```

The Row parameter on the ELEV, HILL, and FLAG inputs may be entered as either the row number, i.e., 1, 2, etc., or as the actual y-coordinate value, e.g., -500., -250., etc. in the example above. The model

sorts the inputs using Row as the index, so the result is the same. The above example could therefore be entered as follows, with the same result:

```
RE GRIDCART CAR1 STA
      XPNTS  -500.  -400.  -200.  -100.  100.  200.  400.  500.
      YPNTS  -500.  -250.  250.  500.
      ELEV   -500.  8*10.
      FLAG   -500.  8*10.
      ELEV   -250.  8*20.
      FLAG   -250.  8*20.
      ELEV    250.  8*30.
      FLAG    250.  8*30.
      ELEV    500.  8*40.
      FLAG    500.  8*40.
RE GRIDCART CAR1 END
```

Of course, one must use either the row number or y-coordinate value consistently within each network to have the desired result.

The following simple example illustrates the use of the XYINC secondary keyword to generate a uniformly spaced Cartesian grid network. The resulting grid is 11 x 11, with a uniform spacing of 1 kilometer (1000. meters), and is centered on the origin (0., 0.). No elevated terrain heights or flagpole receptor heights are included in this example.

```
RE GRIDCART CG1 STA
      XYINC  -5000.  11  1000.  -5000.  11  1000.
RE GRIDCART CG1 END
```

### 3.4.1.2 Polar grid receptor networks

Polar receptor networks are defined by use of the GRIDPOLR keyword. The GRIDPOLR keyword may also be thought of as a "sub-pathway," in that there are a series of secondary keywords that are used to define the start and the end of the inputs for a particular network, and to select the options for defining the receptor locations that make up the network. The syntax and type of the GRIDPOLR keyword are summarized below:

<b>Syntax:</b>	RE GRIDPOLR Netid <u>STA</u> <u>ORIG</u> Xinit Yinit, or <u>ORIG</u> Srcid <u>DIST</u> Ring1 Ring2 Ring3 ... Ringn <u>DDIR</u> Dir1 Dir2 Dir3 ... Dirn, or <u>GDIR</u> Dirnum Dirini Dirinc <u>ELEV</u> Dir Zelev1 Zelev2 Zelev3 ... Zelevn <u>HILL</u> Dir Zhill1 Zhill2 Zhill3 ... Zhilln <u>FLAG</u> Dir Zflag1 Zflag2 Zflag3 ... Zflagn <u>END</u>
<b>Type:</b>	Optional, Repeatable

where the parameters are defined as follows:

Netid	Receptor network identification code (up to eight alphanumeric characters)
<u>STA</u>	Indicates <u>STA</u> rt of GRIDPOLR inputs for a particular network, repeat for each new Netid
<u>ORIG</u> Xinit Yinit Srcid	Keyword to specify the origin of the polar network (optional) x-coordinate for origin of polar network y-coordinate for origin of polar network Source ID of source used as origin of polar network
<u>DIST</u> Ring1 Ringn	Keyword to specify distances for the polar network Distance to the first ring of polar coordinates Distance to the 'nth' ring of polar coordinates
<u>DDIR</u> Dir1 Dirn	Keyword to specify discrete direction radials for the polar network First direction radial in degrees (1 to 360) The 'nth' direction radial in degrees (1 to 360)
<u>GDIR</u> Dirnum Dirini Dirinc	Keyword to specify generated direction radials for the polar network Number of directions used to define the polar system Starting direction of the polar system Increment (in degrees) for defining directions
<u>ELEV</u> Dir Zelev	Keyword to specify that receptor elevations follow (optional) Indicates which direction is being input An array of receptor terrain elevations for a particular direction radial (default units of meters may be changed to feet by use of RE ELEVUNIT keyword), number of entries per radial equals the number of distances for that network

<u>HILL</u> Dir Zelev	Keyword to specify that hill height scales follow (optional) Indicates which direction is being input An array of receptor hill height scales for a particular direction radial (default units of meters may be changed to feet by use of RE ELEVUNIT keyword), number of entries per radial equals the number of distances for that network
<u>FLAG</u> Dir Zflag	Keyword to specify that flagpole receptor heights follow (optional) Indicates which direction is being input An array of receptor heights above local terrain elevation for a particular direction (flagpole receptors)
<u>END</u>	Indicates <u>END</u> of GRIDPOLR subpathway, repeat for each new Netid

The ORIG secondary keyword is optional for the GRIDPOLR inputs. If omitted, the model assumes a default origin of (0.,0.) in x,y coordinates. The ELEV, HILL, and FLAG keywords are also optional inputs, and are only needed if elevated terrain or flagpole receptor heights are to be used. If elevated terrain is being used, then both the ELEV and HILL inputs are needed for each receptor. If the ELEV and HILL keywords are used and the model is being run with the flat terrain option (see Section 3.2.2), then the elevated terrain height inputs will be ignored by the model, and a non-fatal warning message will be generated. If the elevated terrain option is selected, and no elevated terrain heights are entered, the elevations will default to 0.0 meters, and warning messages will also be generated. The model handles flagpole receptor height inputs in a similar manner.

As with the GRIDCART keyword described above, the order of cards within the GRIDPOLR subpathway is not important, as long as all inputs for a particular network are contiguous and start with the STA secondary keyword and end with the END secondary keyword. It is not even required that all ELEV cards be contiguous, although the input file will be more readable if a logical order is followed. The network ID is also not required to appear on each control file command (except for the STA card). The model will assume the previous ID if none is entered, similar to the use of continuation cards for pathway and keywords.

The following example of the GRIDPOLR keyword generates a receptor network consisting of 180 receptor points on five concentric distance rings centered on an assumed default origin of (0.,0.). The receptor locations are placed along 36 direction radials, beginning with 10. degrees and incrementing by 10. degrees in a clockwise fashion.

```

RE GRIDPOLR POL1 STA
          DIST 100. 300. 500. 1000. 2000.
          GDIR 36 10. 10.
RE GRIDPOLR POL1 END

```

Another example is provided illustrating the use of a non-zero origin, discrete direction radials and the specification of elevated terrain and flagpole receptor heights:

```

RE GRIDPOLR POL1 STA
          ORIG 500. 500.
          DIST 100. 300. 500. 1000. 2000.
          DDIR 90. 180. 270. 360.
          ELEV 90. 5. 10. 15. 20. 25.
          ELEV 180. 5. 10. 15. 20. 25.
          ELEV 270. 5. 10. 15. 20. 25.
          ELEV 360. 5. 10. 15. 20. 25.
          HILL 90. 50. 60. 75. 80. 95.
          HILL 180. 50. 60. 75. 80. 95.
          HILL 270. 50. 60. 75. 80. 95.
          HILL 360. 50. 60. 75. 80. 95.
          FLAG 90. 5. 10. 15. 20. 25.
          FLAG 180. 5. 10. 15. 20. 25.
          FLAG 270. 5. 10. 15. 20. 25.
          FLAG 360. 5. 10. 15. 20. 25.
RE GRIDPOLR POL1 END

```

The user has the option of specifying the radial number (e.g., 1, 2, 3, etc.) on the ELEV, HILL, and FLAG inputs, or the actual direction associated with each radial.

For purposes of model calculations, all receptor locations, including those specified as polar, are stored in the model arrays as x, y and z coordinates and flagpole heights. For the purposes of reporting the results by receptor in the main print file, the tables are labeled with the polar inputs, i.e., directions and distances.

### 3.4.2 Using multiple receptor networks

For some modeling applications, the user may need a fairly coarsely spaced network covering a large area to identify the area of significant impacts for a plant, and a denser network covering a smaller area to identify the maximum impacts. To accommodate this modeling need, the AERMOD model allows the user to specify multiple receptor networks in a single model run. The user can define either Cartesian grid networks or polar networks, or both. With the use of the ORIG option in the GRIDPOLR keyword, the user can easily place a receptor network centered on the facility being permitted, and also place a network centered on another background source known to be a significant contributor to high concentrations. Alternatively, the polar network may be centered on a receptor location of special concern, such as a nearby Class I area.

As noted in the introduction to this section (3.4), the model dynamically allocates array storage based on the number of receptors and receptor networks when the AERMOD model is run, up to the maximum amount of memory available on the computer.

### 3.4.3 Specifying discrete receptor locations

In addition to the receptor networks defined by the GRIDCART and GRIDPOLR keywords described above, the user may also specify discrete receptor points for modeling impacts at specific locations of interest. This may be used to model critical receptors, such as the locations of schools or houses, nearby Class I areas, or locations identified as having high concentrations by previous modeling analyses. The discrete receptors may be input as either Cartesian x,y points (DISCCART keyword) or as polar distance and direction coordinates (DISCPOLR keyword). Both types of receptors may be identified in a single run. In addition, for discrete polar receptor points the user specifies the source whose location is used as the origin for the receptor.

#### 3.4.3.1 Discrete Cartesian receptors.

Discrete Cartesian receptors are defined by use of the DISCCART keyword. The syntax and type of this keyword are summarized below:

<b>Syntax:</b>	RE DISCCART Xcoord Ycoord (Zelev Zhill) (Zflag)
<b>Type:</b>	Optional, Repeatable

where the Xcoord and Ycoord parameters are the x-coordinate and y-coordinate (m), respectively, for the receptor location. The Zelev parameter is an optional terrain elevation (m) and Zhill is a corresponding hill height scale for the receptor for use in elevated terrain modeling. Both the Zelev and Zhill parameters must be specified for use with the elevated terrain algorithms and are referenced to the same reference elevation (e.g., mean sea level) used for source elevations. The Zflag parameter is the optional receptor height above ground (m) for modeling flagpole receptors. All of the parameters are in units of meters, except for Zelev and Zhill, which default to meters but may be specified in feet by use of the RE ELEVUNIT keyword.

If neither the elevated terrain option (Section 3.2.2) nor the flagpole receptor height option (Section 3.2.11) are used, then the optional parameters are ignored if present. In other words, the FLAGPOLE keyword is required on the CO pathway if Zflag values are to be used and, the ELEV option must be specified with the MODELOPT keyword on the CO pathway if Zelev and Zhill values are to be used. If only the elevated terrain height option is used (no flagpoles), then the third parameter (the field after the Ycoord) is read as the Zelev parameter. If only the flagpole receptor height option is used (no elevated terrain), then the third parameter is read as the Zflag parameter. If both options are used, then the parameters are read in the order indicated for the syntax above. If the optional parameters are left blank, then default values will be used. The default value for Zelev is 0.0, and the default value for Zflag is defined by the CO FLAGPOLE card (see Section 3.2.11). Note: If both the elevated terrain and flagpole receptor height options are used, then the third parameter will always be used as Zelev, and it is not possible to use a default value for Zelev while entering a specific value for the Zflag parameter.

#### 3.4.3.2 Discrete polar receptors

Discrete polar receptors are defined by use of the DISCPOLR keyword. The syntax and type of this keyword are summarized below:

<b>Syntax:</b>	RE DISCPOLR Srcid Dist Direct (Zelev Zhill) (Zflag)
<b>Type:</b>	Optional, Repeatable

where the Srcid is the alphanumeric source identification for one of the sources defined on the SO pathway which will be used to define the origin for the polar receptor location. The Dist and Direct parameters are the

distance in meters and direction in degrees for the discrete receptor location. Degrees are measured clockwise from north. The Zelev parameter is an optional terrain elevation for the receptor and Zhill is the corresponding hilltop elevation (m) for use in elevated terrain modeling. Both the Zelev and Zhill parameters must be specified for use with the elevated terrain algorithms and are referenced to the same reference elevation (e.g., mean sea level) used for source elevations. The units of Zelev and Zhill are in meters, unless specified as feet by the RE ELEVUNIT keyword. The Zflag parameter is the optional receptor height above ground (meters) for modeling flagpole receptors.

If neither the elevated terrain option (Section 3.2.2) nor the flagpole receptor height option (Section 3.2.11) are used, then the optional parameters are ignored if present. If only the elevated terrain height option is used (no flagpoles), then the third parameter (the field after the Ycoord) is read as the Zelev parameter. If only the flagpole receptor height option is used (no elevated terrain), then the third parameter is read as the Zflag parameter. If both options are used, then the parameters are read in the order indicated for the syntax above. If the optional parameters are left blank, then default values will be used. The default value for Zelev is 0.0, and the default value for Zflag is defined by the CO FLAGPOLE card (see Section 3.2.11). Note: If both the elevated terrain and flagpole receptor height options are used, then fourth parameter will always be used as Zelev, and it is not possible to use a default value for Zelev while entering a specific value for the Zflag parameter.

### 3.4.3.3 Discrete Cartesian receptors for evalfile output

The EVALCART keyword is used to define discrete Cartesian receptor locations, similar to the DISCCART keyword, but it also allows for grouping of receptors, e.g., along arcs. It is designed to be used with the EVALFILE option, described later for the output pathway, which outputs arc maxima values to a separate file for evaluation purposes. The EVALCART keyword can be used without the use of the EVALFILE option, in which case the receptor groupings are ignored. The syntax and type for the modified EVALCART keyword are summarized below:

<b>Syntax:</b>	RE EVALCART Xcoord Ycoord Zelev Zhill Zflag Arcid (Name)
<b>Type:</b>	Optional, Repeatable

where the Xcoord and Ycoord parameters are the x-coordinate and y-coordinate (m), respectively, for the receptor location. The Zelev parameter is the terrain elevation (m) for the receptor and Zhill is the corresponding hilltop elevation (m) for use in elevated terrain modeling. Both the Zelev and Zhill parameters must be specified for use with the elevated terrain algorithms and are referenced to the same

reference elevation (e.g., mean sea level) used for source elevations. The elevation (Zelev) and hill heights (Zhill) inputs are set to zero, by default, if ELEV is NOT specified as a MODELOPT on the CO card. The Zflag parameter is the receptor height above ground (m) for modeling flagpole receptors and must be specified for use with the receptor flagpole option. The flagpole height (Zflag) inputs are set to zero, by default, if CO FLAGPOLE is NOT specified on the CO card. All of the parameters are in units of meters, except for Zelev and Zhill, which default to meters but may be specified in feet by use of the RE ELEVUNIT keyword. The Arcid parameter is the receptor grouping identification, which may be up to eight characters long, and may be used to group receptors by arc. The Name parameter is an optional name field that may be included to further identify a particular receptor location. The Name parameter is ignored by the model. Unlike the DISCCART keyword, all of the parameters (except for the Name) must be present on each card with the EVALCART keyword. The elevation, hill height, and flagpole height are set to zero, by default, if the appropriate options are not specified the CO card.

#### 3.4.4 Including receptor data from an external file

The user has the option of including receptor data from an external file by using the INCLUDED keyword on the receptor pathway. A RE INCLUDED card may be placed anywhere within the source pathway, after the STARTING card and before the FINISHED card (i.e., the RE STARTING and RE FINISHED cards cannot be included in the external file). The data in the included file will be processed as though it were part of the control file. The syntax and type of the INCLUDED keyword are summarized below:

<b>Syntax:</b>	RE INCLUDED Incfil
<b>Type:</b>	Optional, Repeatable

where the Incfil parameter is a character field of up to 200 characters that identifies the filename for the included file. The contents of the included file must be valid control file commands for the receptor pathway. If an error is generated during processing of the included file, the error message will report the line number of the included file (see APPENDIX B). If more than one INCLUDED file is specified for the receptor pathway, the user will first need to determine which file the error occurred in. If the starting column of the main control input file is shifted from column 1 (see Section 2.4.8), then the control file commands in the included file must be offset by the same amount. The INCLUDED option allows the user to include receptor data that have been generated by the AERMOD Terrain Preprocessor, AERMAP, in the control file without having to cut and paste the AERMAP output file. Since AERMAP generates terrain elevations in meters and includes the RE ELEVUNIT METERS card as the first record, an AERMAP file must be

INCLUDED at the beginning of the receptor pathway, immediately following the RE STARTING card. If more than one AERMAP output file is INCLUDED on the receptor pathway, the RE ELEVUNIT METERS card must be deleted from all but the first one.

### 3.5 Meteorology pathway inputs and options

The Meteorology pathway contains keywords that define the input meteorological data for a particular model run.

#### 3.5.1 Specifying the input data files and formats

The AERMOD model uses hourly meteorological data from separate surface and profile data files as one of the basic model inputs. These input meteorological data filenames for AERMOD are identified by the SURFFILE and PROFFILE keywords on the ME pathway. The syntax and type of these keywords are summarized below:

<b>Syntax:</b>	ME SURFFILE Sfcfil (Format) ME PROFFILE Profil (Format)
<b>Type:</b>	Optional, Repeatable

where the Srcfil and Profil parameters are character fields of up to 200 characters that identify the filenames for the input meteorological data files. For running the model on an IBM-compatible PC, the filename parameters may include the complete DOS pathname for the file or will assume the current directory if only the filename is given. The optional Format parameter specifies the format of the meteorological data files. The default formats for the surface and profile data files corresponds with the format of the files generated by the AERMET meteorological preprocessor program. The user also has the option of specifying the Fortran read format for each of these files. The contents of the meteorological data files are described below, and the file formats are documented in APPENDIX C.

The surface meteorological data file consists of a header record containing information on the meteorological station locations, and one record for each hour of data. These data are delimited by at least one space between each element, i.e., the data may be read as free format. The contents of the surface file are as follows:

- Year
- Month (1 – 12)

- Day of Month (1 – 31)
- Julian Day (Day of Year) (1 – 366)
- Hour of Day (1 – 24)
- Heat Flux (W/m<sup>2</sup>)
- Surface Friction Velocity,  $u^*$  (m/s)
- Convective Velocity Scale,  $w^*$  (m/s)
- Lapse Rate above Mixing Height (K/m)
- Convective Mixing Height (m)
- Mechanical Mixing Height (m)
- Monin-Obukhov Length,  $L$  (m)
- Surface Roughness Length,  $z_0$  (m)
- Bowen Ratio
- Albedo
- Reference Wind Speed (m/s)
- Reference Wind Direction (degrees)
- Reference Height for Wind (m)
- Ambient Temperature (K)
- Reference Height for Temperature (m)
- Precipitation Code (0-45)
- Precipitation Amount (mm)
- Relative Humidity (%)
- Surface Pressure (mb)
- Cloud Cover (tenths)
- Wind Speed Adjustment and Data Source Flag

The sensible heat flux, Bowen ratio and albedo are not used by the AERMOD model but are passed through by AERMET for information purposes only.

The profile meteorological data file consists of one or more records for each hour of data. As with the surface data file, the data are delimited by at least one space between each element and may be read as Fortran free format. The contents of the profile meteorological data file are as follows:

- Year
- Month (1 – 12)
- Day (1 – 31)
- Hour (1 – 24)
- Measurement height (m)
- Top flag = 1, if this is the last (highest) level for this hour,  
0, otherwise
- Wind direction for the current level (degrees)
- Wind speed for the current level (m/s)
- Temperature at the current level (°C)
- Standard deviation of the wind direction,  $\sigma_2$  (degrees)
- Standard deviation of the vertical wind speed,  $\sigma_w$  (m/s)

The data in this file include the on-site meteorological data that are processed by AERMET. Since AERMET was designed to be able to perform dispersion parameter calculations with NWS data only, i.e., no on-site data, the profile data may consist of a one-level “profile” based on the NWS winds and temperature.

### 3.5.2 Specifying station information

Three keywords are used to specify information about the meteorological stations, SURFDATA for the surface meteorological station, UAIRDATA for the upper air station, and the optional SITEDATA for any on-site meteorological data that may be used. The syntax and type of these keywords are summarized below:

<b>Syntax:</b>	ME SURFDATA	Stanum	Year	(Name)	(Xcoord)	(Ycoord)
<b>Syntax:</b>	ME UAIRDATA	Stanum	Year	(Name)	(Xcoord)	(Ycoord)
<b>Syntax:</b>	ME SITEDATA	Stanum	Year	(Name)	(Xcoord)	(Ycoord)
<b>Type:</b>	Mandatory, Non-repeatable for SURFDATA and UAIRDATA Optional, Non-repeatable for SITEDATA					

where Stanum is the station number, e.g., the 5-digit WBAN number for NWS stations; Year is the year of data being processed (either 2 or 4 digits); Name is an optional character field (up to 40 characters with no blanks) specifying the name of the station; and Xcoord and Ycoord are optional parameters for specifying the x and y coordinates for the location of the stations. **Note: The Year should indicate the first year of data that are present in the meteorological data, regardless if only a subset of complete temporal period will be modeled by AERMOD using the STARTEND keyword (Section 3.5.4).** The station locations are not utilized in the model. Therefore, no units are specified for Xcoord and Ycoord, although meters are suggested for consistency with the source and receptor coordinates. The AERMOD model compares the station numbers that are input using these keywords with the numbers in the header record of the surface meteorological data file, and issues non-fatal warning messages if there are any mismatches.

### 3.5.3 Specifying the base elevation for potential temperature profile

The AERMOD model generates a gridded vertical profile of potential temperatures for use in the plume rise calculations. Since potential temperature is dependent on the elevation above mean sea level (MSL), the user must define the base elevation for the profile with the PROFBASE keyword. The syntax and type for the PROFBASE keyword are summarized below:

<b>Syntax:</b>	ME PROFBASE BaseElev (Units)
<b>Type:</b>	Mandatory, Non-repeatable

where the BaseElev parameter specifies the base elevation above MSL for the potential temperature profile, and the optional Units parameter specifies the units of BaseElev. Valid inputs of Units are the secondary keywords METERS or FEET. The default units for BaseElev are in meters if Units is left blank. The base elevation should correspond with the base elevation of the primary meteorological tower.

#### 3.5.4 Specifying a data period to process

There are two keywords that allow the user to specify particular days or ranges of days to process from the sequential meteorological file input for the AERMOD model. The STARTEND keyword controls which period within the meteorological data file is read by the model, while the DAYRANGE keyword controls which days or ranges of days (of those that are read) for the model to process. When the STARTEND keyword is omitted from the control file, the default for the model is to read the entire meteorological data file and to process all days within that period.

The syntax and type for the STARTEND keyword are summarized below:

<b>Syntax:</b>	ME STARTEND Strtyr Strtmn Strtdy (Strthr) Endyr Endmn Enddy (Endhr)
<b>Type:</b>	Optional, Non-repeatable

where the Strtyr Strtmn Strtdy parameters specify the year, month and day of the first record to be read (e.g., 87 01 31 for January 31, 1987), and the parameters Endyr Endmn Enddy specify the year, month and day of the last record to be read. The Strthr and Endhr are optional parameters that may be used to specify the start and end hours for the data period to be read. If either Strthr or Endhr is to be specified, then both must be specified. Any records in the data file that occur before the start date are ignored, as are any records in the data file that occur after the end date. In fact, once the end date has been reached, the model does not read any more data from the meteorological file. If Strthr and Endhr are not specified, then processing begins with hour 1 of the start date, and ends with hour 24 of the end date, unless specific days are selected by the DAYRANGE card described below.

Any PERIOD averages calculated by the model will apply only to the period of data actually processed. Therefore, if someone wanted to calculate a six-month average, they could select PERIOD averages on the CO AVERTIME card, and then specify the period as follows:

```
ME STARTEND 87 01 01 87 06 30
```

for the period January 1, 1987 through June 30, 1987.

The syntax and type for the DAYRANGE keyword are summarized below:

<b>Syntax:</b>	ME DAYRANGE Range1 Range2 Range3 ... RangeN
<b>Type:</b>	Optional, Repeatable

where the Range parameters specify particular days or ranges of days to process. The days may be specified as individual days (e.g., 1 2 3 4 5) or as a range of days (e.g., 1-5). The user also has the option of specifying Julian day numbers, from 1 to 365 (366 for leap years), or specifying month and day (e.g., 1/31 for January 31). Any combination of these may also be used. For example, the following card will tell the model to process the days from January 1 (Julian day 1) through January 31 (1/31):

```
ME DAYRANGE 1-1/31
```

The DAYRANGE keyword is also repeatable, so that as many cards as needed may be included in the ME pathway.

As with the STARTEND keyword, any PERIOD averages calculated by the model will apply only to the period of data actually processed. If the STARTEND keyword is also used, then only those days selected on the DAYRANGE cards that fall within the period from the start date to the end date will be processed. Thus, if the ME pathway included the following two cards:

```
ME STARTEND 87 02 01 87 12 31
ME DAYRANGE 1-31
```

then no data would be processed, since the days 1 through 31 are outside the period 2/1 to 12/31.

### 3.5.5 Correcting wind direction alignment problems

The WDRotate keyword allows the user to correct the input meteorological data for wind direction alignment problems. All input wind directions or flow vectors are rotated by a user-specified

amount. Since the model results at particular receptor locations are often quite sensitive to the transport wind direction, this optional keyword should be used only with extreme caution and with clear justification.

The syntax and type of this keyword are summarized below:

<b>Syntax:</b>	ME WDROTATE Rotang
<b>Type:</b>	Optional, Non-repeatable

where the Rotang parameter specifies the angle in degrees to rotate the input wind direction measurements. The value of Rotang is subtracted from the wind direction measurements. It may be used to correct for known (and documented) calibration errors, or to adjust for the alignment of a valley if the meteorological station is located in a valley with a different alignment than the source location.

### 3.5.6 Specifying wind speed categories

Variable emission rate factors may be input to the model that vary by wind speed category. The model uses six wind speed categories, and these are defined by the upper bound wind speed for the first five categories (the sixth category is assumed to have no upper bound). The default values for the wind speed categories are as follows: 1.54, 3.09, 5.14, 8.23, and 10.8 m/s. The syntax and type of the WINDCATS keyword, which may be used to specify different category boundaries, are summarized below:

<b>Syntax:</b>	ME WINDCATS Ws1 Ws2 Ws3 Ws4 Ws5
<b>Type:</b>	Optional, Non-repeatable

where the Ws1 through Ws5 parameters are the upper bound wind speeds of the first through fifth categories in meters per second. The upper bound values are inclusive, i.e., a wind speed equal to the value of Ws1 will be placed in the first wind speed category.

### 3.5.7 Specifying SCIM parameters

The SCIM parameters on the SCIMBYHR card specify the starting hour and sampling interval for the regular sample and an optional file name. The syntax and type of the SCIMBYHR keyword are summarized below:

<b>Syntax:</b>	ME SCIMBYHR NRegStart NRegInt NwetStart NwetInt (SfcFilnam PflFilnam)
<b>Type:</b>	Optional, Non-repeatable

where the NRegStart and NRegInt parameters specify the first hour to be sampled and the sampling interval, respectively, when performing the regular sampling. The NWetStart and NWetInt parameters are used to specify the first wet hour (i.e., with non-zero precipitation) and the wet sampling interval for wet sampling. However, since the AERMOD model currently does not include wet deposition algorithms, the wet sampling option is not operational, and the user should enter a value of zero (0) for both NWetStart and NWetInt. Optionally, the user can create output files containing the surface and profile meteorological data for the sampled hours by specifying the SfcFilnam and PflFilnam parameters. These output files are in the same format used in the summary of the first 24 hours of data included in the main output file.

In order to use the SCIM option, the user must specify the non-DEFAULT SCIM option on the CO MODELOPT card. Although the ME SCIMBYHR is an optional card, it is required when using the SCIM option. NRegStart is required to have a value from 1 through 24, i.e., the first sampled hour must be on the first day in the meteorological data file. There are no restrictions for NRegInt; however, NRegInt would generally be greater than one. For example, NRegInt could be based on the formula  $(24n+1)$ , where "n" is the number of days to skip between samples, in order to ensure a regular diurnal cycle to the sampled hours (e.g., 25 or 49).

### 3.5.8 Specify the number of years to process

The NUMYEARS keyword on the ME pathway allows the user to specify the number of years of data being processed for purposes of allocating array storage for the MAXDCONT option (see Section 3.7.2.8), with a default value of five (5) years being assumed if the optional NUMYEARS keyword is omitted. The syntax of the optional NUMYEARS keyword is summarized below:

<b>Syntax:</b>	ME NUMYEARS NumYrs
<b>Type:</b>	Optional, Non-repeatable

where NumYrs specifies the number of (full) years of meteorological data being processed.

### 3.5.9 Specify turbulence treatment options

Beginning with version 21112, the user can prompt AERMOD to set non-missing values for turbulence ( $\sigma_\theta$  or  $\sigma_w$ ) from the profile file to missing for certain conditions. These options were included to facilitate the use of meteorological data with turbulence under certain conditions. For example, these options allow for the user to use an urban meteorological site with turbulence data with the URBAN option in AERMOD without rerunning AERMET to ignore the site-specific turbulence as discussed Section 3.3 of the AERMOD Implementation Guide (EPA, 2024b). The syntax of the turbulence options is summarized below:

<b>Syntax:</b>	ME TurbOpt
<b>Type:</b>	Optional, Non-repeatable

Where TurbOpt is defined as:

- NOTURB: set  $\sigma_\theta$  and  $\sigma_w$  to missing for all hours
- NOTURBST: set  $\sigma_\theta$  and  $\sigma_w$  for stable hours only
- NOTURBCO: set  $\sigma_\theta$  and  $\sigma_w$  for convective hours only
- NOSA: set  $\sigma_\theta$  to missing for all hours
- NOSW: set  $\sigma_w$  to missing for all hours
- NOSAST: set  $\sigma_\theta$  to missing for stable hours only
- NOSWST: set  $\sigma_w$  to missing for stable hours only
- NOSACO: set  $\sigma_\theta$  to missing for convective hours only
- NOSWCO set  $\sigma_w$  to missing for convective hours only

Where stable (convective) hours are defined as hours where the Monin-Obukhov length is positive (negative). The options NOTURB and NOTURBST can be used with the DFAULT keyword on the MODELOPT pathway. The remaining options cannot be used with the DFAULT keyword and if they are used with the DFAULT keyword, AERMOD will warn the user that the option can not be used with the DFAULT keyword and the option will not set the appropriate turbulence parameters to missing, i.e., AERMOD will ignore the turbulence option. For the options that only reset turbulence under stable conditions only or convective conditions only, AERMOD will report the day and hour and turbulence parameter that is being reset to the file specified with the ERRORFIL keyword.

### 3.6 Event pathway inputs and options

EVENT processing is specifically designed to facilitate analysis of source contributions to specific events for short-term averages (less than or equal to 24 hours). These events may be design concentrations generated by the AERMOD model, occurrences of violations of an air quality standard, or user-specified events. These events are input to the AERMOD model through the EVent pathway. Each event is defined by an averaging period and specific data period, a source group, and a receptor location. Since the locations are only of interest in combination with particular averaging and data periods, the REceptor pathway is not used with EVENT processing.

There are two keywords that are used to define the events on the EV pathway. The EVENTPER keyword defines the averaging period, data period and source group, while the EVENTLOC keyword defines the receptor location for the event. Each event is also given an alphanumeric name that links the two input cards for that event.

The syntax and type of the EVENTPER and EVENTLOC keywords are summarized below:

<b>Syntax:</b>	EV EVENTPER Evname Aveper Grpid Date
<b>Syntax:</b>	EV EVENTLOC Evname <u>XR=</u> Xr <u>YR=</u> Yr (Zelev) (Zflag) Or Evname <u>RNG=</u> Rng <u>DIR=</u> Dir (Zelev) (Zflag)
<b>Type:</b>	Mandatory, Repeatable

where the parameters are as follows:

- Evname - event name (an alphanumeric string of up to 8 characters),
- Aveper - averaging period for the event (e.g., 1, 3, 8, 24 hr)
- Grpid - source group ID for the event (must be defined on SO pathway),
- Date - date for the event, input as an eight-digit integer for the ending hour of the data period (YYMMDDHH), e.g., 84030324 defines a data period ending at hour 24 on March 3, 1984. The length of the period corresponds to Aveper.
- XR= - X-coordinate (m) for the event location, referenced to a Cartesian coordinate system
- YR= - Y-coordinate (m) for the event location, referenced to a Cartesian coordinate system
- RNG= - distance range (m) for the event location, referenced to a polar coordinate system with an origin of (0., 0.)

- DIR= - radial direction (deg.) for the event location, referenced to a polar coordinate system with an origin of (0., 0.)
- Zelev - optional terrain elevation for the event location (m)
- Zflag - optional receptor height above ground (flagpole receptor) for the event location (m)

Each event is defined by the two input cards EVENTPER and EVENTLOC, and these inputs are linked by the event name, which must be unique among the events being processed in a given run. There is no particular requirement for the order of cards on the EV pathway. Note that the location for the event may be specified by either Cartesian coordinates or by polar coordinates, however, the polar coordinates must be relative to an origin of (0,0).

### 3.6.1 Using events generated by the AERMOD model

The AERMOD model has an option (CO EVENTFIL described in Section 3.2.14) to generate an input file for the AERMOD EVENT processing. When this option is used, the AERMOD model copies relevant inputs from the AERMOD control input file to the Event processing input file and generates the inputs for the EV pathway from the results of the modeling run. These events are the design concentrations identified by the OU RECTABLE keyword (see Section 2.1.1.1), such as the highest and high-second-high 24-hour averages, etc., and any threshold violations identified by the OU MAXIFILE keyword (see Section 2.1.1.2). The inputs generated by the AERMOD model correspond to the syntax described above for the EVENTPER and EVENTLOC keywords. The locations for events generated by the AERMOD model are always provided as Cartesian coordinates.

To easily identify the events generated by the AERMOD model, and to provide a mechanism for the AERMOD model to manage the events generated from the model run, a naming convention is used for the EVNAME parameter. The following examples illustrate the event names used by the AERMOD model:

- H1H01001 - High-first-high 1-hour average for source group number 1
- H2H24003 - High-second-high 24-hour average for source group number 3
- TH030010 - Threshold violation number 10 for 3-hour averages
- TH240019 - Threshold violation number 19 for 24-hour averages

The high value design concentrations are listed first in the EVENT processing input file, followed by the threshold violations (grouped by averaging period). To make it easier for the user to review the EVENT processing input file generated by the AERMOD model, and determine which events are of most concern, the actual concentration value associated with the event is included as the last field on the EVENTPER card. This field is ignored by the AERMOD model and is included only for informational purposes. The user should be aware that the same event may appear in the AERMOD model input file as both a design value and as a threshold violation, depending on the options selected and the actual results. Since the model processes the events by date sequence and outputs the results for each event as it is processed, the order of events in the output file will generally not follow the order of events in the input file, unless all of the events were generated by the MAXIFILE option.

### 3.6.2 Specifying discrete events

The user can specify discrete events by entering the EVENTPER and EVENTLOC cards as described above. The averaging period and source group selected for the event must be among those specified on the CO AVERTIME and SO SRCGROUP cards. If the EVENT processing input file was generated by the AERMOD model, the user may include additional events for those averaging periods and source groups used in the original AERMOD model run. They may also add averaging periods or define new source groups in the Event processing input file in order to define additional events.

### 3.6.3 Including event data from an external file

The user has the option of including event data from an external file by using the INCLUDED keyword on the source (EV) pathway. An EV INCLUDED card may be placed anywhere within the event pathway, after the STARTING card and before the FINISHED card (i.e., the EV STARTING and EV FINISHED cards cannot be included in the external file). The data in the included file will be processed as though it were part of the control file. The syntax and type of the INCLUDED keyword are summarized below:

<b>Syntax:</b>	EV INCLUDED Incfil
<b>Type:</b>	Optional, Repeatable

where the Incfil parameter is a character field of up to 40 characters that identifies the filename for the included file. The contents of the included file must be valid control file commands for the event pathway. If an error is generated during processing of the included file, the error message will report the line number

of the included file (see APPENDIX B). If more than one INCLUDED file is specified for the event pathway, the user will first need to determine which file the error occurred in. If the starting column of the main control input file is shifted from column 1 (see Section 2.4.8), then the control file commands in the included file must be offset by the same amount.

### 3.7 Output pathway inputs and options

The **OU**tput pathway contains keywords that define the output options for the model runs. Beginning with version 11059, a number of enhancements have been incorporated in AERMOD to more fully support the form of more recent 1-hour NO<sub>2</sub> and SO<sub>2</sub> standards, as well as the 24-hour PM<sub>2.5</sub> standard. The form of these NAAQS is similar in that they are based on a ranked percentile value averaged over the number of years processed.

The options on the **OU**tput pathway have been divided into five categories: 1) options that control different types of tabular output in the main output files of the model; 2) output files for specialized purposes that that can be generated for any pollutant and averaging period; 3) options that are specific to more recent 24-hour PM<sub>2.5</sub>, 1-hour NO<sub>2</sub>, and/or 1-hour SO<sub>2</sub> standards; 4) options related to EVENT processing; and 5) miscellaneous options. The user may select any combination of output option for a particular application.

#### 3.7.1 Selecting options for tabular printed outputs

The three tabular printed output options are controlled by the following keywords:

- RECTABLE: Controls output option for high value summary tables by receptor;
- MAXTABLE: Controls output option for overall maximum value summary tables; and
- DAYTABLE: Controls output option for tables of concurrent values summarized by receptor for each day processed.

The keywords are described in more detail in the order listed above.

The syntax and type for the RECTABLE keyword are summarized below:

<b>Syntax:</b>	OU RECTABLE Aveper <u>FIRST</u> <u>SECOND</u> ... <u>SIXTH</u> ... <u>TENTH</u> and/or <u>1ST</u> <u>2ND</u> ... <u>6TH</u> ... <u>10TH</u> and/or <u>1</u> <u>2</u> ... <u>6</u> ... <u>10</u> ... <u>N</u> ... <u>999</u>
<b>Type:</b>	Optional, Repeatable

where the Aveper parameter is the short-term averaging period (e.g., 1, 3, 8 or 24 hr or MONTH) for which the receptor table is selected, and the secondary keywords, FIRST, SECOND, etc., indicate which high values are to be summarized by receptor for that averaging period. The RECTABLE card may be repeated for each averaging period. For cases where the user wants the same RECTABLE options for all short-term averaging periods being modeled, the input may be simplified by entering the secondary keyword ALLAVE for the Aveper parameter.

In order to support the implementation of recent guidance regarding modeling to demonstrate compliance with these NAAQS, the RECTABLE keyword had been modified to allow user-specified ranks of short-term averages (for all pollutants) up to the 999th highest value. The previous version of AERMOD was limited to the 10th-highest value and also restricted the rank for the 24-hour PM<sub>2.5</sub> NAAQS to the 8th highest value (corresponding to the 98th percentile of daily values during a year).

The following example will select summaries of the highest, second highest and third highest values by receptor for all averaging periods:

```
OU RECTABLE ALLAVE FIRST SECOND THIRD
```

The model will also recognize a range of high values on the RECTABLE input card, and therefore the following card will have the effect:

```
OU RECTABLE ALLAVE FIRST-THIRD
```

The output file will include tables for only the high values selected. Tables for all source groups for a particular averaging period are grouped together, and the averaging periods are output in the order that they appear the CO AVERTIME card. For each averaging period and source group combination, the tables of high values for the receptor networks (if any) are printed first, followed by any discrete Cartesian receptors, and any discrete polar receptors.

If the CO EVENTFIL keyword has been used to generate an input file for EVENT processing, then the design values identified by the RECTABLE options, e.g., the high-second-high 24-hour average, are included in the events that are defined in the EVENT processing input file.

If the PLOTFILE (3.7.2.3) and/or MAXDCONT (0) keywords are used, the RECTABLE keyword is required and must be specified prior to these keywords in the OU pathway. The rank or high value (e.g., FIRST, SECOND, etc.) specified for each PLOTFILE must also be included on the RECTABLE keyword. There will need to be a RECTABLE entry that includes each of the high values and averaging periods for which a PLOTFILE is generated, or a single RECTABLE entry with the ALLAVE keyword and each high value specified can be used. However, because the RECTABLE only relates to short-term averaging periods, a RECTABLE entry is not required for a PLOTFILE that is generated for either an ANNUAL or a PERIOD average. When the MAXDCONT keyword is used, the UpperRank and LowerRank values of the MAXDCONT file must be within the range of ranks specified on the RECTABLE keyword. The MAXDCONT THRESH value analysis is limited to the range of ranks specified on the RECTABLE keyword (but not the individual ranks that are specified). Read more about the requirements of the of RECTABLE as it relates to the PLOTFILE and MAXDCONT keywords in Sections 3.7.2.3 and 0, respectively.

The syntax and type for the MAXTABLE keyword are summarized below:

<b>Syntax:</b>	OU MAXTABLE Aveper Maxnum
<b>Type:</b>	Optional, Repeatable

where the Aveper parameter is the short-term averaging period (e.g., 1, 3, 8 or 24 hr or MONTH) for which the receptor table is selected, and the Maxnum parameter specifies the number of overall maximum values to be summarized for each averaging period. The MAXTABLE card may be repeated for each averaging period. As with the RECTABLE keyword, for cases where the user wants the same MAXTABLE options for all short-term averaging periods being modeled, the input may be simplified by entering the secondary keyword ALLAVE for the Aveper parameter. The following example will select the maximum 50 table for all averaging periods:

```
OU MAXTABLE ALLAVE 50
```

A separate maximum overall value table is produced for each source group. The maximum value tables follow the RECTABLE outputs in the main print file. All source group tables for a particular averaging period are grouped together, and the averaging periods are output in the order that they appear on the CO AVERTIME card.

The syntax and type for the DAYTABLE keyword are summarized below:

<b>Syntax:</b>	OU DAYTABLE Avper1 Avper2 Avper3 . . .
<b>Type:</b>	Optional, Non-repeatable

where the Avper*n* parameters are the short-term averaging periods (e.g., 1, 3, 8 or 24 hr or MONTH) for which the daily tables are selected. The DAYTABLE card is non-repeatable, but as with the RECTABLE and MAXTABLE keywords, for cases where the user wants daily tables for all short-term averaging periods being modeled, the input may be simplified by entering the secondary keyword ALLAVE for the first parameter. The following example will select the daily tables for all averaging periods:

```
OU DAYTABLE ALLAVE
```

For each averaging period for which the DAYTABLE option is selected, the model will print the concurrent averages for all receptors for each day of data processed. The receptor networks (if any) are printed first, followed by any discrete Cartesian receptors, and any discrete polar receptors. Results for each source group are output. For example, if 1, 3, and 24-hour averages are calculated, and the OU DAYTABLE ALLAVE option is used, then for the first day of data processed, there will be 24 sets of tables of hourly averages (one for each hour in the day), eight sets of 3-hour averages (one for each 3-hour period in the day), and one set of 24-hour averages. The averages are printed as they are calculated by the model, but for hours where more than one averaging period is calculated (e.g., hour 24 is the end of an hourly average, a 3-hour average, and a 24-hour average), the order in which the averages are output will follow the order used on the CO AVERTIME card. Note: This option can produce very large output files, especially when used with a full year of data and very short period averages, such 1-hour and 3-hour. It should therefore be used with CAUTION.

### 3.7.2 Selecting options for special purpose output files

The AERMOD model provides options for seven types of output files for specialized purposes. These options are controlled by the following keywords that create the output file described:

- MAXIFILE - Occurrences of violations of user-specified threshold value;
- POSTFILE - Concurrent (raw) results at each receptor suitable for post-processing;
- PLOTFILE - Design values that can be imported into graphics software for plotting contours;
- TOXXFILE - Unformatted files of raw results above a threshold value with a special structure for use with the TOXX model component of TOXST;
- RANKFILE - Output values by rank for use in Q-Q (quantile) plots;
- EVALFILE - Output values, including arc-maximum normalized concentrations, suitable for model evaluation studies;
- SEASONHR - Output values by season and hour-of-day;
- MAXDCONT - Ranked values for individual source groups to determine source contributions for 24-hour PM<sub>2.5</sub>, 1-hour NO<sub>2</sub> and 1-hour SO<sub>2</sub> standards;
- MAXDAILY - Daily maximum 1-hour concentrations for a specified source group, for each day in the data period processed, useful for analyzing the 1-hour NO<sub>2</sub> and SO<sub>2</sub> NAAQS; and
- MAXDYBY-R - Summary of daily maximum 1-hour concentrations by year for each rank specified on the RECTABLE keyword.

The keywords are described in more detail in the order listed above.

### 3.7.2.1 MAXIFILE

The syntax and type for the MAXIFILE keyword are summarized below:

<b>Syntax:</b>	OU MAXIFILE Aveper Grpid Thresh Filnam (Funit)
<b>Type:</b>	Optional, Repeatable

where the Aveper parameter is the short-term averaging period (e.g., 3, 8, 24 for 3, 8 and 24-hour averages, or MONTH for monthly averages) and Grpid is the source group ID for which the MAXIFILE option is selected. The Thresh parameter is the user-specified threshold value, and Filnam is the name of the file where the MAXIFILE results are to be written. The optional Funit parameter allows the user the option of specifying the Fortran logical file unit for the output file. Please note, when specifying the FUNIT 1 to 32 are reserved for input/output files, internally computed file units range 100 to 730, and the following are

reserved for debug files: 731, 931, 932, 933, 937, 938, 939, 941, 8837, 8932, 9937, 9938, 9939, 9940.

Therefore, to ensure there will be no file conflicts, it is recommended that user-specified units begin at a large integer value such as 10,000 and increment by one. By specifying the same filename and unit for more than one MAXIFILE card, results for different source groups and/or averaging periods may be combined into a single file. If the Funit parameter is omitted, then the model will dynamically allocate a unique file unit for this file (see Section 2.1.2).

The MAXIFILE card may be repeated for each combination of averaging period and source group, and a different filename should be used for each file. The resulting maximum value file will include several header records identifying the averaging period, source group and the threshold value for that file, and a listing of every occurrence where the result for that averaging period/source group equals or exceeds the threshold value. Each of these records includes the averaging period, source group ID, date for the threshold violation (ending hour of the averaging period), the x, y, z and flagpole receptor height for the receptor location where the violation occurred, and the concentration value.

Each of the threshold violations, except for monthly averages, identify events that may be modeled for source contribution information with EVENT processing by selecting the CO EVENTFIL option (see Sections 3.2.14 and 2.1). Each of the threshold violations is included as an event on the EV pathway and is given a name of the form THxxyyyy, where xx is the averaging period, and yyyy is the violation number for that averaging period. For example, an event name of TH240019 identifies the 19th threshold violation for 24-hour averages. Monthly average threshold violations are included in the file specified on the MAXIFILE card but are not included in the EVENT processing input file since the AERMOD model currently handles only averaging periods of up to 24 hours.

The following examples illustrate the use of the MAXIFILE option:

OU MAXIFILE	24	ALL	364.0	MAX24ALL.OUT	
OU MAXIFILE	24	PSD	91.0	MAXPSD.OUT	50
OU MAXIFILE	3	PSD	365.0	MAXPSD.OUT	50
OU MAXIFILE	3	PLANT	25.0	C:\OUTPUT\MAXI3HR.FIL	
OU MAXIFILE	MONTH	ALL	10.0	MAXMONTH.OUT	

where the 3-hour example illustrates the use of a DOS pathname for the PC, and the last example illustrates the use of monthly averages. The FILNAM parameter may be up to 200 characters in length. It should also be noted that only one MAXIFILE card may be used for each averaging period/source group combination.

Note: The MAXIFILE option may produce very large files for runs involving a large number of receptors if a significant percentage of the results exceed the threshold value.

### 3.7.2.2 POSTFILE

The syntax and type for the POSTFILE keyword are summarized below:

<b>Syntax:</b>	OU POSTFILE Aveper Grpid Format Filnam (Funit)
<b>Type:</b>	Optional, Repeatable

where the Aveper parameter is the averaging period (e.g., 3, 8, 24 for 3, 8 and 24-hour averages, MONTH for monthly averages, PERIOD for period averages, or ANNUAL for annual averages) and Grpid is the source group ID for which the POSTFILE option is selected. The Format parameter specifies the format of the POSTFILE output and may either be the secondary keyword UNFORM for unformatted concentration files, or the secondary keyword PLOT to obtain formatted files of receptor locations (x- and y-coordinates) and concentrations suitable for plotting contours of concurrent values. The Filnam parameter is the name of the file where the POSTFILE results are to be written. The optional Funit parameter allows the user the option of specifying the Fortran logical file unit for the output file. Please note, when specifying the FUNIT, 1 to 32 are reserved for input/output files, internally computed file units range 100 to 730, and the following are reserved for debug files: 731, 931, 932, 933, 937, 938, 939, 941, 8837, 8932, 9937, 9938, 9939, 9940. Therefore, to ensure there will be no file conflicts, it is recommended that user-specified units begin at a large integer value such as 10,000 and increment by one. By specifying the same filename and unit for more than one POSTFILE card, results for different source groups and/or averaging periods may be combined into a single file. If the Funit parameter is omitted, then the model will dynamically allocate a unique file unit for this file (see Section 2.1.2).

The POSTFILE card may be repeated for each combination of averaging period and source group, and a different filename should be used for each file. If UNFORM is specified for the Format parameter, then the resulting unformatted file includes a constant-length record for each of the selected averaging periods calculated during the model run. The first variable of each record is an integer variable (4 bytes) containing the ending date (YYMMDDHH) for the averages on that record. The second variable for each record is an integer variable (4 bytes) for the number of hours in the averaging period. The third variable for each record is a character variable of length eight containing the source group ID. The remaining variables of each record contain the calculated average concentration values for all receptors, in the order in which they were defined in the input runstream.

The following examples illustrate the use of the POSTFILE option:

```

OU POSTFILE 24 ALL UNFORM PST24ALL.BIN
OU POSTFILE 24 PSD UNFORM PST24PSD.BIN
OU POSTFILE 3 PLANT UNFORM C:\BINOUT\PST3HR.FIL
OU POSTFILE MONTH ALL PLOT PSTMONTH.PLT
OU POSTFILE PERIOD ALL PLOT PSTANN.PLT

```

where the 3-hour example illustrates the use of a DOS pathname for the PC, and the last example illustrates the use of monthly averages. The Filnam parameter may be up to 200 characters in length. The use of separate files for each averaging period/source group combination allows the user flexibility to select only those results that are needed for post-processing for a particular run, and also makes the resulting unformatted files manageable. Note: The POSTFILE option can produce very large files and should be used with some caution. For a file of hourly values for a full year (8760 records) and 400 receptors, the resulting file will use about 14 megabytes of disk space. To estimate the size of the file (in bytes), use the following equation:

$$File\ Size\ (bytes) = \frac{\# Hrs/Yr}{\# Hrs/Ave} * (\# Rec + 4) * 4$$

Divide the result by 1000 to estimate the number of kilobytes (KB) and divide by 1.0E6 to estimate the number of megabytes (MB).

### 3.7.2.3 PLOTFILE

The syntax and type for the PLOTFILE keyword are summarized below:

<b>Syntax:</b>	OU PLOTFILE Aveper Grpid Hivalu Filnam (Funit), or OU PLOTFILE <u>PERIOD</u> Grpid Filnam (Funit) OU PLOTFILE <u>ANNUAL</u> Grpid Filnam (Funit)
<b>Type:</b>	Optional, Repeatable

where the Aveper parameter is the averaging period (e.g., 3, 8, 24 for 3, 8 and 24-hour averages, MONTH for monthly averages, PERIOD for period averages, or ANNUAL for annual averages), Grpid is the source group ID for which the PLOTFILE option is selected, and Hivalu specifies which short-term high values are to be output (FIRST for the first highest at each receptor, SECOND for the second highest at each receptor,

etc.) Note that the Hivalu parameter is not specified for PERIOD or ANNUAL averages, since there is only one period or annual average for each receptor. The Filnam parameter is the name of the file where the PLOTFILE results are to be written. The optional Funit parameter allows the user the option of specifying the Fortran logical file unit for the output file. Please note, when specifying the FUNIT 1 to 32 are reserved for input/output files, internally computed file units range 100 to 730, and the following are reserved for debug files: 731, 931, 932, 933, 937, 938, 939, 941, 8837, 8932, 9937, 9938, 9939, 9940. Therefore, to ensure there will be no file conflicts, it is recommended that user-specified units begin at a large integer value such as 10,000 and increment by one. By specifying the same filename and unit for more than one PLOTFILE card, results for different source groups and/or averaging periods may be combined into a single file. If the Funit parameter is omitted, then the model will dynamically allocate a unique file unit for this file (see Section 2.1.2).

**Note: The averaging period and high value for which a PLOTFILE is generated must also be included on the RECTABLE keyword (see Section 3.7.1). The RECTABLE keyword entry must be specified on the OU pathway prior to the PLOTFILE entry. However, a RECTABLE entry is not required for a PLOTFILE generated for the ANNUAL or PERIOD average.**

The PLOTFILE card may be repeated for each combination of averaging period, source group, and high value, and a different filename should be used for each file. The resulting formatted file includes several records with header information identifying the averaging period, source group and high value number of the results, and then a record for each receptor which contains the x and y coordinates for the receptor location, the appropriate high value at that location, and the averaging period, source group and high value number. The data are written to the file in the order of x-coord, y-coord, concentration so that the file can easily be imported into a graphics package designed to generate contour plots. Many such programs will read the PLOTFILES directly without any modification, ignoring the header records, and produce the desired plots.

The following examples illustrate the use of the PLOTFILE option:

OU	PLOTFILE	24	ALL	FIRST	PLT24ALL.FST
OU	PLOTFILE	24	ALL	SECOND	PLT24ALL.SEC
OU	PLOTFILE	24	PSD	2ND	PLTPSD.OUT 75
OU	PLOTFILE	3	PSD	2ND	PLTPSD.OUT 75
OU	PLOTFILE	3	PLANT	1ST	C:\PLOTS\PLT3HR.FIL

OU	PLOTFILE	MONTH	ALL	THIRD	PLTMONTH.OUT
OU	PLOTFILE	PERIOD	ALL		PSTANN.PLT

where the 3-hour example illustrates the use of a DOS pathname for the PC, and the last example illustrates the use of monthly averages. As illustrated by the second and third examples, the high value parameter may also be input as secondary keywords using the standard abbreviations of 1ST, 2ND, 3RD . . . 10TH. The Filnam parameter may be up to 40 characters in length. The use of separate files for each averaging period, source group, high value combination allows the user flexibility to select only those results that are needed for plotting from a particular run.

### 3.7.2.4 TOXXFILE

The syntax and type for the TOXXFILE keyword are summarized below:

<b>Syntax:</b>	OU TOXXFILE Aveper Cutoff Filnam (Funit)
<b>Type:</b>	Optional, Repeatable

where the Aveper parameter is the short-term averaging period (e.g., 1, 3, 8, 24 for 1, 3, 8 and 24-hour averages, or MONTH for monthly averages) for which the TOXXFILE option has been selected. The Cutoff (threshold) parameter is the user-specified threshold cutoff value in  $g/m^3$ , and Filnam is the name of the file where the TOXXFILE results are to be written. It is important to note that the units of the Cutoff parameter are  $g/m^3$ , regardless of the input and output units selected with the SO EMISUNIT card. The optional Funit parameter allows the user the option of specifying the Fortran logical file unit for the output file. Please note, when specifying the FUNIT 1 to 32 are reserved for input/output files, internally computed file units range 100 to 730, and the following are reserved for debug files: 731, 931, 932, 933, 937, 938, 939, 941, 8837, 8932, 9937, 9938, 9939, 9940. Therefore, to ensure there will be no file conflicts, it is recommended that user-specified units begin at a large integer value such as 10,000 and increment by one. If the Funit parameter is omitted, then the model will dynamically allocate a unique file unit for this file (see Section 2.1.2). While the TOXXFILE option may be specified for any of the short-term averaging periods that are identified on the CO AVERTIME card for a particular run, a non-fatal warning message will be generated if other than 1-hour averages are specified. This is because the TOXST model currently supports only 1-hour averages.

The TOXXFILE card may be repeated for each averaging period, but a different filename should be used for each file since the structure of the output file generated by the TOXXFILE option does not allow for a clear way to distinguish between results for different averaging periods. The resulting output file for the AERMOD model is an unformatted file with several header records identifying the title, averaging period, receptor information, and the threshold value for that file, followed by records listing every occurrence where the result for any source group for that averaging period equals or exceeds the threshold value. When one of the source groups exceeds the threshold value, the results for all source groups for that averaging period and receptor location are output. Each concentration that is output through the TOXXFILE option is paired with an integer ID variable that identifies the averaging period (hour number of the year), the source group number, and the receptor number corresponding to that value. The concentration values and corresponding ID variables are stored in buffer arrays, and the arrays are then written to the unformatted output file when full. The size of the arrays is controlled by the NPAIR PARAMETER defined in MODULE MAIN1 and is initially set at 100. At the end of the modeling run, any values remaining in the buffer arrays are written to the file, padded to the right with zeroes. The structure of the output file generated by the TOXXFILE option is described in more detail in Section 2.1.2 and in APPENDIX C. When using the TOXXFILE option, the user will normally place a single source in each source group. The user should refer to the user's guide for TOXST for further instructions on the application of the TOXXFILE option of the AERMOD model.

The following examples illustrate the use of the TOXXFILE option:

```
OU TOXXFILE 1 1.0E-5 TOXX1HR.BIN
OU TOXXFILE 24 2.5E-3 TOXX24HR.BIN 50
```

The Filnam parameter may be up to 200 characters in length. It should be noted that only one TOXXFILE card may be used for each averaging period. Note: The TOXXFILE option may produce very large files for runs involving a large number of receptors if a significant percentage of the results exceed the threshold value.

### 3.7.2.5 RANKFILE

The RANKFILE keyword outputs values by rank for use in Q-Q (quantile) plots. The MAXTABLE option must be specified first in order to use the RANKFILE option for a particular averaging period. However, the RANKFILE output differs from the results in the MAXTABLE output in that duplicate date/hour occurrences are removed. The syntax and type for the RANKFILE keyword are summarized below:

<b>Syntax:</b>	OU RANKFILE Aveper Hinum Filnam (Funit)
<b>Type:</b>	Optional, Repeatable

where the Aveper parameter is the averaging period (e.g., 3, 8, 24 for 3, 8, and 24-hour averages, or MONTH for monthly averages), and Hinum is the number of high values to be ranked. The RANKFILE keyword cannot be used with PERIOD averages. As noted above, the MAXTABLE option must be specified first for the particular Aveper, and the Hinum parameter on the RANKFILE card must be less than or equal to the Maxnum parameter on the corresponding MAXTABLE card. Since duplicate dates are removed from the RANKFILE output, the output file may contain less than the number of requested high values. The NMAX parameter, which controls the maximum number of values that can be stored, has been set initially to 400. The Filnam parameter is the name of the file (up to 200 characters) where the RANKFILE results are to be written. The optional Funit parameter allows the user the option of specifying the Fortran logical file unit for the output file. Please note, when specifying the FUNIT, 1 to 32 are reserved for input/output files, internally computed file units range 100 to 730, and the following are reserved for debug files: 731, 931, 932, 933, 937, 938, 939, 941, 8837, 8932, 9937, 9938, 9939, 9940. Therefore, to ensure there will be no file conflicts, it is recommended that user-specified units begin at a large integer value such as 10,000 and increment by one. By specifying the same filename and unit for more than one RANKFILE card, results for different averaging periods may be combined into a single file. If the Funit parameter is omitted, the model will dynamically allocate a unique file unit for this file according to the following formula:

$$\text{IRKUNT} = 100 + \text{IAVE}$$

where IRKUNT is the Fortran unit number and IAVE is the averaging period number (the order of the averaging period as specified on the CO AVERTIME card).

### 3.7.2.6 EVALFILE

The EVALFILE option is specifically designed for use in generating residuals for model evaluation studies. The EVALFILE output consists of the arc-maximum normalized concentration values for each hour of meteorology and for each source specified. The arc groupings of the receptors must be specified using the RE EVALCART keyword described above. The syntax and type for the EVALFILE keyword are summarized below:

<b>Syntax:</b>	OU EVALFILE Srcid Filnam (Funit)
<b>Type:</b>	Optional, Repeatable

where the Srcid parameter is the source ID for which EVALFILE results are requested, the Filnam parameter is the name of the file (up to 200 characters) where the EVALFILE results are to be written, and the optional Funit parameter allows the user the option of specifying the Fortran logical file unit for the output file. Please note, when specifying the FUNIT, 1 to 32 are reserved for input/output files, internally computed file units range 100 to 730, and the following are reserved for debug files: 731, 931, 932, 933, 937, 938, 939, 941, 8837, 8932, 9937, 9938, 9939, 9940. Therefore, to ensure there will be no file conflicts, it is recommended that user-specified units begin at a large integer value such as 10,000 and increment by one. By specifying the same filename and unit for more than one EVALFILE card, results for different sources may be combined into a single file. If the Funit parameter is omitted, the model will dynamically allocate a unique file unit for this file according to the following formula:

$$IELUNT = 400 + ISRC*5$$

where IELUNT is the Fortran unit number and ISRC is the source number (the order of the source as specified on the SO pathway).

For each hour of meteorological data processed and for each receptor grouping (e.g., arc), the EVALFILE option outputs five records containing the source ID, date, arc ID, arc-maximum normalized concentration (P/Q), emission rate, and other plume dispersion and meteorological variables associated with the arc-maximum. Since the EVALFILE option looks at receptor groupings, it must be used in conjunction with the EVALCART keyword described above for the RE pathway, and a fatal error is generated if no receptor groups are identified.

### 3.7.2.7 SEASONHR

The SEASONHR option is used to output a file containing the average results by season and hour-of-day. To select this option, the user must include the SEASONHR keyword on the OU pathway. The syntax, type, and order for the SEASONHR keyword are summarized below:

<b>Syntax:</b>	OU SEASONHR GroupID Filenam (FUnit)
<b>Type:</b>	Optional, Repeatable

where the GroupID parameter specifies the source group to be output, FileName specifies the name of the output file, and the optional FileUnit parameter specifies an optional file unit. Please note, when specifying the FUNIT, 1 to 32 are reserved for input/output files, internally computed file units range 100 to 730, and the following are reserved for debug files: 731, 931, 932, 933, 937, 938, 939, 941, 8837, 8932, 9937, 9938, 9939, 9940. Therefore, to ensure there will be no file conflicts, it is recommended that user-specified units begin at a large integer value such as 10,000 and increment by one. If FileUnit is left blank, then the model will dynamically assign a file unit based on the formula  $302+IGRP*10$ , where IGRP is the group index number. A sample from a SEASONHR output file is shown below:

```

* MODELING OPTIONS USED:
*   CONC           WDEP   RURAL   FLAT       TOXICS
*   FILE OF SEASON/HOUR VALUES FOR SOURCE GROUP: ALL
*   FOR A TOTAL OF   216 RECEPTORS.
*   FORMAT: (4(1X,F13.5),1X,F8.2,2X,A8,2X,I4,2X,I4,2X,I4,2X,A8)
*
*   X             Y             AVERAGE CONC   ZELEV   GRP   NHRS  SEAS  HOUR  NET ID
*   -----
      8.68241      49.24039      0.00000      0.00   ALL    87    1    1   POL1
      17.36482     98.48077      0.00000      0.00   ALL    87    1    1   POL1
      86.82409    492.40387      0.18098      0.00   ALL    87    1    1   POL1
      173.64818   984.80774      2.52520      0.00   ALL    87    1    1   POL1
      868.24091  4924.03857      2.07470      0.00   ALL    87    1    1   POL1
     1736.48181  9848.07715      0.93252      0.00   ALL    87    1    1   POL1
      17.10101     46.98463      0.00000      0.00   ALL    87    1    1   POL1
      34.20201     93.96926      0.00000      0.00   ALL    87    1    1   POL1
      171.01007   469.84631      0.15772      0.00   ALL    87    1    1   POL1
      342.02014   939.69263      2.48554      0.00   ALL    87    1    1   POL1
     1710.10071  4698.46289      6.09119      0.00   ALL    87    1    1   POL1
     3420.20142  9396.92578      4.49830      0.00   ALL    87    1    1   POL1
      25.00000     43.30127      0.00000      0.00   ALL    87    1    1   POL1
      50.00000     86.60254      0.00000      0.00   ALL    87    1    1   POL1
     250.00000   433.01270      0.10114      0.00   ALL    87    1    1   POL1
     500.00000   866.02539      2.12970      0.00   ALL    87    1    1   POL1
    2500.00000  4330.12695      2.79993      0.00   ALL    87    1    1   POL1
    5000.00000  8660.25391      1.97200      0.00   ALL    87    1    1   POL1

```

The NHRS column in the output file contains the number of non-calm and non-missing hours used to calculate the season-by-hour-of-day averages. The SEAS column is the season index, and is 1 for winter, 2 for spring, 3 for summer and 4 for fall. The records loop through hour-of-day first, and then through the seasons.

### 3.7.2.8 MAXDCONT

Beginning with version 11059, three output options have been incorporated on the OU pathway to support the 1-hour NO<sub>2</sub> and SO<sub>2</sub> standards, especially the analyses that may be required to determine a source's (or group of sources) contributions to modeled violations of the NAAQS for comparison to the Significant Impact Level (SIL). The form of the standards, based on averages of ranked values across years, complicates this analysis, especially for the 1-hour NO<sub>2</sub> and SO<sub>2</sub> standards which are based on ranked values from the distribution of daily maximum 1-hour averages. One of the options (MAXDCONT) can also be used for the 24-hour PM<sub>2.5</sub> NAAQS.

The MAXDCONT option, applicable to 24-hour PM<sub>2.5</sub>, 1-hour NO<sub>2</sub> and 1-hour SO<sub>2</sub> standards, can be used to determine the contribution of each user-defined source group to the high ranked values for a target source group, paired in time and space. This is accomplished as an internal post-processing routine after the main model run is completed. The user can specify the range of ranks to analyze, or can specify an upper bound rank, e.g., 8th-highest for 1-hour NO<sub>2</sub> (note that "upper bound" rank implies a higher concentration, while "lower bound" rank implies a lower concentration), and a threshold value, such as the NAAQS, for the target source group. The model will process each rank within the range specified but will stop after the first rank (in descending order of concentration) that is below the threshold.

The syntax, type and order of the optional MAXDCONT keyword are summarized below:

<b>Syntax:</b>	OU MAXDCONT GrpID UpperRank LowerRank FileName (FileUnit) or OU MAXDCONT GrpID UpperRank <u>THRESH</u> ThreshValue FileName (FileUnit)
<b>Type:</b>	Optional, Repeatable

where GrpID is the target or reference source group toward which contributions are being determined, UpperRank and LowerRank are the upper bound and lower bound ranks (where upper bound rank implies higher concentrations and lower bound rank implies lower concentrations), THRESH indicates that the lower bound rank is determined based on a lower concentration threshold, ThreshValue is the user-specified concentration threshold for GrpID impacts which serves as a lower bound on the range of ranks analyzed, FileName is the output file name, and (FileUnit) is the optional file unit. The filename can be up to 200 characters in length based on the default parameters in AERMOD. Double quotes (") at the beginning and end of the filename can also be used as field delimiters to allow filenames with embedded spaces. Please note, when specifying the FUNIT 1 to 32 are reserved for input/output files, internally computed file units

range 100 to 730, and the following are reserved for debug files: 731, 931, 932, 933, 937, 938, 939, 941, 8837, 8932, 9937, 9938, 9939, 9940. Therefore, to ensure there will be no file conflicts, it is recommended that user-specified units begin at a large integer value such as 10,000 and increment by one. When the THRESH option is selected AERMOD will skip the contribution analysis for any receptor where the target GrpID impact is less than the threshold and will stop processing completely after the first rank where the target GrpID values are below the threshold for all receptors. **NOTE: It is important note that the range of ranks that can be analyzed under the MAXDCONT option is limited to the range of ranks (not the individual ranks) specified on the OU RECTABLE keyword, even when the THRESH option is used in lieu of specifying a LowerRank value. AERMOD will issue a fatal error if the THRESH option is used and the range of ranks is less than or equal to 8 for the 1-hr SO<sub>2</sub> NAAQS, or less than or equal to 12 for the 1-hr NO<sub>2</sub> and 24-hr PM<sub>2.5</sub> NAAQS. Non-fatal warning messages will be generated if the THRESH option is used and the range of ranks is less than or equal to 24 for the 1-hr SO<sub>2</sub> NAAQS, or less than or equal to 28 for the 1-hr NO<sub>2</sub> and 24-hr PM<sub>2.5</sub> NAAQS. The RECTABLE keyword entry must be specified on the OU pathway prior to the MAXDCONT entry.**

When the MAXDCONT option is specified, AERMOD stores all meteorological variables in memory for each hour during the initial stage of processing in order to optimize the model runtime during the post-processing stage. Any temporally varying emissions and background concentrations, including background ozone concentrations for the OLM and PVMRM options, are also stored in memory for each hour. While optimizing runtime for the post-processing, this approach may also significantly increase the memory storage requirements of the model. In addition, since the MAXDCONT option extracts meteorological variables and other temporally-varying data stored in memory to optimize runtime, the MAXDCONT option cannot be used with the model “re-start” option using the INITFILE and SAVEFILE keywords (Section 3.2.15) on the CO pathway, or with the MULTYEAR option (Section 3.2.7) on the CO pathway.

### 3.7.2.9 MAXDAILY

The MAXDAILY option, introduced with version 11059, is applicable to 1-hour NO<sub>2</sub> and 1-hour SO<sub>2</sub> NAAQS and generates a file of daily maximum 1-hour concentrations for a specified source group, for each day in the data period processed. The MAXDAILY file provides an interim output that may be useful for analyzing the 1-hour NO<sub>2</sub> and SO<sub>2</sub> NAAQS. The syntax, type and order of the optional MAXDAILY keyword are summarized below:

<b>Syntax:</b>	OU MAXDAILY GrpID FileName (FileUnit)
<b>Type:</b>	Optional, Non-repeatable

where GrpID is the source group selected for daily maximum 1-hour values, FileName is the name of the MAXDAILY output file, and FileUnit is the optional file unit. The filename can be up to 200 characters in length based on the default parameters in AERMOD. Double quotes (“”) at the beginning and end of the filename can also be used as field delimiters to allow filenames with embedded spaces. Please note, when specifying the FUNIT, 1 to 32 are reserved for input/output files, internally computed file units range 100 to 730, and the following are reserved for debug files: 731, 931, 932, 933, 937, 938, 939, 941, 8837, 8932, 9937, 9938, 9939, 9940. Therefore, to ensure there will be no file conflicts, it is recommended that user-specified units begin at a large integer value such as 10,000 and increment by one.

### 3.7.2.10 MAXDYBYR

Another option applicable to 1-hour NO<sub>2</sub> and 1-hour SO<sub>2</sub> NAAQS introduced with version 11059, the MXDYBYR keyword, generates a summary of daily maximum 1-hour concentrations by year for each rank specified on the RECTABLE keyword. The ranks included in the MXDYBYR file are the ranks used in the MAXDCONT postprocessing option. The syntax, type and order of the optional MXDYBYR keyword are summarized below:

<b>Syntax:</b>	OU MXDYBYR GrpID FileName (FileUnit)
<b>Type:</b>	Optional, Non-repeatable

where GrpID is the source group selected for daily maximum 1-hour values summarized by year, FileName is the name of the MXDYBYR output file, and FileUnit is the optional file unit. The filename can be up to 200 characters in length based on the default parameters in AERMOD. Double quotes (“”) at the beginning and end of the filename can also be used as field delimiters to allow filenames with embedded spaces. Please

note, when specifying the FUNIT 1 to 32 are reserved for input/output files, internally computed file units range 100 to 730, and the following are reserved for debug files: 731, 931, 932, 933, 937, 938, 939, 941, 8837, 8932, 9937, 9938, 9939, 9940. Therefore, to ensure there will be no file conflicts, it is recommended that user-specified units begin at a large integer value such as 10,000 and increment by one.

### 3.7.3 EVENT processing options

EVENT processing in the AERMOD model is designed specifically to perform source contribution analyses for short-term average (less than or equal to 24-hour) events. The events may either be generated by the AERMOD model, or they may be user-specified events, or both. Because of this rather narrow focus of applications, the output options are limited to a single keyword. The EVENTOUT keyword controls the level of detail in the source contribution output from the EVENT model. The syntax and type of the EVENTOUT keyword are summarized below:

<b>Syntax:</b>	OU EVENTOUT <u>SOCONT</u> <u>DETAIL</u>
<b>Type:</b>	Mandatory, Non-repeatable

where the SOCONT secondary keyword specifies the option to produce only the source contribution information in the output file, and the DETAIL secondary keyword specifies the option to produce more detailed summaries in the output file. The SOCONT option provides the average concentration (or total deposition) value (i.e., the contribution) from each source for the period corresponding to the event for the source group. The basic source contribution information is also provided with the DETAIL option. In addition, the DETAIL option provides the hourly average concentration (or total deposition) values for each source for every hour in the averaging period, and a summary of the hourly meteorological data for the event period. In general, the DETAIL option produces a larger output file than the SOCONT file, especially if there are a large number of sources. There is no default setting for the EVENTOUT options.

### 3.7.4 Miscellaneous output options

The optional SUMMFILE keyword can be used to generate a separate formatted output file containing the summary of high ranked values included at the end of the standard 'aermod.out' file. The optional FILEFORM keyword can be used to specify the use of exponential notation, rather than fixed format as currently used, for results that are output to separate result files. The optional NOHEADER keyword can be used to suppress file headers in formatted output file options. These new options are described below.

The syntax, type, and order of the optional SUMMFILE keyword are summarized below:

<b>Syntax:</b>	OU SUMMFILE SummFileName
<b>Type:</b>	Optional, Non-repeatable

where the SummFileName is the name of the external file containing the summary of high ranked values. The SUMMFILE filename can be up to 200 characters in length based on the default parameters in AERMOD. Double quotes (“”) at the beginning and end of the filename can also be used as field delimiters to allow filenames with embedded spaces. In addition to the summary of high ranked values, the SUMMFILE also includes the “MODEL SETUP OPTIONS SUMMARY” page from the main ‘aermod.out’ file.

The syntax, type, and order of the optional FILEFORM keyword are summarized below:

<b>Syntax:</b>	OU FILEFORM <u>EXP</u> or <u>FIX</u>
<b>Type:</b>	Optional, Non-repeatable

where the EXP parameter specifies that output results files will use exponential-formatted values, and the FIX parameter specifies that the output results files will use fixed-formatted values. The default option is to use fixed-formatted results, so use of FILEFORM = ‘FIX’ is extraneous. Note that AERMOD only examines the first three characters of the input field, so that the full terms of ‘EXPONENTIAL’ or ‘FIXED’ can also be used. The format specified on this optional keyword is applicable to PLOTFILES, plot formatted POSTFILES, MAXIFILES, RANKFILES, and SEASONHR files, but will not affect the format of results in the standard ‘aermod.out’ file or the optional SUMMFILE. The FILEFORM optional may be useful to preserve precision in applications with relatively small impacts, especially for the purpose of post-processing hourly concentrations using the POSTFILE option. The option may also be useful for applications with relatively large impacts that may overflow the Fortran format specifier of F13.5 used for fixed-formatted outputs. AERMOD will issue a warning message if values that exceed the range allowed for fixed format are detected unless the FILEFORM EXP option has been selected.

The syntax, type, and order of the optional NOHEADER keyword are summarized below:

<b>Syntax:</b>	OU NOHEADER FileType1 FileType2 FileType3 ... FileTypeN or OU NOHEADER <u>ALL</u>
<b>Type:</b>	Optional, Non-repeatable

where FileTypeN identifies the keywords for formatted output files for which the file headers will be suppressed, which may include the includes the following file types: POSTFILE, PLOTFILE, MAXIFILE, RANKFILE, SEASONHR, MAXDAILY, MXDYBYR, and MAXDCONT. The keyword ALL may be used to specify that header records will be suppressed for ALL applicable output file types.

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*Note: Many of the references listed can be found on the U.S. EPA SCRAM website at the following url:*  
<https://www.epa.gov/scram>.

## APPENDIX A. Functional keyword/parameter reference

This appendix provides a functional reference for the primary keywords and related secondary keywords and parameters used by the input control files for the AERMOD model. The keywords are organized by functional pathway. Except where noted, there is not a required order that the primary keywords within a pathway must be specified. Similarly, there is not a required order in which secondary keywords that follow a primary keyword must be specified, unless noted. However, AERMET assumes that user-entered values for parameters following a primary keyword are specified in the order listed in the tables below. The pathways used by the model are as follows, in the order in which they appear in the control file and in the tables that follow:

- CO** - for specifying overall job **C**ontrol options;
- SO** - for specifying **S**ource information;
- RE** - for specifying **R**eceptor information;
- ME** - for specifying **M**eteorology information and options;
- EV** - for specifying **E**vent information and options;
- OU** - for specifying **O**utput options.

The pathways and keywords are presented in the same order as in the Detailed Keyword Reference in Section 3.0, and in the Quick Reference at the end of the manual.

Two types of tables are provided for each pathway. The first table lists all of the keywords for that pathway, identifies each keyword as to its type (either mandatory or optional and either repeatable or non-repeatable), and provides a brief description of the function of the keyword. The second type of table, which takes up more than one page for most pathways, presents the parameters for each keyword, in the order in which they should appear in the control file where order is important, and describes each parameter in detail.

The following convention is used for identifying the different types of input parameters. Parameters corresponding to secondary keywords which should be input "as is" are listed on the tables with all capital letters and are underlined, although none of the inputs to AERMOD are treated as case sensitive. Other parameter names are given with an initial capital letter and are not input "as is." In all cases, the parameter names are intended to be descriptive of the input variable being represented, and they often correspond to the Fortran variable names used in the AERMOD code. Parentheses around a parameter indicate that the parameter is optional for that keyword. The default that is taken when an optional parameter is left blank is explained in the discussion for that parameter.

**Table A-1. Description of Control Pathway Keywords**

<b>CO Keywords</b>	<b>Type</b>	<b>Keyword Description</b>
STARTING	M – N	Identifies the start of CONTROL pathway inputs
TITLEONE	M – N	First line of title for output
TITLETWO	O – N	Optional second line of title for output
MODELOPT	M – N	Job control and dispersion options
AVERTIME	M – N	Averaging time(s) to process
URBANOPT	O – R	Specifies parameters for urban dispersion option
POLLUTID	M – N	Identifies type of pollutant being modeled
HALFLIFE <sup>1</sup>	O – N	Optional half life used for exponential decay
DCAYCOEF <sup>1</sup>	O – N	Optional decay coefficient
GASDEPDF	O – N	Option to override default parameters for gas dry deposition
GASDEPVD	O – N	Option to specify deposition velocity for gas dry deposition
GDLANUSE	O – N	Specify land use categories by sector for gas dry deposition
GDSEASON	O – N	Specify seasonal definitions for gas dry deposition
LOW_WIND	O – N	ALPHA option for low wind conditions that allows user to specify values for minimum sigma-v, minimum wind speed, and maximum meander factor
AWMADWNW	O – N	Specifies downwash options developed by AWMA
ORD_DWNW	O – N	Specifies downwash options developed by ORD
NO2EQUIL	O – N	Option to override default NO <sub>2</sub> /NO <sub>x</sub> equilibrium ratio for PVMRM, OLM, or TTRM/TTRM2
NO2STACK	O – N	Option to specify default in-stack NO <sub>2</sub> /NO <sub>x</sub> equilibrium ratio for PVRM, OLM, TTRM/TTRM2, and GRSM options; may be overridden by NO2RATIO option on SO pathway
NOX_FILE	O – N	Specifies hourly NO <sub>x</sub> file for the GSRM option
NOX_UNIT	O – N	Option to specify units for temporally varying NO <sub>x</sub> concentrations for the NOX_VALS keyword used with the GSRM option for estimating NO <sub>2</sub>
NOXVALUE	O – N	Specifies background value of NO <sub>x</sub> for the GSRM option for estimating NO <sub>2</sub>
NOXSECTR	O – N	Option to specify wind sectors for use in varying background NO <sub>x</sub> concentrations by wind direction for use with the GSRM option for estimating NO <sub>2</sub> ; can be used with the NOX_FILE, NOXVALUE, and NOX_VALS options
NOX_VALS	O – R	Option to specify temporally varying NO <sub>x</sub> concentrations for use with the GSRM option for estimating NO <sub>2</sub>
ARMRATIO	O – N	Option to override default minimum and maximum (equilibrium) ratios for the ARM2 option
O3SECTOR	O – N	Specifies optional wind sectors for use in varying background ozone (O <sub>3</sub> ) concentrations by wind direction for use with OLM, PVMRM, TTRM/TTRM2,

		and GRSM options; can be used with the OZONEFIL, OZONEVAL, and O3VALUES options
OZONEFIL	O – N	Specifies filename for hourly ozone file for use with OLM, PVMRM, TTRM/TTRM2, and GRSM options
OZONEVAL	O – R	Specifies background value of ozone for use with OLM, PVMRM, TTRM/TTRM2, and GRSM options
O3VALUES	O – R	Option to specify temporally varying ozone concentrations for use with OLM, PVMRM, TTRM/TTRM2, and GRSM options for estimating NO <sub>2</sub>
OZONUNIT	O – N	Option to specify units for temporally varying ozone concentrations for the O3VALUES keyword
FLAGPOLE	O – N	Specifies whether to accept receptor heights above local terrain (m) for use with flagpole receptors, and allows for default flagpole height to be specified
ARCFTOPT	O – N	Option to apply aircraft plume rise to AREA and VOLUME source types identified as aircraft using the ARCFTSRC keyword in the SO pathway
RUNORNOT	M – N	Identifies whether to run model or process setup information only
EVENTFIL <sup>2</sup>	O – N	Specifies whether to generate an input file for EVENT model
SAVEFILE <sup>3</sup>	O – N	Option to store intermediate results for restart of model after user or system interrupt
INITFILE <sup>3</sup>	O – N	Option to initialize model from intermediate results generated by SAVEFILE option
MULTYEAR <sup>3</sup>	O – N	Option to process multiple years of meteorological data (one year per run) and accumulate high short-term values across years
DEBUGOPT	O – N	Option to generate detailed result and meteorology files for debugging purposes
ERRORFIL	O – N	Option to generate detailed error listing file
FINISHED	M – N	Identifies the end of CONTROL pathway inputs

Type: M – Mandatory, O – Optional, N – Non-Repeatable, R – Repeatable

- 1) Either HALFLIFE or DCAYCOEF may be specified. If both cards appear a warning message will be issued and the first value entered will be used in calculations. The DFAULT option assumes a half-life of 4 hours for SO<sub>2</sub> modeled in urban mode.
- 2) The EVENTFIL keyword controls whether to generate an input file for EVENT processing. The primary difference between AERMOD “regular” processing and EVENT processing by AERMOD is in the treatment of source group contributions. The AERMOD model treats the source groups independently, whereas EVENT processing determines individual source contributions to particular events, such as the design concentrations determined from AERMOD, or user specified events. By specifying the EVENTFIL keyword, an input control file will be generated that can be used directly for EVENT processing. The events included in the generated EVENT processing input file are defined by the RECTABLE and MAXIFILE keywords on the OU pathway and are placed in the EVENT pathway.
- 3) The SAVEFILE and INITFILE keywords work together to implement the model's re-start capabilities. Since the MULTYEAR option utilizes the re-start features in a special way to

accumulate high short-term values from year to year, it cannot be used together with the SAVEFILE or INITFILE keyword in the same model run.

**Table A-2. Description of Control Pathway Keywords and Parameters**

Keyword	Parameters	
TITLEONE	Title1	
where:	Title1	First line of title for output, character string of up to 68 characters (additional characters can be included on the TITLEONE keyword, but only the first 68 characters are printed in the output files).
TITLETWO	Title2	
where:	Title2	Optional second line of title for output, character string of up to 68 characters (any additional characters are not printed).
MODELOPT	<u>DFAULT</u> <u>ALPHA</u> <u>BETA</u> <u>CONC</u> <u>AREADPLT</u> <u>FLAT</u> <u>NOSTD</u> <u>NOCHKD</u> <u>NOWARN</u> <u>SCREEN</u> <u>SCIM</u> <u>NOMINO3</u> <u>RLINEFDH</u> <u>ELEV</u> <u>WARNCHKD</u> <u>NOURTRAN</u> <u>VECTORWS</u> <u>PSDCREDIT</u> <u>FASTALL</u> <u>FASTAREA</u> <u>GSRM</u> <u>TTRM</u> <u>TTRM2</u> <u>PVMRM</u> <u>OLM</u> <u>ARM2</u> <u>DEPOS</u> <u>DDEP</u> <u>WDEP</u> <u>DRYDPLT</u> <u>WETDPLT</u> <u>NODRYDPLT</u> <u>NOWETDPLT</u> <u>AREAMNDR</u> <u>HBP</u>	
where:	<u>DFAULT</u>  <u>ALPHA</u>  <u>BETA</u>  <u>CONC</u> <u>DEPOS</u> <u>DDEP</u> <u>WDEP</u> <u>AREADPLT</u>  <u>FLAT</u>	<p>Specifies that the regulatory default options will be used; note that specification of the DFAULT option will override some non-DFAULT options that may be specified in the input file, while other non-DFAULT options will cause fatal errors when DFAULT is specified (see below for details).</p> <p>Non-regulatory option flag that allows the input control file to include research/experimental options for review and evaluation by the user community; (e.g., LOW_WIND, PSDCREDIT, ORD_DWNW, AWMADWNW, PLATFORM, METHOD 2 particle deposition, gas deposition, RLINEFDH, and RLINEXT with options for modeling barriers and depressed roadways) and cannot be used with DFAULT keyword.</p> <p>Non-regulatory option flag that allows the input control file to include options that have been vetted through the scientific community and are waiting to be promulgated as regulatory options. Prior to promulgation, BETA options require alternative model approval for use in regulatory applications and cannot be used with DFAULT keyword.</p> <p>Specifies that concentration values will be calculated.</p> <p>Specifies that total deposition flux values will be calculated.</p> <p>Specifies that dry deposition flux values will be calculated.</p> <p>Specifies that wet deposition flux values will be calculated.</p> <p>Specifies use of non-regulatory method for optimized plume depletion due to dry removal mechanisms for area sources (cannot be used when the DFAULT keyword is specified).</p> <p>Specifies that the non-regulatory option of assuming flat terrain will be used; Note that FLAT and ELEV may be specified in the same model run to allow specifying the non-regulatory FLAT terrain option on a source-by-source basis; FLAT sources are identified by specifying the keyword <u>FLAT</u> in place of the source elevation field on the SO LOCATION</p>

Keyword	Parameters	
	<u>ELEV</u>  <u>NOSTD</u>  <u>NOCHKD</u>  <u>WARNCHKD</u>  <u>NOWARN</u>  <u>SCREEN</u>  <u>SCIM</u>  <u>PVMRM</u>  <u>OLM</u>  <u>ARM2</u>  <u>TTRM</u>	<p>keyword (cannot be used simultaneously with the DFAULT keyword)..</p> <p>Specifies that the default option of assuming elevated terrain will be used; Note that FLAT and ELEV may be specified in the same model run to allow specifying the non-regulatory FLAT terrain option on a source-by-source basis (the ELEV option is set as a regulatory option with the DFAULT keyword).</p> <p>Specifies that the non-regulatory option of no stack-tip downwash will be used (cannot be used with the DFAULT keyword).</p> <p>Specifies that the non-regulatory option of suspending date checking will be used for non-sequential meteorological data files (cannot be used with the DFAULT keyword).</p> <p>Specifies that the option of issuing warning messages rather than fatal errors will be used for non-sequential meteorological data files.</p> <p>Specifies that the option of suppressing the detailed listing of warning messages in the main output file will be used (the number of warning messages is still reported, and warning messages are still included in the error file controlled by the CO ERRORFIL keyword).</p> <p>Non-regulatory option for running AERMOD in a screening mode for AERSCREEN will be used (cannot be used when the DFAULT keyword is specified).</p> <p>Sampled Chronological Input Model – non-regulatory option used only with the ANNUAL average option to reduce runtime by sampling meteorology at a user-specified regular interval; SCIM sampling parameters must be specified on the ME pathway (cannot be used with the DFAULT keyword).</p> <p>Specifies that the Plume Volume Molar Ratio Method (PVMRM) for NO<sub>2</sub> conversion will be used (regulatory option, can be used simultaneously with DFAULT); cannot be used with OLM, ARM2, or GRSM; cannot be used with TTRM without TTRM2.</p> <p>Specifies that the Ozone Limiting Method (OLM) for NO<sub>2</sub> conversion will be used (regulatory option, can be used simultaneously with DFAULT keyword); cannot be used with PVMRM, ARM2, or GRSM; cannot be used with TTRM without TTRM2.</p> <p>Specifies that the Ambient Ratio Method - 2 (ARM2) for NO<sub>2</sub> conversion will be used (regulatory option, can be used with DFAULT keyword); cannot be used with PVMRM, OLM, or GRSM; cannot be used with TTRM without TTRM2.</p> <p>Specifies that the non-regulatory Travel Time Reaction Method (TTRM) will be used for NO<sub>2</sub> conversion (non-regulatory alpha option, requires the ALPHA keyword and cannot be used with the DFAULT keyword); cannot be used with PVMRM, OLM, ARM2 without TTRM2; cannot be used with</p>

Keyword	Parameters	
	<u>TTRM2</u>  <u>GRSM</u>  <u>PSDCREDIT</u>  <u>FASTALL</u>  <u>FASTAREA</u>  <u>DRYDPLT</u>  <u>NODRYDPLT</u>  <u>WETDPLT</u>  <u>NOWETDPLT</u>	<p>GRSM; cannot be used with TTRM2 without PVMRM, OLM, or ARM2.</p> <p>Specifies that the non-regulatory Travel Time Reaction Method (TTRM) will be paired with OLM, PVMRM, or ARM2 for NO<sub>2</sub> conversion (non-regulatory alpha option, requires the ALPHA keyword and cannot be used with the DFAULT keyword); cannot be used with TTRM alone or GRSM; must be paired with one of PVMRM, OLM, or ARM2</p> <p>Specifies that the Generic Reaction Set Method (GRSM) will be used for NO<sub>2</sub> conversion; cannot be used with PVMRM, OLM, TTRM, TTRM2, or ARM2.</p> <p>Specifies that the non-regulatory ALPHA option will be used to calculate the increment consumption with PSD credits using the PVMRM option (cannot be used with the DFAULT keyword).</p> <p>Non-regulatory option to optimize model runtime through use of an alternative implementation of horizontal meander for POINT and VOLUME sources; also optimizes model runtime for AREA/AREAPOLY/AREACIRC/LINE, OPENPIT, RLINE, and RLINEXT sources (formerly associated with TOXICS option, now controlled by the FASTAREA and FASTALL option, cannot be used with the DFAULT keyword).</p> <p>Non-regulatory option to optimize model runtime through hybrid approach for AREA/ AREAPOLY/AREACIRC and OPENPIT sources (formerly associated with TOXICS option, cannot be used with the DFAULT keyword).</p> <p>Option to incorporate dry depletion (removal) processes associated with dry deposition algorithms; this requires specification of dry deposition source parameters and additional meteorological variables; dry depletion will be used by default if dry deposition algorithms are invoked; cannot be used with NODRYDPLT.</p> <p>Option to disable dry depletion (removal) processes associated with dry deposition algorithms; cannot be used with DRYDPLT.</p> <p>Option to incorporate wet depletion (removal) processes associated with wet deposition algorithms; this requires specification of wet deposition source parameters and additional meteorological variables; wet depletion will be used by default if wet deposition algorithms are invoked; cannot be used with NOWETDPLT.</p> <p>Option to disable wet depletion (removal) processes associated with wet deposition algorithms; cannot be used with WETDPLT.</p> <p>Non-regulatory option to ignore the transition from nighttime urban boundary layer to daytime convective boundary layer</p>

Keyword	Parameters	
	<u>NOURBTRAN</u>  <u>VECTORWS</u>  <u>NOMINO3</u>  <u>RLINEFDH</u>  <u>AREAMNDR</u>  <u>HBP</u>	<p>(i.e., to revert to the urban option as implemented prior to version 11059) (cannot be used with the DFAULT keyword).</p> <p>Option to specify that input wind speeds are vector mean (or resultant) wind speeds, rather than scalar means. Under the VECTORWS option, the adjustments to wind speeds based on Equation 112 of the AERMOD Model Formulation document (EPA, 2024a) will be applied (can be used with the DFAULT keyword).</p> <p>Option to remove the minimum ozone used for Tier 2 &amp; 3 NO<sub>2</sub> options. Without this option, AERMOD will use a minimum value of 40 ppb of ozone for nighttime stable conditions, regardless of the value in an hourly input file (can be used with the DFAULT keyword).</p> <p>Option to have wind profile calculations without a displacement height for RLINE and RLINEXT source types. This makes the wind profile closer to other AERMOD source types, which do not use a displacement height in wind profile (requires the ALPHA keyword and cannot be used with the DFAULT keyword).</p> <p>Option to apply plume meander to AREA, AREAPOLY, AREACIRC, and LINE source types. Note that AREAMNDR and FASTAREA or FASTALL can be specified in the same model run, but in that case, meander will not be applied to those source types listed.</p> <p>Option for highly buoyant plumes (HBP) when plume penetrates the top of the convective mixed layer. Limited to point source types (POINT, POINTHOR, POINTCAP). Compares convective mixing height for the current hour and next hour to determine how much of the penetrated plume has been captured by the CBL by the end of the current hour (requires the ALPHA keyword and cannot be used with the DFAULT keyword).</p>
AVERTIME	Time1 Time2 ... TimeN <u>MONTH</u> <u>PERIOD</u> or <u>ANNUAL</u>	
where:	TimeN <u>MONTH</u> <u>PERIOD</u>  <u>ANNUAL</u>	<i>N</i> th optional averaging time ( <u>1</u> , <u>2</u> , <u>3</u> , <u>4</u> , <u>6</u> , <u>8</u> , <u>12</u> , or <u>24</u> -hr) Option to calculate <u>MONTH</u> ly averages. Option to calculate averages for the entire data <u>PERIOD</u> ; for the <u>MULTYEAR</u> option, the summary of highest <u>PERIOD</u> averages is based on the highest <u>PERIOD</u> average across the individual years processed with <u>MULTYEAR</u> . Option to calculate <u>ANNUAL</u> averages (assumes complete years); for multi-year meteorological data files, with and without the <u>MULTYEAR</u> option, the multi-year average of the <u>ANNUAL</u> values is reported.
URBANOPT	For multiple urban areas:	



Keyword	Parameters	
where:	Haflif	Half-life used for exponential decay (s).
DCAYCOEF	Decay	
where:	Decay	Decay coefficient for exponential decay ( $s^{-1}$ ) = 0.693/HAFLIF
GASDEPDF	React F_Seas2 F_Seas5 (Refpoll)  <b>The ALPHA option must be specified as a MODELOPT on the CO pathway to use the GASDEPDF keyword.</b>	
where:	React F_Seas2 F_Seas5 (Refpoll)	Value for pollutant reactivity factor ( $f_0$ ). Fraction (F) of maximum green LAI for seasonal category 2. Fraction (F) of maximum green LAI for seasonal category 5. Optional name of reference pollutant.
GASDEPVD	Uservd  <b>The ALPHA option must be specified as a MODELOPT on the CO pathway to use the GASDEPVD keyword.</b>	
where:	Uservd	User-specified dry deposition velocity (m/s) for gaseous pollutants.
GDLANUSE	Sec1 Sec2 ... Sec36  <b>The ALPHA option must be specified as a MODELOPT on the CO pathway to use the GDLANUSE keyword.</b>	
where:	Sec1  Sec2 . . . Sec36	Land use category for winds blowing toward sector 1 (10 degrees). Land use category for winds blowing toward sector 2 (20 degrees).  Land use category for winds blowing toward sector 36 (360 degrees).
GDSEASON	Jan Feb ... Dec  <b>The ALPHA option must be specified as a MODELOPT on the CO pathway to use the GDSEASON keyword.</b>	
where:	Jan  . . . . Dec	Seasonal category for January: 1 = Midsummer/Lush vegetation; 2 = Autumn/Unharvested cropland; 3 = Late autumn after harvest or Winter with no snow; 4 = Winter with continuous snow cover; or 5 = Transitional spring/partial green coverage/short annuals)  Seasonal category for December.
LOW_WIND	SVmin (WSmin) or	

Keyword	Parameters	
	SVmin WSmin (FRANmax) or SVmin WSmin FRANmax (SWmin) or SVmin WSmin FRANmax SWmin (BigT) or SVmin WSmin FRANmax SWmin BigT (FRANmin) or SVmin WSmin FRANmax SWmin BigT FRANmin (PBAL)  <b>The ALPHA option must be specified as a MODELOPT on the CO pathway to use the LOW_WIND keyword</b>	
where:	SVmin WSmin FRANmax SWmin BigT  FRANmin  <u>PBAL</u>	Minimum value of sigma-v, within a range of 0.01 to 1.0 m/s. Minimum value of wind speed, within a range of 0.01 to 1.0 m/s. Maximum value for meander factor, within a range of 0.0 to 1.0. Minimum value of sigma-w, within a range of 0.0 to 3.0 m/s. Time period (BigT) used to calculate the time scale TRAN, within a range of 0.5 to 48.0 hours. Minimum value for meander factor, within a range of 0.0 to 1.0 but must be less than or equal to FRANmax. Alternate momentum balance approach to determine plume meander which overrides the default energy balance approach.
AWMADWNW	<u>AWMAUEFF</u> and/or <u>AWMAENTRAIN</u> and/or (( <u>AWMAUTURB</u> or <u>AWMAUTURBHX</u> ) w/wo <u>STREAMLINE(D)</u> )  <b>The ALPHA option must be specified as a MODELOPT on the CO pathway to use the AWMADWNW keyword.</b>	
where:	<u>AWMAUEFF</u>  <u>AWMAENTRAIN</u>  <u>AWMAUTURB</u>  <u>AWMAUTURBHX</u>  <u>STREAMLINE</u>	Redefines the height at which the wind speed is taken from the profile wind speed used in the calculation of concentrations from the primary plume. Changes beta (B) entrainment coefficient for PRIME downwash from default value of 0.60 to 0.35. Uses alternative formulations for turbulence enhancement and velocity deficit calculations. Uses distance-based plume rise at the downwind distance X for calculations. Reduces dispersion in the wake of streamlined structures such as storage tanks and cooling towers.
ORD_DWNW	<u>ORDUEFF</u> and/or <u>ORDTURB</u> and/or <u>ORDCAV</u>  <b>The ALPHA option must be specified as a MODELOPT on the CO pathway to use the ORD_DWNW keyword.</b>	
where:	<u>ORDUEFF</u>  <u>ORDTURB</u>  <u>ORDCAV</u>	Redefines the height at which the wind speed is taken from the profile wind speed used in the calculation of concentrations from the primary plume. Redefines the maximum value of the ambient turbulence intensity in the wake, reduced from 0.07 to 0.06.

Keyword	Parameters	
		Redefines the initial vertical dispersion, $\sigma_z$ , of the re-emitted plume at the cavity boundary to equal the $\sigma_z$ of the cavity plume.
NO2EQUIL	NO2Equil	
where:	NO2Equil	Equilibrium ratio of NO <sub>2</sub> /NO <sub>x</sub> for the PVMRM, OLM, and TTRM options; between 0.1 and 1.0, inclusive (default is 0.9).
NO2STACK	NO2Ratio	
where:	NO2Ratio	Default in-stack ratio of NO <sub>2</sub> /NO <sub>x</sub> for PVMRM, OLM, TTRM, and GSRM options, which may be overridden by the NO2RATIO keyword on SO pathway.  <u>NOTE:</u> Beginning with version 11059, AERMOD no longer assumes a default in-stack ratio of 0.1 for the OLM option.
ARMRATIO	ARM2_Min    ARM2_Max	For ARM2 Option
where:	ARM2_Min ARM2_Max	Minimum ARM2 ambient ratio, with a default value of 0.50. Maximum ARM2 ambient ratio, with a default value of 0.90.
O3SECTOR	StartSect1 StartSect2 . . . StartSectN, where N is ≤ 6	
where:	StartSect1 StartSect2 . . StartSectN	Starting direction for the first sector. Starting direction for the second sector. . . Starting direction for the last sector.  <u>NOTE:</u> The minimum sector width allowed is 30 degrees, and warning messages will be issued for sector widths less than 60 degrees. Sector-varying O <sub>3</sub> concentrations will be selected based on the flow vector, i.e., the downwind direction based on the wind direction specified in the surface meteorological data file.
OZONEFIL	O3FileName (O3Units) (O3Format) (without O3SECTORs) or SECTx O3FileName (O3Units) (O3Format) (with O3SECTORs)	
where:	SECTx  O3FileName  (O3Units) (O3Format)	Applicable sector ( $x = 1$ to 6) defined on the CO O3SECTOR keyword, if specified. Filename for hourly ozone data file (YR, MN, DY, HR, O3Value). Units of ozone data (PPM, PPB, or UG/M3); default is UG/M3. Fortran format statement to read ozone file; default is FREE-format, i.e., comma or space-delimited data fields (Yr Mn Dy Hr O3Value). The O3Format parameter must include open and close parentheses, the date variables must be read as integers (Fortran I format), and the O3Value must be read as real (Fortran F, E, or D format), e.g., '(412,F8.3)'. The year



Keyword	Parameters	
NOXSECTR	StartSect1 StartSect2 . . . StartSectN, where N is ≤ 6	
where:	StartSect1 StartSect2 . . StartSectN	Starting direction for the first sector. Starting direction for the second sector. . . Starting direction for the last sector.  <u>NOTE:</u> The minimum sector width allowed is 30 degrees, and warning messages will be issued for sector widths less than 60 degrees. Sector-varying NOX concentrations will be selected based on the flow vector, i.e., the downwind direction based on the wind direction specified in the surface meteorological data file.
NOX_FILE	NOXFileName (NOXUnits) (NOXFormat) (without NOXSECTRs) or SECTx NOXFileName (NOXUnits) (NOXFormat) (with NOXSECTRs)	
where:	SECTx  NOXFileName  (NOXUnits) (NOXFormat)	Applicable sector (x = 1 to 6) defined on the CO O3SECTOR keyword, if specified. Filename for hourly NOX data file (YR, MN, DY, HR, NOXValue). Units of NOX data (PPM, PPB, or UG/M3); default is UG/M3. Fortran format statement to read NOX file; default is FREE-format, i.e., comma or space-delimited data fields (Yr Mn Dy Hr NOXValue). The NOXFormat parameter must include open and close parentheses, the date variables must be read as integers (Fortran I format), and the NOXValue must be read as real (Fortran F, E, or D format), e.g., '(412,F8.3)'. The year may be specified as a 2-digit or 4-digit year, and the data period in the NOX_FILE must match the data period in the meteorological data files.
NOXVALUE	NOXValue (NOXUnits) (without NOXSECTRs) or SECTx NOXValue (NOXUnits) (with NOXSECTRs)	
where:	SECTx  NOXValue  (NOXUnits)	Applicable sector (x = 1 to 6) defined on the CO NOXSECTR keyword, if specified. Background ozone concentration; also used to substitute for missing data in OZONEFIL. Units of ozone value (PPM, PPB, or UG/M3); default is UG/M3.
NOX_VALS	NOXFlag NOXvalues(i), i=1, n (without NOXSECTRs) or SECTx NOXFlag NOXvalues(i), i=1, n (with NOXSECTRs)	
where:	SECTx  NOXFlag	Applicable sector (x = 1 to 6) defined on the CO O3SECTOR keyword, if specified. Background ozone values flag:

Keyword	Parameters	
	NOXvalues	<p><u>ANNUAL</u> for annual; <u>SEASON</u> for seasonal; <u>MONTH</u> for monthly; <u>HROFDY</u> for hour-of-day; <u>WSPEED</u> for wind speed category; <u>SEASHR</u> for season-by-hour; <u>HRDOW</u> for emission rates vary by hour-of-day, and day-of-week [M-F, Sat, Sun]; <u>HRDOW7</u> for emission rates vary by hour-of-day, and the seven days of the week [M, Tu, W, Th, F, Sat, Sun]; <u>SHRDOW</u> for season by hour-of-day by day-of-week (M-F,Sat,Sun); <u>SHRDOW7</u> for season by hour-of-day by day-of-week (M,Tu,W,Th,F,Sat,Sun); <u>MHRDOW</u> for month by hour-of-day by day-of-week (M-F,Sat,Sun); <u>MHRDOW7</u> for month by hour-of-day by day-of-week (M,Tu,W,Th,F,Sat,Sun).</p> <p>Array of background concentrations, for: <u>ANNUAL</u>, <math>n=1</math>; <u>SEASON</u>, <math>n=4</math>; <u>MONTH</u>, <math>n=12</math>; <u>HROFDY</u>, <math>n=24</math>; <u>WSPEED</u>, <math>n=6</math>; <u>SEASHR</u>, <math>n=96</math>; <u>HRDOW</u>, <math>n=72</math>; <u>HRDOW7</u>, <math>n=168</math>; <u>SHRDOW</u>, <math>n=288</math>; <u>SHRDOW7</u>, <math>n=672</math>; <u>MHRDOW</u>, <math>n=864</math>; <u>MHRDOW7</u>, <math>n=2016</math>.</p> <p><u>NOTE</u>: Background NOX values input through the NOXVALUES keyword are assumed to be in units of PPB, unless modified by the NOX_UNIT keyword.</p>
NOX_UNIT	NOXUnits	
where:	NOXUnits	NOX concentration units for NOX_VALS, specified as <u>PPB</u> for parts-per-billion, <u>PPM</u> for parts-per-million, or <u>UG/M3</u> for micrograms/cubic-meter.
FLAGPOLE	(Flagdf)	
where:	(Flagdf)	Default value for height of (flagpole) receptors above local ground, a default value of 0.0 m is used if this optional parameter is omitted.
ARCFTOPT	(AirportID)	
where:	(AirportID)	Optional alphanumeric character string to identify the airport where aircraft sources are located.
RUNORNOT	<u>RUN</u> or <u>NOT</u>	
where:	<u>RUN</u> <u>NOT</u>	Indicates to run full model calculations. Indicates to process setup data and report errors, but to <u>not</u> run full model calculations.
EVENTFIL	(Evfile) (Evopt)	
where:	(Evfile)  (Evopt)	Identifies the filename to be used to generate a file for input to EVENT model (Default=EVENTFIL.INP). Optional parameter to specify the level of output detail selected for the EVENT model: either <u>SOCONT</u> or <u>DETAIL</u> (default is <u>DETAIL</u> if this parameter is omitted).

<b>Keyword</b>	<b>Parameters</b>	
SAVEFILE	(Savfil) (Dayinc) (Savfl2)	
where:	(Savfil)  (Dayinc) (Savfl2)	Specifies name of disk file to be used for storing intermediate results (default = SAVE.FIL); file is overwritten after each dump.  Number of days between dumps (optional: default is 1).  Optional second disk filename to be used on alternate dumps - eliminates risk of system crash during the dump. If blank, file is overwritten each time.
INITFILE	(Inifil)	
where:	(Inifil)	Specifies name of disk file of intermediate results to be used for initializing run (default = SAVE.FIL).
MULTYEAR	<u>(H6H)</u> Savfil (Inifil)	
where:	<u>(H6H)</u>  Savfil  (Inifil)	Optional field formerly used to specify that High-Sixth-High is being calculated for use in PM10 processing; no longer required.  Specifies name of file to be used for storing results at the end of the year.  Optional name of file used for initializing the results arrays from previous year(s). The Inifil parameter is not used for the first year in the multi-year run.
DEBUGOPT	<u>MODEL</u> (Dbgfil) and/or <u>METEOR</u> (Dbmfil) and/or <u>PRIME</u> (Prmfil) and/or <u>AWMADW</u> (AwmaDwfil) and/or <u>PLATFORM</u> (PlatfmDbgFil) and/or <u>DEPOS</u> (Dbgfil) and/or <u>[AREA</u> (AreaDbFil) or <u>LINE</u> (LineDbFil)] and/or <u>RLINE</u> (RlineDbgFil) and/or <u>BLPDEBUG</u> (BLPDdbFil) and/or <u>URBANDB</u> (UrbanDbFil) and/or <u>[PVMRM</u> (Dbpvfil) (and <u>TTRM2</u> ) or <u>OLM</u> (OLMfil) (and <u>TTRM2</u> ) or <u>ARM2</u> (ARM2fil) (and <u>TTRM2</u> ) or <u>TTRM</u> (TTRMfil) or <u>GSRM</u> (GSRMfil)] and/or <u>SWPOINT</u> (SWfil) and/or <u>HBPDBG</u> (HBPfil) and/or	

Keyword	Parameters	
	<u>AIRCRAFT</u> (DbARCFTfil)	
where:	<u>MODEL</u> (Dbgfil)  <u>METEOR</u> (Dbmfil)  <u>PRIME</u> (Prmfil)  <u>AWMADW</u> (AwmaDwfil)  <u>PLATFORM</u> (PlatfmDbgfil)  <u>DEPOS</u>  <u>AREA</u> or <u>LINE</u> (AreaDbfil)  <u>RLINE</u> (RLineDbgFil)  <u>BLPDBUG</u> (BLPDbFil)  <u>URBANDB</u> (UrbanDbFil)	<p>Specifies that <u>MODEL</u> debugging output will be generated. Optional filename for the model calculation debug file (a default filename of 'MODEL.DBG' will be used if omitted).</p> <p>Specifies that <u>METEOR</u>ological profile data file will be generated. Optional filename for the meteorological profile data file (a default filename of 'METEOR.DBG' will be used if omitted).</p> <p>Specifies that <u>PRIME</u> debugging output will be generated. Optional filename for PRIME debug file (a default filename of 'PRIME.DBG' will be used if omitted).</p> <p>Specifies the debug out will be generated for <u>AWMA</u> Downwash options. Optional filename for AWMADW debug file (a default filename of 'AWMADW.DBG' will be used if omitted).</p> <p>Specifies the debug out will be generated for PLATFORM Downwash options. Optional filename for PLATFORM downwash debug file. (a default filename of 'PLATFORM.DBG' will be used if omitted).</p> <p>Specifies that <u>DEPOS</u>ition debugging output will be generated, using default filenames of 'GDEP.DAT' for gas deposition and 'PDEP.DAT' for particle deposition.</p> <p>Specifies that <u>AREA</u> or <u>LINE</u> debugging output will be generated, including debugging outputs for OPENPIT sources, if included in the modeling. Optional filename for AREA debug file (a default filename of 'AREA.DBG' will be used if omitted).</p> <p>Specifies that RLINE debugging output will be generated. Optional filename for RLINE debug file (a default filename of 'RLINE.DBG' will be used if omitted).</p> <p>Debug information for the BUOYLINE source. Optional filename for BLPDBUG debug file (a default filename of 'BLPDBUG.DBG' will be used if omitted).</p> <p>Debug information from the URBANDB option. This will produce 3 output files, one for the surface meteorology and two for the profile meteorology. Optional filename for URBANDB debug files This will produce three output files, one for the surface meteorology, two for the profile meteorology. If the filename is specified by the user, then the filename will be used for the surface meteorology debug file. The same name will be assigned for the two profile debug files with a "1" and "2" appended to the filename, respectively. Default filenames: URBDDBUG.DBG, URBDDBUG1.DBG, and URBDDBUG2.DBG.</p>

Keyword	Parameters
	<p><u>PVMRM</u> (Dbpvfil) Specifies that <u>PVMRM</u> debugging output will be generated Optional filename for PVMRM debug file (a default filename of 'PVMRM.DBG' will be used if omitted).</p> <p><u>OLM</u> (OLMfil) Specifies that <u>OLM</u> debugging output will be generated Optional filename for OLM debug file (a default filename of 'OLM.DBG' will be used if omitted).</p> <p><u>ARM2</u> (ARM2fil) Specifies that <u>ARM2</u> debugging output will be generated Optional filename for ARM2 debug file (a default filename of 'ARM2.DBG' will be used if omitted).</p> <p><u>TTRM</u> (TTRMfil) Specifies that <u>TTRM</u> debugging output will be generated Optional filename for TTRM debug file (a default filename of 'TTRM.DBG' will be used if omitted).</p> <p><u>TTRM2</u> Specifies that TTRM2 debugging output will be generated. TTRM2 can only be used with ARM2, PVMRM, or OLM and only if specified with the MODELOPT keyword along with one of those options. A user-defined debug filename cannot be specified for the TTRM2 debug option.</p> <p><u>GRSM</u> (GRSMfil) Specifies that <u>GRSM</u> debugging output will be generated. Optional filename for GRSM debug file (a default filename of 'GRSM.DBG' will be used if omitted).</p> <p><u>SWPOINT</u> (SWfil) Specifies debugging output for the SWPOINT (sidewash) source type will be generated. Optional filename for SWPOINT debug file (a default filename of SWPOINT.DBG will be used if omitted).</p> <p><u>Note:</u> The user can specify any of the applicable debug options for a particular model run, and the options can be specified in any order. However, the optional filenames must be specified immediately after the keyword option associated with the filename. Also note that debugging information that was written to the main 'aermod.out' file for the <u>MODEL</u> debug option prior to version 13350 is now written to the applicable debug file (either <u>MODEL</u> or <u>PRIME</u>) and beginning with version 14134 debug information for AREA/LINE/OPENPIT sources is written to the <u>AREA</u> debug file.</p> <p><u>HBPDBG</u> (HBPfil) Specifies debugging output for the HBP (highly buoyant plume) sources will be generated. Optional filename for HBP debug file (a default filename of HBP_DEBUG.DBG will be used if omitted).</p> <p><u>AIRCRAFT</u> (DbARCFTfil) Specifies debugging output for AREA and VOLUME aircraft sources. Optional filename for the AIRCRAFT debug file (a default filename of AIRCRAFT.DBG will be used if omitted).</p>

ERRORFIL	(Errfil)	
where:	(Errfil)	Specifies name of detailed error listing file (default = ERRORS.LST).

**Table A-3. Description of Source Pathway Keywords**

<b>SO Keywords</b>	<b>Type</b>	<b>Keyword Description</b>
STARTING	M – N	Identifies the start of SOURCE pathway inputs
ELEVUNIT	O – N	Defines input units for source elevations (defaults to meters), must be first keyword after SO STARTING if used.
LOCATION	M – R	Identifies coordinates for particular source
RLEMCONV	O - N	Optional emission units conversion that changes the input units for the RLINE and RLINEXT sources to grams/hour/link
SRCPARAM	M – R	Identifies source parameters for a particular source
BUILDHGT	O – R	Building height values for each wind sector
BUILDLEN	O – R	Building projected length values for each wind sector
BUILDWID	O – R	Building projected width values for each wind sector
XBADJ	O – R	Along-flow distances from the stack to the center of the upwind face of the projected building
YBADJ	O – R	Across-flow distances from the stack to the center of the upwind face of the projected building
AREAVERT	M – R	Specifies location of vertices for an AREAPOLY source type (mandatory if AREAPOLY source is used)
RBARRIER	O - R	Specifies RLINEXT barrier source configuration  <b>The ALPHA option must be specified as a MODELOPT on the CO pathway to use the RBARRIER keyword.</b>
RDEPRESS	O - R	Specifies RLINEXT depressed roadway source configuration  <b>The ALPHA option must be specified as a MODELOPT on the CO pathway to use the RDEPRESS keyword.</b>
BLPINPUT	M - R	Buoyant line group parameters representative of the buoyant line group
URBANSRC	O – R	Identifies which sources to model with urban effects
EMISFACT	O – R	Optional input for variable emission rate factors
EMISUNIT	O – N	Optional unit conversion factors for emissions, concentrations
CONCUNIT	O – N	Optional conversion factors for emissions and concentrations
DEPOUNIT	O – N	Optional conversion factors for emissions and depositions
PARTDIAM	O – R	Input variables for optional input of particle size (microns)
MASSFRAX	O – R	Optional input of mass fraction for each particle size category
PARTDENS	O – R	Optional input of particle density (g/cm <sup>3</sup> ) for each size category
METHOD_2	O – R	Optional input of parameters for METHOD_2 particle deposition

SO Keywords	Type	Keyword Description
		<b>The ALPHA option must be specified as a MODELOPT on the CO pathway to use the METHOD_2 keyword.</b>
GASDEPOS	O – R	Optional input of gas deposition parameters  <b>The ALPHA option must be specified as a MODELOPT on the CO pathway to use the GASDEPOS keyword.</b>
NO2RATIO	O – R	Option to specify in-stack NO2/NOx equilibrium ratio for OLM and PVMRM options by source
HOUREMIS	O – R	Option for specifying hourly emission rates in a separate file
BGSECTOR	O – N	Specifies optional wind sectors for use in varying background concentrations by wind direction for the pollutant being modeled, as specified on the BACKGRND keyword
BACKGRND	O – R	Option to specify temporally varying background concentrations
BACKUNIT	O – N	Option to specify units for background concentrations
INCLUDED	O – R	Option to include data from a separate file in the runstream
OLMGROUP	O – R	Specifies sources to combine for OLM option to account for merging plumes
BLPGROUP <sup>2</sup>	M - R	Associates individual buoyant lines with a buoyant line source group
PSDGROUP <sup>1</sup>	O – R	Specifies source groups for PSDCREDIT option with PVMRM
HBPSRCID	M – R	Identification of HBP (highly buoyant plume) sources. Mandatory when HBP option is used
ARCFTSRC	M - R	Identification of aircraft sources. Mandatory when the ARCFTOPT option is used
SRCGROUP <sup>1</sup>	M – R	Identification of source groups
PLATFORM	O – R	Optional input for POINT and POINTHOR sources on a platform.  <b>The ALPHA option must be specified as a MODELOPT on the CO pathway to use the PLATFORM keyword.</b>
FINISHED	M – N	Identifies the end of SOURCE pathway inputs

- 1) The PSDGROUP or SRCGROUP keywords must be the last keyword within the SO pathway before the FINISHED keyword. The SRCGROUP keyword is mandatory, unless the PSDCREDIT option is used, which requires the PSDGROUP option instead.
- 2) The BLPGROUP keyword(s) must be after the BLPINPUT keyword(s)

**Table A-4. Description of Source Pathway Keywords and Parameters**

<b>Keyword</b>	<b>Parameters</b>	
ELEVUNIT	<u>METERS</u> or <u>FEET</u>	
where:	<u>METERS</u>	Specifies input units for source base elevations of meters (default if ELEVUNIT is omitted).
	<u>FEET</u>	Specifies input units for source elevations of feet. <u>Note:</u> This keyword applies to source base elevations only.
LOCATION	SrcID Srcryp Xs Ys (Zs)  or ( <u>FLAT</u> )	[for all Srcryps except <u>LINE</u> , <u>BUOYLINE</u> , <u>RLINE</u> , and <u>RLINEXT</u> ]  [for 'FLAT & ELEV' option]
	SrcID Srcryp Xs1 Ys1 Xs2 Ys2 (Zs)  or ( <u>FLAT</u> )	[for <u>LINE</u> , <u>RLINE</u> , or <u>BUOYLINE</u> Srcryp]  [for 'FLAT & ELEV' option]
	SrcID Srcryp Xs1 Ys1 Zs1 Xs2 Ys2 Zs2 (Zs)  or ( <u>FLAT</u> )	[for <u>RLINEXT</u> Srcryp]  [for ' <u>FLAT</u> & <u>ELEV</u> ' option]
where:	SrcID Srcryp Xs Ys Xs1, Xs2 Ys1, Ys2 Zs1, Zs2 (Zs) ( <u>FLAT</u> )	Source identification code (unique alphanumeric string of up to 12 characters). Source type: <u>POINT</u> , <u>POINTCAP</u> , <u>POINTHOR</u> , <u>VOLUME</u> , <u>AREA</u> , <u>AREAPOLY</u> , <u>AREACIRC</u> , <u>OPENPIT</u> , <u>LINE</u> , <u>BUOYLINE</u> , <u>RLINE</u> , or <u>RLINEXT</u> . x-coord of source location, corner for <u>AREA</u> , <u>AREAPOLY</u> , and <u>OPENPIT</u> , center for <u>AREACIRC</u> (m). y-coord of source location, corner for <u>AREA</u> , <u>AREAPOLY</u> , and <u>OPENPIT</u> , center for <u>AREACIRC</u> (m). x-coords of midpoint for start and end of <u>LINE</u> , <u>RLINE</u> , <u>RLINEXT</u> , or <u>BUOYLINE</u> source (m). y-coords of midpoint for start and end of <u>LINE</u> , <u>RLINE</u> , <u>RLINEXT</u> , or <u>BUOYLINE</u> source (m). z-coords of midpoint for start and end of <u>RLINEXT</u> source (m). Optional z-coord of source location (elevation above mean sea level, defaults to 0.0 if omitted). Optional keyword to indicate non-DEFAULT option to specify source to model with FLAT terrain.
SRCPARAM	SrcID Ptemis Stkhgt Stktmp Stkvel Stkdia  Vlemis Relhgt Syinit Szinit Aremis Relhgt Xinit (Yinit) (Angle) (Szinit) Aremis Relhgt Nverts (Szinit) Aremis Relhgt Radius (Nverts) (Szinit)	( <u>POINT</u> , <u>POINTCAP</u> , <u>POINTHOR</u> source) ( <u>VOLUME</u> source) ( <u>AREA</u> source) ( <u>AREAPOLY</u> source) ( <u>AREACIRC</u> source)

Keyword	Parameters	
	Lnemis Relhgt Width (Szinit)	( <u>LINE</u> or <u>RLINE</u> source)
	Opemis Relhgt Xinit Yinit Pitvol (Angle)	( <u>OPENPIT</u> source)
	Blemis Relhgt	( <u>BUOYLINE</u> source)
	Rlemis DCL Width Szinit	( <u>RLINEXT</u> source)
where:	SrcID	Source identification code.
	Emis	Source emission rate: in g/s for Ptemis, Vlemis, and Blemis; g/(s-m <sup>2</sup> ) for Aremis, Lnemis, and Opemis; g/m/s for Rlemis.
	Hgt	Source physical release height above ground (center of height for <u>VOLUME</u> , height above base of pit for <u>OPENPIT</u> ).
	Stktmp	Stack gas exit temperature (K).
	Stkvel	Stack gas exit velocity (m/s).
	Stkdia	Stack inside diameter (m).
	Syinit	Initial lateral dimension of <u>VOLUME</u> source (m).
	Szinit	Initial vertical dimension of <u>VOLUME</u> , <u>AREA</u> , <u>LINE</u> , <u>RLINE</u> , or <u>RLINEXT</u> source (m).
	Xinit	Length of side of <u>AREA</u> source in X-direction (m).
	Yinit	Length of side of <u>AREA</u> source in Y-direction (m) (optional parameter, assumed to be equal to Xinit if omitted).
	Angle	Orientation angle (deg) of <u>AREA</u> or <u>OPENPIT</u> source relative to N measured positive clockwise, rotated around the source location, (Xs,Ys) (optional parameter, assumed to be 0.0 if omitted).
	Nverts	Number of vertices used for <u>AREAPOLY</u> or <u>AREACIRC</u> source (optional for <u>AREACIRC</u> sources).
	Radius	Radius of circular area for <u>AREACIRC</u> source (m).
	Width	Width of <u>LINE</u> , <u>RLINE</u> , or <u>RLINEXT</u> source (m).
	Pitvol	Volume of <u>OPENPIT</u> source (m <sup>3</sup> ).
	Blemis	Buoyant line emission rate in g/(s) for the individual line of <u>BUOYLINE</u> source.
	DCL	Distance from roadway centerline for <u>RLINEXT</u> source (m).
BUILDHGT	SrcID (or SrcRange) Dsbh(i), i=1, 36	
where:	SrcID	Source identification code.
	SrcRange	Range of sources (inclusive) for which building dimensions apply, entered as two alphanumeric strings separated by a '-'. Dsbh
	Dsbh	Array of direction-specific building heights (m) beginning with 10-degree flow vector and incrementing by 10 degrees clockwise.
BUILDLEN	SrcID (or SrcRange) Dsbl(i), i=1, 36	
where:	SrcID	Source identification code.
	SrcRange	Range of sources (inclusive) for which building dimensions apply.
	Dsbl	Array of direction-specific building lengths (m) beginning with 10 degree flow vector and incrementing by 10 degrees clockwise.
BUILDWID	SrcID (or SrcRange) Dsbw(i), i=1, 36	
where:	SrcID	Source identification code.
	SrcRange	Range of sources (inclusive) for which building dimensions apply.

Keyword	Parameters	
	Dsbw	Array of direction-specific building widths (m) beginning with 10 degree flow vector and incrementing by 10 degrees clockwise.
XBADJ	SrcID (or SrcRange) Xbadj(i), i=1, 36	
where:	SrcID SrcRange Xbadj(i)	Source identification code. Range of sources (inclusive) for which XBADJ distances apply. Array of direction-specific along-wind distances beginning with 10 degree flow vector and incrementing by 10 degrees clockwise.
YBADJ	SrcID (or SrcRange) Ybadj(i), i=1, 36	
where:	SrcID SrcRange Ybadj(i)	Source identification code. Range of sources (inclusive) for which YBADJ distances apply. Array of direction-specific across-wind distances beginning with 10 degree flow vector and incrementing by 10 degrees clockwise.
AREAVERT	SrcID Xv(1) Yv(1) Xv(2) Yv(2) ... Xv(i) Yv(i)	
where:	SrcID Xv(1)  Yv(1)  Xv(i) Yv(i)	Source identification code. X-coordinate of the first vertex of an AREAPOLY source (must be the same as the value of Xs for that source defined on the SO LOCATION card). Y-coordinate of the first vertex of an AREAPOLY source (must be the same as the value of Ys for that source defined on the SO LOCATION card). X-coordinate for the i <sup>th</sup> vertex of an AREAPOLY source. Y-coordinate for the i <sup>th</sup> vertex of an AREAPOLY source.
RBARRIER	SrcID Htwall DCLwall (Htwall2 DCLwall2)	
where:	SrcID Htwall DCLwall Htwall2 DCLwall2	Source identification code. Height of the wall (or barrier 1) near roadway (m). Distance from the roadway centerline to the wall (m). Height of the second wall (or barrier 2) near roadway (m). Distance from the roadway centerline to the second wall (m).
RDEPRESS	SrcID Htwall DCLwall Depth Wtop Wbottom	
where:	SrcID Depth Wtop Wbottom	Source identification code. Depth of the depression containing the roadway (m). Width of the top of the depression containing the roadway (m). Width of the bottom of the depression containing the roadway (m).
BLPINPUT	(BLPGrpID) Blavglen Blavgbhgt Blavgbwid Blavglwid Blavgbsep Blavgfprm	
where:	BLPGrpID Blavglen Blavgbhgt Blavgbwid Blavglwid Blavgbsep Blavgfprm	Buoyant line group ID following parameters apply to Average buoyant line length (m) Average building height (m) Average building width (m) Average buoyant line width (m) Average building separation (m) Average buoyancy parameter (m <sup>4</sup> /s <sup>3</sup> )

Keyword	Parameters	
URBANSRC	<p><u>For multiple urban areas:</u> UrbanID SrcID's and/or SrcRng's</p> <p><u>For single urban areas:</u> SrcID's and/or SrcRng's</p> <p>User may also specify 'ALL' for SrcID's to assign all sources as urban.</p>	
where:	UrbanID SrcID SrcRange	<p>Specifies the alphanumeric urban ID (up to eight characters).</p> <p>Specifies which source(s) will be modeled with urban effects.</p> <p>Specifies a range of sources that will be modeled with urban effects.</p>
EMISFACT	SrcID (or SrcRange) Qflag Qfact(i), i=1,n	
where:	SrcID SrcRange Qflag  Qfact	<p>Source identification code.</p> <p>Range of sources (inclusive) for which emission rate factors apply.</p> <p>Variable emission rate flag:  <u>SEASON</u> for seasonal; <u>MONTH</u> for monthly; <u>HROFDY</u> for hour-of-day; <u>WSPEED</u> for wind speed category; <u>SEASHR</u> for season-by-hour; <u>HRDOW</u> for emission rates vary by hour-of-day, and day-of-week [M-F, Sat, Sun]; <u>HRDOW7</u> for emission rates vary by hour-of-day, and the seven days of the week [M, Tu, W, Th, F, Sat, Sun]; <u>SHRDOW</u> for season by hour-of-day by day-of-week (M-F,Sat,Sun); <u>SHRDOW7</u> for season by hour-of-day by day-of-week (M,Tu,W,Th,F,Sat,Sun); <u>MHRDOW</u> for month by hour-of-day by day-of-week (M-F,Sat,Sun); <u>MHRDOW7</u> for month by hour-of-day by day-of-week (M,Tu,W,Th,F,Sat,Sun).</p> <p>Array of scalar emission rate factors, for:  <u>SEASON</u>, n=4; <u>MONTH</u>, n=12; <u>HROFDY</u>, n=24;  <u>WSPEED</u>, n=6; <u>SEASHR</u>, n=96; <u>HRDOW</u>, n=72;  <u>HRDOW7</u>, n=168; <u>SHRDOW</u>, n=288; <u>SHRDOW7</u>, n=672;  <u>MHRDOW</u>, n=864; <u>MHRDOW7</u>, n=2016</p>
EMISUNIT	Emifac Emilbl Outlbl	
where:	Emifac  Emilbl Outlbl	<p>Emission rate factor used to adjust units of output (default value is 1.0E06 for CONC for grams to micrograms; default value is 3600 for grams/sec to grams/m<sup>2</sup>/hr for deposition).</p> <p>Label to use for emission units (default is grams/sec).</p> <p>Label to use for output units; applies to first output type if more than one output type is generated (default is micrograms/m<sup>**3</sup> for concentration and grams/m<sup>**2</sup> for deposition).</p>
RLEMCONV	<p><i>No parameters or secondary keywords</i></p> <p>Changes the expected emission units for the RLINE (Lemis) and RLEINXT (Rlemis)emissions to grams/hour/link.</p>	
CONCUNIT	Emifac Emilbl Conlbl	
where:	Emifac	Emission rate factor used to adjust units of output (default value is 1.0E06 for concentration for grams to micrograms).

Keyword	Parameters	
	Emilbl Conlbl	Label to use for emission units (default is grams/sec). Label to use for concentrations (default is micrograms/m <sup>3</sup> ).
DEPOUNIT	Emifac Emilbl Deplbl	
where:	Emifac Emilbl Deplbl	Emission rate factor used to adjust units of output for deposition (default value is 3600 for grams/sec to grams/m <sup>2</sup> /hr). Label to use for emission units (default is grams/sec). Label to use for deposition (default is grams/m <sup>2</sup> ).
PARTDIAM	SrcID (or SrcRange) Pdiam(i), i=1,Npd	
where:	SrcID SrcRange Pdiam	Source identification code. Range of sources (inclusive) for which size categories apply. Array of particle diameters (microns).
MASSFRAX	SrcID (or SrcRange) Phi(i), i=1,Npd	
where:	SrcID SrcRange Phi	Source identification code. Range of sources (inclusive) for which mass fractions apply. Array of mass fractions for each particle size category.
PARTDENS	SrcID (or SrcRange) Pdens(i), i=1,Npd	
where:	SrcID SrcRange Pdens	Source identification code. Range of sources (inclusive) for which particle densities apply. Array of particle densities (g/cm <sup>3</sup> ) for each size category.
METHOD_2	SrcID (or SrcRange) FineMassFraction Dmm	
where:	SrcID FineMassFraction Dmm	Source identification code. Fraction (between 0 and 1) of particle mass emitted in fine mode, less than 2.5 microns. Representative mass mean particle diameter in microns.
GASDEPOS	SrcID (or SrcRange) Da Dw rcl Henry	
where:	SrcID Da Dw rcl Henry	Source identification code. Diffusivity in air for the pollutant being modeled (cm <sup>2</sup> /s). Diffusivity in water for the pollutant being modeled (cm <sup>2</sup> /s). Cuticular resistance to uptake by lipids for individual leaves (s/cm). Henry's Law constant (Pa m <sup>3</sup> /mol).
NO2RATIO	SrcID (or SrcRange) NO2Ratio	
where:	SrcID SrcRange NO2Ratio	Source identification code. Source ID range for specified ratio. In-stack ratio of NO <sub>2</sub> /NO <sub>x</sub> .
HOUREMIS	Emifil SrcID's SrcRange's	
where:	Emifil SrcID's SrcRange's	Specifies name of the hourly emission rate file. Discrete source IDs that are included in the hourly emission file. Source ID ranges that are included in the hourly emission file.
BGSECTOR	StartSect1 StartSect2 . . . StartSectN, where N is ≤ 6	

Keyword	Parameters	
where:	StartSect1 StartSect2 . . StartSectN	Starting direction for the first sector. Starting direction for the second sector. . . Starting direction for the last sector.  <u>NOTE:</u> The minimum sector width allowed is 30 degrees, and warning messages will be issued for sector widths less than 60 degrees. Sector-varying background concentrations will be selected based on the flow vector, i.e., the downwind direction, based on the wind direction specified in the surface meteorological data file.
BACKGRNd	BGflag BGvalue(i), i=1, n (without BGSECTORs) and/or <u>HOURLY</u> BGfilnam (BGformat)  or  SECT <sub>x</sub> BGflag BGvalue(i), i=1, n (with BGSECTORs) and/or SECT <sub>x</sub> <u>HOURLY</u> BGfilnam (BGformat)	
where:	SECT <sub>x</sub>  BGflag  BGvalue  <u>HOURLY</u>	Applicable sector ( $x = 1$ to 6) defined on the SO BGSECTOR keyword, if specified.  Variable background concentration flag: <u>ANNUAL</u> for annual; <u>SEASON</u> for seasonal; <u>MONTH</u> for monthly; <u>HROFDY</u> for hour-of-day; <u>WSPEED</u> for wind speed category; <u>SEASHR</u> for season-by-hour; <u>HRDOW</u> for emission rates vary by hour-of-day, and day-of-week [M-F, Sat, Sun]; <u>HRDOW7</u> for emission rates vary by hour-of-day, and the seven days of the week [M, Tu, W, Th, F, Sat, Sun]; <u>SHRDOW</u> for season by hour-of-day by day-of-week (M-F,Sat,Sun); <u>SHRDOW7</u> for season by hour-of-day by day-of-week (M,Tu,W,Th,F,Sat,Sun); <u>MHRDOW</u> for month by hour-of-day by day-of-week (M-F,Sat,Sun); <u>MHRDOW7</u> for month by hour-of-day by day-of-week (M,Tu,W,Th,F,Sat,Sun).  Array of background concentrations; for: <u>ANNUAL</u> , $n=1$ ; <u>SEASON</u> , $n=4$ ; <u>MONTH</u> , $n=12$ ; <u>HROFDY</u> , $n=24$ ; <u>WSPEED</u> , $n=6$ ; <u>SEASHR</u> , $n=96$ ; <u>HRDOW</u> , $n=72$ ; <u>HRDOW7</u> , $n=168$ ; <u>SHRDOW</u> , $n=288$ ; <u>SHRDOW7</u> , $n=672$ ; <u>MHRDOW</u> , $n=864$ ; <u>MHRDOW7</u> , $n=2016$  Flag indicating that hourly background concentrations are specified in a separate data file; data period must match the meteorological data period being processed; no missing values are allowed in the hourly file, unless temporally varying background concentrations are also specified through the BGflag parameter, which are used to substitute for missing hourly values.

Keyword	Parameters	
	BGfilnam (BGformat)	<p>Filename for hourly background concentrations. Optional Fortran format of hourly background concentration file; the default format is FREE format, i.e., comma or space-delimited data fields (Yr Mn Dy Hr BGvalue). The BGformat parameter must include open and close parentheses, the date variables must be read as integers (Fortran I format), and the BGvalue must be read as real (Fortran F, E, or D format), e.g., '(4I2,F8.3)'. The year may be specified as a 2-digit or 4-digit year, and the data period in the HOURLY background file must match the data period in the meteorological data files. The BGformat parameter cannot include any blank spaces, unless the field is enclosed by double quotes.</p> <p><u>NOTE:</u> Background concentrations specified on the BACKGRND keyword are currently assumed to be in units of PPB for NO<sub>2</sub> and SO<sub>2</sub>, PPM for CO, and UG/M3 for all other pollutants, unless otherwise specified on the SO BACKUNIT keyword.</p> <p>Background concentrations can be included with any source group, including group 'ALL', by including a "SrcID" of 'BACKGROUND' on the SRCGROUP keyword. <b>Note that background concentrations are automatically included with group ALL by default; however, background concentrations can be excluded from group ALL by including NOBACKGROUND (or NOBACKGRND) on the SRCGROUP ALL keyword.</b></p>
BACKUNIT	BGunits	
where:	BGunits	<p>Background concentration units, specified as <u>PPB</u> for parts-per-billion, <u>PPM</u> for parts-per-million, or <u>UG/M3</u> for micrograms/cubic-meter. Background concentrations input in units of PPB or PPM are converted to micrograms/cubic-meter based on reference temperature (25 C) and pressure (1013.25 mb).</p> <p><u>Note:</u> Units of PPB and PPM can only be used with the NO<sub>2</sub>, SO<sub>2</sub>, and CO POLLUTID.</p>
INCLUDED	Incfil	
where:	SrcIncFile	<p>Filename for the included source file, up to 200 characters in length; double quotes (") may be used as delimiters for the filename to allow for embedded spaces; and quotes don't count toward the limit of 200.</p>
OLMGROUP	OLMGrpID SrcID's SrcRange's or <u>ALL</u>	
where:	OLMGrpID  SrcID's	<p>Group ID (Grpid = ALL specifies group including all sources). Discrete source IDs to be included in group. Source ID ranges to be included in group.</p>

Keyword	Parameters	
	SrcRange's	<u>Note:</u> Card may be repeated with same Grpid if more space is needed to specify sources.
BLPGROUP	BLPGrpID SrcID's SrcRange's	
where:	BLPGrpID SrcID's SrcRange's	Buoyant line group ID. Discrete BUOYLINE source IDs to be included in group. BUOYLINE source ID ranges to be included in group.
PSDGROUP	PSDGrpID SrcID's SrcRange's	
where:	PSDGrpID  SrcID's SrcRange's	PSD GrpID for PSDCREDIT option, must be one of the following: INCRCONS – increment-consuming sources, NONRBASE – non-retired baseline sources, or RETRBASE – retired (increment-expanding) baseline sources. Discrete source IDs to be included in group. Source ID ranges to be included in group.  <u>Note:</u> Card may be repeated with same PSDGrpID if more space is needed to specify sources
HBPSRCID	SrcID's and/or SrcRange's or ALL	
where:	SrcID's  SrcRange's  ALL	Discrete source IDs to be included. Source ID ranges to be included.  <u>Note:</u> Card may be repeated if more space is needed to specify sources.  Includes all sources modeled that are source type POINT, POINTHOR, and POINTCAP.
ARCFTSRC	SrcID's and/or SrcRange's or ALL	
where:	SrcID's  SrcRange's  ALL	Discrete source IDs to be included. Source ID ranges to be included.  <u>Note:</u> Card may be repeated if more space is needed to specify sources.  Applies aircraft plume rise option (ARCFTOPT) to all AREA and VOLUME source types modeled.
SRCGROUP	SrcGrpID SrcID's SrcRange's	
where:	SrcGrpID SrcID's	Group ID (Grpid = ALL specifies group including all sources). Discrete source IDs to be included in group; a "SrcID" of 'BACKGROUND' (or 'BACKGRND') can be used to include background concentrations, based on the BACKGRND keyword. Also note that background concentrations are automatically included with group ALL; however, background concentrations can be

Keyword	Parameters	
	SrcRange's	<p>excluded from group ALL by specifying 'NOBACKGROUND' on the SRCGROUP ALL keyword.</p> <p>Source ID ranges to be included in group.</p> <p><u>Note:</u> Card may be repeated with same Grpid if more space is needed to specify sources.</p>
BLPINPUT	Blavgblen Blavgbhgt Blavgbwid Blavglwid Blavgbsep Blavgfprm	
where:	Blavgblen Blavgbhgt Blavgbwid Blavglwid Blavgbsep Blavgfprm	<p>Average building length (m).</p> <p>Average building height (m).</p> <p>Average building width (m).</p> <p>Average line source width (m) (of the individual lines).</p> <p>Average building separation (m) (between the individual lines).</p> <p>Average buoyancy parameter (m<sup>4</sup>/s<sup>3</sup>).</p>

**Table A-5. Description of Receptor Pathway Keywords**

RE Keywords	Type	Keyword Description
STARTING	M – N	Identifies the start of RECEPTOR pathway inputs
ELEVUNIT	O – N	Defines input units for receptor elevations (defaults to meters), must be first keyword after RE STARTING if used.
GRIDCART	O <sup>1</sup> – R	Defines a Cartesian grid receptor network
GRIDPOLR	O <sup>1</sup> – R	Defines a polar receptor network
DISCCART	O <sup>1</sup> – R	Defines the discretely placed receptor locations referenced to a Cartesian system
DISCPOLR	O <sup>1</sup> – R	Defines the discretely placed receptor locations referenced to a polar system
EVALCART	O <sup>1</sup> – R	Defines discrete Cartesian receptor locations for use with EVALFILE output option
INCLUDED	O – R	Identifies an external file containing receptor locations to be included in the inputs
FINISHED	M - N	Identifies the end of RECEPTOR pathway inputs

- 1) At least one of the following must be present: GRIDCART, GRIDPOLR, DISCCART, DISCPOLR, or EVALCART, unless the INCLUDED keyword is used to include receptor inputs from an external file. Multiple receptor networks can be specified in a single run, including both Cartesian and polar.

**Table A-6. Description of Receptor Pathway Keywords and Parameters**

Keyword	Parameters	
ELEVUNIT	<u>METERS</u> or <u>FEET</u>	
where:	<u>METERS</u> <u>FEET</u>	Specifies input units for receptor elevations of meters. Specifies input units for receptor elevations of feet. Note: This keyword applies to receptor elevations only.
GRIDCART	Netid <u>STA</u> <u>XYINC</u> Xinit Xnum Xdelta Yinit Ynum Ydelta or <u>XPNTS</u> Gridx1 Gridx2 Gridx3 .... GridxN, and <u>YPNTS</u> Gridy1 Gridy2 Gridy3 .... GridyN <u>ELEV</u> Row Zelev1 Zelev2 Zelev3 ... ZelevN <u>HILL</u> Row Zhill1 Zhill2 Zhill3 ... ZhillN <u>FLAG</u> Row Zflag1 Zflag2 Zflag3 ... ZflagN <u>END</u>	
where:	Netid <u>STA</u> <u>XYINC</u> Xinit Xnum Xdelta Yinit Ynum Ydelta <u>XPNTS</u>  Gridx1 GridxN <u>YPNTS</u>  Gridy1 GridyN <u>ELEV</u> Row Zelev <u>HILL</u> Row Zhill <u>FLAG</u> Row Zflag  <u>END</u>	Receptor network identification code (up to eight alphanumeric characters). Indicates <u>START</u> of GRIDCART subpathway, repeat for each new Netid. Keyword identifying grid network generated from x and y increments. Starting local x-axis grid location in meters. Number of x-axis receptors. Spacing in meters between x-axis receptors. Starting local y-axis grid location in meters. Number of y-axis receptors. Spacing in meters between y-axis receptors. Keyword identifying grid network defined by series of x and y coordinates. Value of first x-coordinate for Cartesian grid. Value of 'nth' x-coordinate for Cartesian grid. Keyword identifying grid network defined by series of x and y coordinates. Value of first y-coordinate for Cartesian grid. Value of 'nth' y-coordinate for Cartesian grid. Keyword to specify that receptor elevations follow. Indicates which row (y-coordinate fixed) is being input. An array of receptor terrain elevations for a particular Row. Keyword to specify that hill height scales follow. Indicates which row (y-coordinate fixed) is being input. An array of hill height scales for a particular Row. Keyword to specify that flagpole receptor heights follow. Indicates which row (y-coordinate fixed) is being input. An array of receptor heights above local terrain elevation for a particular Row (flagpole receptors). Indicates <u>END</u> of GRIDCART subpathway, repeat for each new Netid.
GRIDPOLR	Netid <u>STA</u> <u>ORIG</u> Xinit Yinit, or <u>ORIG</u> Srcid	

Keyword	Parameters	
	<p><u>DIST</u> Ring1 Ring2 Ring3 ... RingN  <u>DDIR</u> Dir1 Dir2 Dir3 ... DirN,  or <u>GDIR</u> Dirnum Dirini Dirinc  <u>ELEV</u> Dir Zelev1 Zelev2 Zelev3 ... ZelevN  <u>HILL</u> Dir Zhill1 Zhill2 Zhill3 ... ZhillN  <u>FLAG</u> Dir Zflag1 Zflag2 Zflag3 ... ZflagN  <u>END</u></p>	
where:	Netid  <u>STA</u> <u>ORIG</u>  Xinit Yinit Srcid <u>DIST</u> Ring1 RingN <u>DDIR</u> Dir1 DirN <u>GDIR</u> Dirnum Dirini Dirinc <u>ELEV</u> Dir Zelev <u>HILL</u> Row Zhill  <u>FLAG</u> Dir Zflag  <u>END</u>	Receptor network identification code (up to eight alphanumeric characters). Indicates <u>STA</u> rt of GRIDPOLR subpathway, repeat for each new Netid Optional keyword to specify the origin of the polar network (assumed to be at x=0, y=0 if omitted). local x-coordinate for origin of polar network (m). local y-coordinate for origin of polar network (m). Source ID of source used as origin of polar network. Keyword to specify distances for the polar network. Distance to the first ring of polar coordinates (m). Distance to the 'nth' ring of polar coordinates (m). Keyword to specify discrete direction radials for the polar network. First direction radial in degrees (1 to 360). The 'nth' direction radial in degrees (1 to 360). Keyword to specify generated direction radials for the polar network. Number of directions used to define the polar system. Starting direction of the polar system. Increment (in degrees) for defining directions. Keyword to specify that receptor elevations follow. Indicates which direction is being input. An array of receptor terrain elevations for a particular direction radial. Keyword to specify that hill height scales follow. Indicates which row (y-coordinate fixed) is being input. An array of hill height scales for a particular Row Keyword to specify that flagpole receptor heights follow. Keyword to specify that flagpole receptor heights follow. Indicates which direction or direction number is being input. An array of receptor heights above local terrain elevation for a particular direction (flagpole receptors). Indicates <u>END</u> of GRIDPOLR subpathway, repeat for each new Netid.
DISCCART	Xcoord Ycoord (Zelev Zhill) (Zflag)	
where:	Xcoord Ycoord (Zelev)  (Zhill) (Zflag)	local x-coordinate for discrete receptor location (m). local y-coordinate for discrete receptor location (m). Elevation above sea level for discrete receptor location (optional), used only for <u>ELEV</u> terrain. Hill height scale (optional), used only for <u>ELEV</u> terrain. Receptor height (flagpole) above local terrain (optional), used only with <u>FLAGPOLE</u> keyword.
DISCPOLR	Srcid Dist Direct (Zelev Zhill) (Zflag)	

Keyword	Parameters	
where:	Srcid Dist Direct (Zelev) (Zhill) (Zflag)	Specifies source identification for which discrete polar receptor locations apply (used to define the origin for the discrete polar receptor). Downwind distance to receptor location (m). Direction to receptor location, in degrees clockwise from North. Elevation above sea level for receptor location (optional), used only for <u>ELEV</u> terrain. Hill height scale (optional). Receptor height (flagpole) above local terrain (optional), used only with <u>FLAGPOLE</u> keyword.
EVALCART	Xcoord Ycoord Zelev Zhill Zflag Arcid (Name)	
where:	Xcoord Ycoord Zelev  Zhill Zflag  Arcid (Name)	Local x-coordinate for discrete receptor location (m). Local y-coordinate for discrete receptor location (m). Elevation above sea level for discrete receptor location, used only for <u>ELEV</u> terrain. Hill height scale (m), used only for <u>ELEV</u> terrain. Receptor height (flagpole) above local terrain, used only with <u>FLAGPOLE</u> keyword. Receptor arc ID used to group receptors along an arc or other grouping (up to eight characters). Optional name for receptor (up to eight characters).
INCLUDED	RecIncFile	
where:	RecIncFile	Identifies the filename for the included receptor file, up to 200 characters in length; double quotes (“) may be used as delimiters for the filename to allow for embedded spaces; quotes don’t count toward the limit of 200.

**Table A-7. Description of Meteorology Pathway Keywords**

<b>ME Keywords</b>	<b>Type</b>	<b>Keyword Description</b>
STARTING	M – N	Identifies the start of METEOROLOGY pathway inputs
SURFFILE	M – N	Describes input meteorological surface data file
PROFFILE	M – N	Describes input meteorological profile data file
SURFDATA	M – N	Describes surface meteorological station
UAIRDATA	M – N	Describes upper air meteorological station
SITEDATA	O – N	Describes on-site meteorological station
PROFBASE	M – N	Specifies the base elevation for the potential temperature profile
STARTEND	O – N	Specifies start and end dates to be read from input meteorological data file (default is to read entire file)
DAYRANGE	O – R	Specifies days or ranges of days to process (default is to process all data)
NOSA	O – N	Specifies to set $\sigma_{\theta}$ to missing for all hours in profile data file
NOSACO	O – N	Specifies to set $\sigma_{\theta}$ to missing for convective hours only in profile data file
NOSAST	O – N	Specifies to set $\sigma_{\theta}$ to missing for stable hours only in profile data file
NOSW	O – N	Specifies to set $\sigma_w$ to missing for all hours in profile data file
NOSWCO	O – N	Specifies to set $\sigma_w$ to missing for convective hours only in profile data file
NOSWST	O – N	Specifies to set $\sigma_w$ to missing for stable hours only in profile data file
NOTURB	O – N	Specifies to set $\sigma_{\theta}$ and $\sigma_w$ to missing for all hours in profile data file
NOTURBCO	O – N	Specifies to set $\sigma_{\theta}$ and $\sigma_w$ to missing for convective hours only in profile data file
NOTURBST	O – N	Specifies to set $\sigma_{\theta}$ and $\sigma_w$ to missing for stable hours only in profile data file
SCIMBYHR	O – N	Specifies the parameters for the SCIM (Sampled Chronological Input Model) option (see CO MODELOPT)
WDROTATE	O – N	May be used to correct for alignment problems of wind direction measurements, or to convert wind direction from to flow vector
WINDCATS	O – N	Input upper bounds of wind speed categories, five values input - sixth category is assumed to have no upper bound (used for WSPEED option on the EMISFACT keyword)
FINISHED	M – N	Identifies the end of METEOROLOGY pathway inputs

**Table A-8. Description of Meteorology Pathway Keywords and Parameters**

<b>Keyword</b>	<b>Parameters</b>	
SURFFILE	Sfcfil	
where:	Sfcfil	Specify filename for surface meteorological input file <u>Note:</u> FREE format is used for all SURFFILE reads beginning with version 09292.
PROFFILE	Profil	
where:	Profil	Specify filename for profile meteorological input file <u>Note:</u> FREE format is used for all PROFFILE reads beginning with version 09292.
SURFDATA	Stanum Year (Name) (Xcoord Ycoord)	
where:	Stanum Year (Name) (Xcoord) (Ycoord)	Station number, e.g., 5-digit WBAN number for NWS station. Year of data being processed (four digits). Station name (optional). x-coordinate of station location (m) (optional). y-coordinate of station location (m) (optional).
UAIRDATA	Stanum Year (Name) (Xcoord Ycoord)	
where:	Stanum Year (Name) (Xcoord) (Ycoord)	Station number, e.g., 5-digit WBAN number for NWS station. Year of data being processed (four digits). Station name (optional). x-coordinate of station location (m) (optional). y-coordinate of station location (m) (optional).
SITEDATA	Stanum Year (Name) (Xcoord Ycoord)	
where:	Stanum Year (Name) (Xcoord) (Ycoord)	Station number for on-site meteorological data station. Year of data being processed (four digits). Station name (optional). x-coordinate of station location (m) (optional). y-coordinate of station location (m) (optional).
PROFBASE	BaseElev (Units)	
where:	BaseElev (Units)	Base elevation (above MSL) for the potential temperature profile. Units of BaseElev: <u>METERS</u> or <u>FEET</u> (default is <u>METERS</u> ).
STARTEND	Strtyr Strtmn Strtdy (Strthr) Endyr Endmn Enddy (Endhr)	
where:	Strtyr Strtmn Strtdy (Strthr) Endyr Endmn Enddy (Endhr)	Year of first record to be read. Month of first record to be read. Day of first record to be read. Hour of first record to be read (optional). Year of last record to be read. Month of last record to be read. Day of last record to be read. Hour of last record to be read (optional).

Keyword	Parameters	
		<u>Note:</u> File read begins with hour 1 of the start date and ends with hour 24 of the end date if Stahr and Endhr are omitted.
DAYRANGE	Range1 Range2 Range3 ... RangeN	
where:	Range1  RangeN	First range of days to process, either as individual day (XXX) or as range (XXX-YYY); days may be input as Julian dates (XXX) or as month and day (XX/YY). The 'N-th' range of days to process.
NUMYEARS	NumYrs	
where:	NumYrs	Specifies the number of years of meteorological data being processed for purposes of allocating array storage for the OU MAXDCONT option. A default value of 5 years is assumed if the optional NUMYEARS keyword is omitted.
NOSA or NOSACO or NOSAST or NOSW or NOSWCO or NOSWST or NOTURB or NOTURBCO or NOTURBST	<i>No parameters or secondary keywords</i>	
SCIMBYHR	NRegStart NRegInt (SfcFilnam PflFilnam)	
where:	NRegStart  NRegInt (SfcFilnam)  (PflFilnam)	Specifies the first hour to be sampled with the SCIM option; required to have a value from 1 to 24. Specifies the sampling interval, in hours. Optional output file name to list the surface meteorological data for the sampled hours. Optional output file name to list the profile meteorological data for the sampled hours.
WDROTATE	Rotang	
where:	Rotang	Specifies angle (in degrees) to rotate wind direction measurements to correct for alignment problems; value of Rotang is subtracted from WD measurements, i.e., rotation is counterclockwise.
WINDCATS	Ws1 Ws2 Ws3 Ws4 Ws5	

<b>Keyword</b>	<b>Parameters</b>	
where:	Ws1 Ws2 Ws3 Ws4 Ws5	Upper bound of first wind speed category (m/s). Upper bound of second wind speed category (m/s). Upper bound of third wind speed category (m/s). Upper bound of fourth wind speed category (m/s). Upper bound of fifth wind speed category (m/s). (sixth category is assumed to have no upper bound).

**Table A-9. Description of Event Pathways and Keywords**

<b>EV Keywords</b>	<b>Type</b>	<b>Keyword Description</b>
STARTING	M – N	Identifies the start of EVENT pathway inputs
EVENTPER	M – R	Describes data and averaging period for an event
EVENTLOC	M – R	Describes receptor location for an event
INCLUDED	O – R	Identifies an external file containing EVENT data to be included in the inputs
FINISHED	M – N	Identifies the end of EVENT pathway inputs

**Table A-10. Description of Event Pathway Keywords and Parameters**

<b>Keyword</b>	<b>Parameters</b>	
EVENTPER	Evname Aveper Grpid Date Conc	
where:	Name Grpid Aveper Date Conc	Specify name of event to be processed (e.g., H002H24ALL), (up to ten alphanumeric characters). Specify source group ID for event. Specify averaging period for event. Specify data period for event (ending YYMMDDHH for averaging period). Specifies the concentration value generated during the initial non-EVENT processing.
EVENTLOC	Evname <u>XR=</u> Xr <u>YR=</u> Yr (Zelev Zhill) (Zflag) or <u>RNG=</u> Rng <u>DIR=</u> Dir (Zelev Zhill) (Zflag)	
where:	Evname <u>XR=</u> <u>YR=</u> <u>RNG=</u> <u>DIR=</u> (Zelev) (Zhill) (Zflag)	Specify name of event to be processed (e.g., H002H24ALL), (up to ten alphanumeric characters). X-coordinate for event (discrete Cartesian receptor). Y-coordinate for event (discrete Cartesian receptor). Distance range for event (discrete polar receptor). Radial direction for event (discrete polar receptor). Terrain elevation for event (optional). Hill height scale (optional). Receptor height above ground for event (optional).
INCLUDED	EventIncFile	
where:	EventIncFile	Identifies the filename for the included EVENT file, up to 200 characters in length; double quotes (“) may be used as delimiters for the filename to allow for embedded spaces; and quotes don’t count toward the limit of 200.

Note: EVENT locations can be input as either discrete Cartesian receptors (XR=, YR=) or as discrete polar receptors (RNG=, DIR=). Events that are specified in the file generated by the AERMOD model (CO EVENTFIL card) are always given as discrete Cartesian coordinates. Discrete polar receptors are assumed to be relative to an origin of (0,0).

**Table A-11. Description of Output Pathway Keywords**

<b>OU Keywords</b>	<b>Type</b>	<b>Keyword Description</b>
STARTING	M – N	Identifies the start of OUTPUT pathway inputs
RECTABLE	O – R	Option to specify value(s) by receptor for output
MAXTABLE	O – R	Option to summarize the overall maximum values
DAYTABLE	O – N	Option to print summaries for each averaging period for each day processed.
MAXIFILE	O – R	Option to list events exceeding a threshold value to file (if CO EVENTFIL option is used, these events are included in the input file generated for the EVENT model).
POSTFILE <sup>1</sup>	O – R	Option to write results to a mass storage file for postprocessing.
PLOTFILE <sup>1</sup>	O – R	Option to write certain results to a storage file suitable for input to plotting routines
TOXXFILE	O – R	Option to write results to a storage file suitable for input to the TOXX model component of TOXST or the RISK
RANKFILE	O – R	Option to output file of ranked values for Q-Q plots (must be used with the MAXTABLE keyword)
EVALFILE	O – R	Option to output file of normalized arc maxima from EVALCART receptors for model evaluation studies
SEASONHR	O – R	Option to output results by season and hour-of-day
MAXDAILY	O – R	Option to output file of daily maximum 1-hour values for each day processed; only applicable for 1-hour NO <sub>2</sub> and 1-hour SO <sub>2</sub> NAAQS
MXDYBYR	O – R	Option to output file of daily maximum 1-hour values by year, for each year processed; only applicable for 1-hour NO <sub>2</sub> and 1-hour SO <sub>2</sub> NAAQS
MAXDCONT	O – R	Option to output contributions of each source group to ranked values averaged across years for a reference source group, paired in time and space; only applicable for 24-hour PM <sub>2.5</sub> 1-hour NO <sub>2</sub> , and 1-hour SO <sub>2</sub> NAAQS
SUMMFILE	O – N	Option to output summary of high ranked values to separate file
FILEFORM	O – N	Specify fixed or exponential format for output results files
NOHEADER	O – N	Option to suppress file headers for output file options, e.g., POSTFILE, PLOTFILE, MAXDCONT, etc.
EVENTOUT	M – N	Specifies the level of output information provided for EVENT Processing [EVENT Only]
FINISHED	M – N	Identifies the end of OUTPUT pathway inputs

- 1) POSTFILE is used to output concurrent concentration values for particular source groups and averaging times across the receptor network suitable for postprocessing. PLOTFILE is used to output specific design values, such as second high concentrations, across the receptor network, suitable for plotting concentration contours.

**Table A-12. Description of Output Pathway Keywords and Parameters**

Keyword	Parameters	
RECTABLE	Aveper <u>FIRST</u> <u>SECOND</u> ... <u>SIXTH</u> ... <u>TENTH</u> and/or Aveper <u>1ST</u> <u>2ND</u> ... <u>6TH</u> ... <u>10TH</u> and/or Aveper <u>1</u> <u>2</u> ... <u>6</u> ... <u>10</u> ... <u>N</u> ... <u>999</u>	
where:	Aveper  <u>FIRST</u> <u>SECOND</u> <u>SIXTH</u> <u>1ST</u> <u>2ND</u> <u>6TH</u> <u>N</u>	Averaging period to summarize with high values (keyword <u>ALLAVE</u> specifies all short-term averaging periods). Select summaries of <u>FIRST</u> highest values by receptor. Select summaries of <u>SECOND</u> highest values by receptor. Select summaries of <u>SIXTH</u> highest values by receptor. Select summaries of <u>1ST</u> highest values by receptor. Select summaries of <u>2ND</u> highest values by receptor. Select summaries of <u>6TH</u> highest values by receptor. Select summaries of <u>N</u> -th highest values by receptor (up to <u>999</u> -th highest values).  <u>Note:</u> If two parameters are input separated by a dash (e.g. <u>FIRST-THIRD</u> or <u>4-12</u> ), then summaries of all high ranked values within that range (inclusive) are provided.  If the CO EVENTFIL keyword is exercised, then the events generated by the RECTABLE keyword are included in the input file for EVENT model.  The range of ranks specified on the RECTABLE keyword (but not the individual ranks specified) also determines the range of ranks that may be considered with the MAXDCONT option.
MAXTABLE	Aveper Maxnum	
where:	Aveper  Maxnum	Averaging period to summarize with overall maximum values (keyword <u>ALLAVE</u> specifies all averaging periods). Specifies number of overall maximum values to summarize .
DAYTABLE	Avper1 Avper2 Avper3 ...	
where:	Avper1	Averaging period, e.g., <u>24</u> for 24-hr averages, to summarize with values by receptor for each day of data processed (keyword <u>ALLAVE</u> for first parameter specifies all averaging periods).
MAXIFILE	Aveper GrpID Thresh Filnam (Funit)	
where:	Aveper  GrpID Thresh Filnam Funit	Specifies averaging period for list of values equal to or exceeding a threshold value. Specifies source group to be output to file. Threshold value (e.g., NAAQS) for list of exceedances. Name of disk file to store maximum values. Optional parameter to specify the file unit.

Keyword	Parameters	
		<u>Note:</u> If the CO EVENTFIL keyword is exercised, then the events generated by the MAXIFILE keyword are included in the input file for EVENT processing.
POSTFILE	Aveper GrpID Format Filnam (Funit)	
where:	Aveper GrpID Format Filnam Funit	Specifies averaging period to be output to file, e.g., <u>24</u> for 24-hr averages, <u>PERIOD</u> for period averages. Specifies source group to be output to file. Specifies format of file, either <u>UNFORM</u> for unformatted files or <u>PLOT</u> for formatted files for plotting. Specifies filename for output file. Optional parameter to specify the file unit.
PLOTFILE	Aveper GrpID Hivalu Filnam (Funit) (Short-Term values) Aveper GrpID Filnam (Funit) (PERIOD or ANNUAL averages)	
where:	Aveper GrpID Hivalu Filnam Funit	Specifies averaging period to be output to file, e.g., <u>24</u> for 24-hr averages, <u>PERIOD</u> for period averages, etc. Specifies source group to be output to file. Specifies rank to be included in high value summary (e.g., <u>FIRST</u> , <u>SECOND</u> , <u>1ST</u> , <u>2ND</u> , etc.) to be output to file (the rank must be included on the RECTABLE card). Specifies filename for output file. Optional parameter to specify the file unit.
TOXXFILE	Aveper Cutoff Filnam (Funit)	
where:	Aveper Cutoff Filnam Funit	Specifies averaging period to be output to file, e.g., <u>1</u> for 1-hr averages. Specifies cutoff (threshold) value in g/m <sup>3</sup> for outputting results for AERMOD model. Specifies filename for output file. Optional parameter to specify the file unit.
RANKFILE	Aveper Hinum Filnam (Funit)	
where:	Aveper Hinum Filnam Funit	Specifies averaging period to be output to file, e.g., <u>24</u> for 24-hr averages. Specifies the number of high values to be ranked. Specifies filename for output file. Optional parameter to specify the file unit.
EVALFILE	SrcID Filnam (Funit)	
where:	SrcID Filnam Funit	Specifies the source ID to be output to file. Specifies filename for output file. Optional parameter to specify the file unit.
SEASONHR	GrpID FileName (FileUnit)	
where:	GrpID FileName	Specifies the source group ID to be output to file. Specifies filename for output file.

Keyword	Parameters	
	(FileUnit)	Optional parameter to specify file unit.
MAXDAILY	GrpID FileName (FileUnit)	
where:	GrpID FileName (FileUnit)	Specifies the source group ID to be output to file. Specifies filename for output file. Optional parameter to specify file unit.
MXDYBYR	GrpID FileName (FileUnit)	
where:	GrpID FileName (FileUnit)	Specifies the source group ID to be output to file. Specifies filename for output file. Optional parameter to specify file unit.
MAXDCONT	GrpID UpperRank LowerRank FileName (FileUnit) or GrpID UpperRank <u>THRESH</u> ThreshValue FileName (FileUnit)	
where:	GrpID UpperRank LowerRank  <u>THRESH</u> ThreshValue  FileName (FileUnit)	Specifies the source group ID to be output to file. Upper bound of ranks to evaluate for contributions. Lower bound of ranks to evaluate for contributions (note that lower rank refers to lower concentrations and higher rank refers to higher concentrations). <u>NOTE:</u> The UpperRank and LowerRank values must be within the range of ranks specified on the RECTABLE keyword. AERMOD will analyze each rank within the range, regardless of whether the rank is specified explicitly on the RECTABLE keyword. Indicates that a threshold concentration (ThreshValue) will be specified as a limit on the lower bound rank to process. Lower threshold value for evaluating contributions; processing will stop after the first ranked value that is below ThreshValue <u>NOTE:</u> The ThreshValue analysis will be limited to the range of ranks specified on the RECTABLE keyword (but not the individual ranks that are specified). A warning message is generated if the ThreshValue is not reached within the range of ranks analyzed. Specifies filename for output file. Optional parameter to specify file unit.  <u>Note:</u> The range of ranks specified on the RECTABLE keyword (but not the individual ranks specified) also determines the range of ranks that may be considered with the MAXDCONT option, even with the <u>THRESH</u> option.
SUMMFILE	SummFileName	
where:	SummFileName	Specifies filename of output summary file
FILEFORM	<u>EXP</u> or <u>FIX</u>	

Keyword	Parameters	
where:	<u>EXP</u>  <u>FIX</u>	Specifies that the output results files will use EXPonential-formatted values.  Specifies that the output results files will use FIXed-formatted values (fixed-formatted values will be used if FILEFORM is omitted).
NOHEADER	FileType1 FileType2 FileType3 . . . FileTypeN or <u>ALL</u>	
where:	FileTypeN  <u>ALL</u>	Specifies the output file type(s) for which header records will be suppressed; includes the following file types: POSTFILE, PLOTFILE, MAXIFILE, RANKFILE, SEASONHR, MAXDAILY, MXDYBYR, and MAXDCONT.  Specifies that header records will be suppressed for <u>ALL</u> applicable output file types.
EVENTOUT	<u>SOCONT</u> or <u>DETAIL</u> [EVENT Only]	
where:	<u>SOCONT</u> <u>DETAIL</u>	Provide source contribution information only in the event output. Include hourly concentrations for each source and hourly meteorological data in the event output

## APPENDIX B. Explanation of error message codes

### B.1 Introduction

Prior to AERMOD beginning the intensive processing to calculate predicted values specified by the user (e.g., concentrations, deposition), AERMOD runs a series of checks on the input control file to identify issues that would prevent AERMOD from completing successfully. Some of these checks include the control file structure and syntax, proper use or use of undefined keywords or parameters, missing required keywords, and conflicting options. Also, a great deal of effort has been made to eliminate the possibility of run time errors, such as "divide by zero" and to identify questionable input data.

Error messages are reported to the user in two ways. A summary of messages is provided in the main output result file. The user can also request a detailed message file.

Message Summary: Whether the user selects a detailed message file or not, the AERMOD model outputs a summary of messages within the output result file. This message table gives the number of messages of each type, together with a detailed list of all the fatal errors and warning messages. During setup processing, if no errors or warnings are generated, then the model simply reports to the user that "SETUP Finishes Successfully."

Detailed Message File: The AERMOD model provides the option of saving a detailed list of all messages generated by the model in a separate output file. The user can select this option by specifying the keyword "ERRORFIL" followed by a filename inside the CONTROL pathway. For example, the following statements will save all the error messages to an ASCII text file named "errormsg.out":

```
CO STARTING
   ERRORFIL errormsg.out
CO FINISHED
```

## B.2 Output message summary

There are two message summaries provided in the standard output file of the AERMOD model. The first one is located after the echo of input control file options and before the input data summary. This summary will take one of two forms, depending on whether any fatal error or non-fatal warning messages were generated and depending on whether the option to RUN or NOT to run was selected on the CO RUNORNOT card. If there are no errors or warnings generated during the setup processing, and the RUN option was selected, then the model simply reports that "SETUP Finishes Successfully." If any fatal errors or warning messages were generated during the setup processing or if the option NOT to run was selected, then a more detailed summary is provided. This summary provides a message count for each type of message and a detailed listing of each fatal error and warning message generated. The second message summary table is located at the very end of the standard output result file, and it sums up the messages generated by the complete model run - both setup processing and run-time processing. An example of a setup processing message summary is shown in Figure B-1.

```
*** Message Summary For The AERMOD Model Setup ***

----- Summary of Total Messages -----
A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 0 Information Message(s)

***** FATAL ERROR MESSAGES *****
          *** NONE ***

***** WARNING MESSAGES *****
          *** NONE ***

*****
*** SETUP Finishes Successfully ***
*****
```

**Figure B-1. Example of an AERMOD Message Summary**

### B.3 Description of the message layout

Three types of messages can be produced by the model during the processing of input control file commands and during model calculations. These are described briefly below:

- Errors that will halt any further processing, except to identify additional error conditions (type E);
- Warnings that do not halt processing but indicate possible errors or suspect conditions (type W); and
- Informational messages that may be of interest to the user but have no direct bearing on the validity of the results (type I).

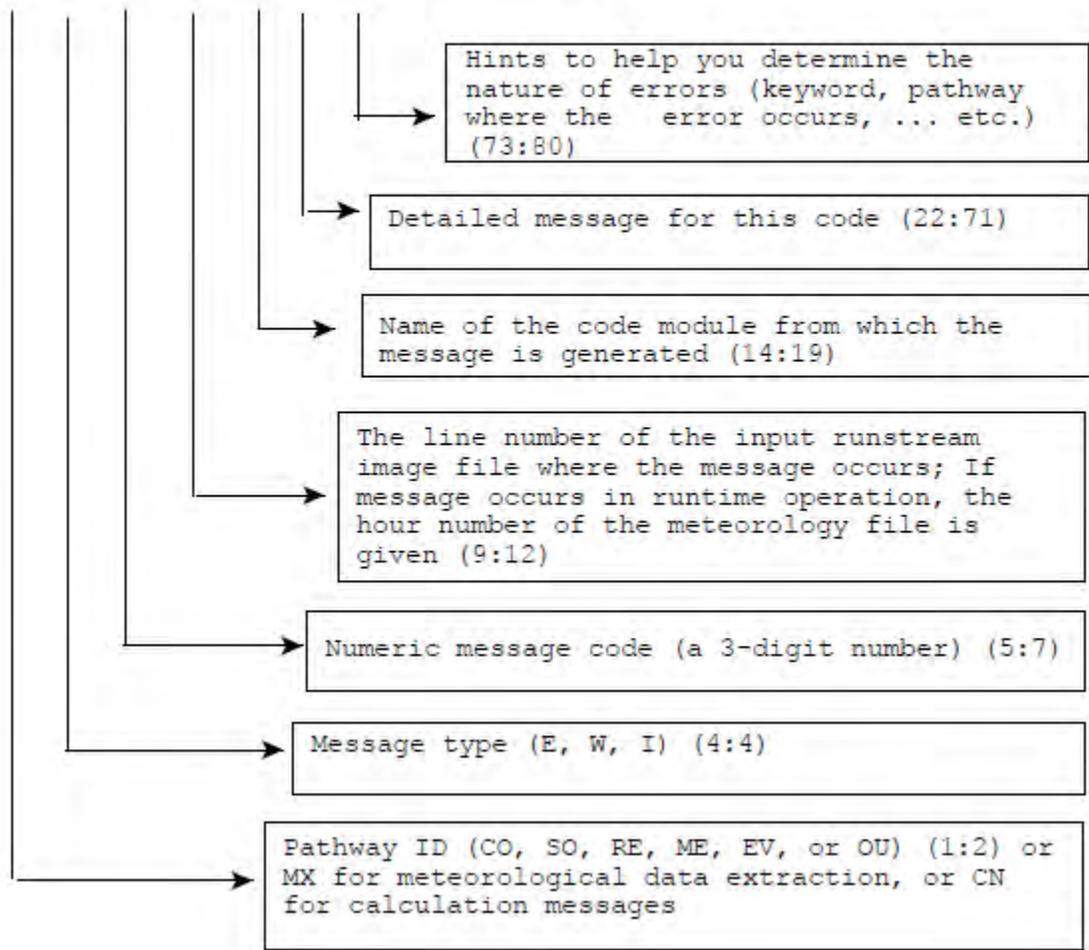
The messages have a consistent structure which contains the pathway ID, indicating which pathway the messages are generated from; the message type followed by a three-digit message number; the line number of the input control file command file for setup messages (or the meteorology hour number for runtime messages); the name of the module (e.g., the subroutine name) from which the message is generated; a detailed message corresponding to the message code; and an 8-character simple hint to help the user spot the possible source of the problem.

The following is an example of a detailed message generated from the CO pathway:

```
CO E1008 EXPATH: Invalid Pathway Specified. The Troubled Pathway is FF
```

The message syntax is explained in more detail below (values in parentheses give the column numbers within the message line for each element):

```
PW Txxx LLLL mmmmmmm: MESSAGE Hints
```



If an error occurs during processing of an included file (either SO INCLUDED or RE INCLUDED), the line number will represent the line number of the included file. The line number of the control file is saved before processing the included data, and then restored when processing returns to the main control file. The three message types are identified with the letters E (for errors), W (for warnings), and I (for informational messages).

## APPENDIX C. Description of file formats

### C.1 AERMET meteorological data

Two files are produced for input to the AERMOD dispersion model by the AERMET meteorological preprocessor. The surface OUTPUT contains observed and calculated surface variables, one record per hour. The PROFILE file contains the observations made at each level of an on-site tower, or the one level observations taken from NWS data, one record per level per hour. The contents and format of each of these files is described below:

#### SURFACE OUTPUT

##### Header record:

READ( ) *latitude, longitude, UA identifier, SF identifier, OS identifier, Version date, AERMET flags*

FORMAT (2(2X,A8), 8X,' UA\_ID: ',A8,' SF\_ID: ',A8,' OS\_ID: ',A8, T85,'VERSION:', A6 )

where	<i>latitude</i>	=	latitude specified in Stage 1 for primary surface station
	<i>longitude</i>	=	longitude specified in Stage 1 for primary surface station
	<i>UA identifier</i>	=	station identifier for upper air data; usually the WBAN number used to extract the data from an archive data set
	<i>SF identifier</i>	=	station identifier for hourly surface observations; usually the WBAN number used in extracting the data
	<i>OS identifier</i>	=	site-specific identifier
	<i>Version date</i>	=	AERMET version date; this date also appears in the banner on each page of the summary reports
	<i>AERMET flags</i>	=	One or more of the following flags may be included in the header record after the version date, based on either the source of the data or option(s) used in AERMET to process the data for input to AERMOD: CCVR_Sub, TEMP_Sub, THRESH_1MIN <i>speed</i> , Adjust_u*, MMIF <i>version</i> , BULKRN, and COARE, where <i>speed</i> is the threshold wind speed and <i>version</i> is the MMIF version used. Refer to the AERMET User's Guide (EPA, 2024e) for information on each of these flags.

Note 1: The '*cc\_ID*:' fields in the FORMAT statement above where *cc* can be UA for upper air, SF for surface, and OS for onsite or site-specific, include two spaces before the 2-character pathway ID and one space after the colon.

Note 2: The FORMAT statement above will read the header record through the version date. One or more flags may follow the version date to identify either the data source or option(s) used to preprocess the data with AERMET for input to AERMOD. The FORMAT statement will need to be revised with additional terms to read beyond the version date to retrieve the flags from the header record.

### Data records:

READ( )            *year, month, day, j\_day, hour, H, u\* , w\* , VPTG, Zic, Zim, L, z<sub>o</sub> , B<sub>o</sub> , r, W<sub>s</sub> , W<sub>d</sub> , z<sub>ref</sub>, temp, z<sub>temp</sub>, ipcode, pamt, rh, pres, ccvr, WSADJ*

FORMAT            (3(I2,1X), I3,1X, I2,1X, F6.1,1X, 3(F6.3,1X), 2(F5.0,1X), F8.1,1X, F7.4,1X, 2(F6.2,1X), F7.2,1X, F5.0, 3(1X,F6.1), 1X,I5, 1X,F6.2, 2(1X, F6.0), 1X, I5, 1X, A7)

where            *j\_day*            =            Julian day  
*H*                =            sensible heat flux (W/m<sup>2</sup>)  
*u\**              =            surface friction velocity (m/s)  
*w\**              =            convective velocity scale (m/s)  
*VPTG*          =            vertical potential temperature gradient above *Zic* (K/m)  
*Zic*             =            height of convectively-generated boundary layer (m)  
*Zim*            =            height of mechanically-generated boundary layer (m)  
*L*               =            Monin-Obukhov length (m)  
*z<sub>o</sub>*             =            surface roughness length (m)  
*B<sub>o</sub>*             =            Bowen ratio  
*r*                =            Albedo  
*W<sub>s</sub>*             =            reference wind speed (m/s)  
*W<sub>d</sub>*             =            reference wind direction (degrees)  
*z<sub>ref</sub>*            =            reference height for wind (m)  
*temp*          =            reference temperature (K)  
*z<sub>temp</sub>*         =            reference height for temperature (m)  
*ipcode*        =            precipitation type code (0=none, 11=liquid, 22=frozen, 99=missing)  
*pamt*          =            precipitation amount (mm/hr)  
*rh*             =            relative humidity (percent)  
*pres*          =            station pressure (mb)  
*ccvr*          =            cloud cover (tenths)  
*WSADJ* =        wind speed adjustment and data source flag

When site-specific data are included in the data base, the definition of the reference height wind speed and direction are subject to the following restrictions:

- the wind speed,  $W_s$ , must be greater than or equal to the site-specific data threshold wind speed;
- the measurement height must be at or above  $7 \cdot z_0$ , where  $z_0$  is the surface roughness length;
- the height must be less than or equal to 100 meters;

If AERMET is run only with NWS data, i.e., no site-specific data are in the data base, then the restrictions above do not apply and the reference winds are taken to be the NWS winds independent of the height at which the winds were measured.

Ambient air temperature is subject to a similar, but less restrictive, selection process:

- the measurement height must be above  $z_0$ ; and
- the height must be less than or equal to 100 meters.

The sensible heat flux, Bowen ratio and albedo are not used by AERMOD, but are passed through by AERMET for information purposes only.

### PROFILE OUTPUT

READ( ) *year, month, day, hour, height, top, WDnn, WSnn, TTnn, SAnn, SWnn*

FORMAT (4(I2,1X), F7.1,1X, I1,1X, F7.1,1X, F8.2,1X, F8.2,1X, F8.2,1X, F8.2)

where, height = measurement height (m)  
top = 1, if this is the last (highest) level for this *hour*, or 0 otherwise  
WDnn = wind direction at the current level (degrees)  
WSnn = wind speed at the current level (m/s)  
TTnn = temperature at the current level (°C)  
SAnn =  $\sigma_\theta$  (degrees)  
SWnn =  $\sigma_w$  (m/s)

### **C.2 Threshold violation files (MAXIFILE option)**

The OU MAXIFILE card for the AERMOD model allows the user the option to generate a file or files of threshold violations for specific source group and averaging period combinations. The file consists of several header records, each identified with an asterisk (\*) in column one. The header information includes the model name and version number, the first line of the title information for the run, the list of modeling option keywords applicable to the results, the averaging period and source group included in the file, and the threshold value. Any value equal to or exceeding the threshold value will be included in the file. The header also includes the format used for writing the data records, and column headers for the variables included in the file. The variables provided on each data record include the averaging period, the source group ID, the date (YYMMDDHH) for the end of averaging period, the X and Y coordinates of the receptor location,

receptor terrain elevation, hill height scale, flagpole receptor height, and the concentration value that violated the threshold. The following example from a threshold file identifies the contents of the MAXIFILE:

```

* AERMOD ( 15181): A Simple Example Problem for the AERMOD-PRIME Model                                06/09/16
* AERMET ( 15181):                                                                                                      17:03:34
* MODELING OPTIONS USED:  NonDEFAULT CONC          FLAT          RURAL
*
*   MAXI-FILE FOR 3-HR VALUES >= A THRESHOLD OF      50.00
*
*   FOR SOURCE GROUP: ALL
*
*   FORMAT: (1X,I3,1X,A8,1X,I8.8,2(1X,F13.5),3(1X,F7.2),1X,F13.5)
*AVE  GRP   DATE           X           Y           ZELEV   ZHILL   ZFLAG  AVERAGE CONC
*-----
  3 ALL    88030112      344.68271    -60.77686     0.00     0.00     0.00     71.36678
  3 ALL    88030112      492.40388    -86.82409     0.00     0.00     0.00     73.20689
  3 ALL    88030112      984.80775   -173.64818     0.00     0.00     0.00     50.65556
  3 ALL    88030112      164.44621    -59.85353     0.00     0.00     0.00    112.74896

```

### C.3 Postprocessor files (POSTFILE option)

The OU POSTFILE card for the AERMOD model allows the user the option of creating output files of concurrent concentration values suitable for postprocessing. The model offers two options for the type of file generated - one is an unformatted file, and the other is a formatted file of X, Y, CONC values suitable for inputting to plotting programs.

The unformatted POSTFILE option generates a separate unformatted data record of concurrent values for each averaging period and source group specified. The averaging period and source group combinations may be written to separate files or combined into a single file. Each record begins with the date variable for the end of the averaging period (an integer variable of the form YYMMDDHH), the averaging period (e.g., an integer value of 3 for 3-hour averages), and the source group ID (eight characters). Following these three header variables, the record includes the concentration values for each receptor location, in the order in which the receptors are defined on the RE pathway. The results are output to the unformatted file or files as they are calculated by the model.

The formatted plot file option for the POSTFILE keyword includes several lines of header information, each identified with an asterisk (\*) in column one. The header information includes the model

name and version number, the first line of the title information for the run, the list of modeling option keywords applicable to the results, the averaging period and source group included in the file, and the number of receptors included. The header also includes the format used for writing the data records, and column headers for the variables included in the file. The variables provided on each data record include the X and Y coordinates of the receptor location, the concentration value for that location, receptor terrain elevation, hill height scale, flagpole receptor height, the averaging period, the source group ID, the date variable for the end of the averaging period (in the form of YYMMDDHH) for short-term averages or the number of hours in the period for PERIOD averages, and the receptor network ID. The following example from a formatted postprocessor file for PERIOD averages identifies the contents of the POSTFILE:

```
* AERMOD ( 15181): A Simple Example Problem For the AERMOD-PRIME Model          06/09/16
* AERMET ( 15181):                                                              16:58:19
* MODELING OPTIONS USED: NonDEFAULT CONC      FLAT      RURAL
*
*      POST/PLOT FILE OF PERIOD VALUES FOR SOURCE GROUP: ALL
*
*      FOR A TOTAL OF   144 RECEPTORS.
*
*      FORMAT: (3(1X,F13.5),3(1X,F8.2),2X,A6,2X,A8,2X,I8.8,2X,A8)
*
*      X          Y      AVERAGE CONC      ZELEV      ZHILL      ZFLAG      AVE      GRP      NUM HRS      NET ID
*
*      30.38843    172.34136    0.21576    0.00    0.00    0.00 PERIOD ALL    00000096 POL1
*
*      60.77686    344.68271    0.53162    0.00    0.00    0.00 PERIOD ALL    00000096 POL1
*
*      86.82409    492.40388    0.85993    0.00    0.00    0.00 PERIOD ALL    00000096 POL1
*
*      173.64818   984.80775    1.39778    0.00    0.00    0.00 PERIOD ALL    00000096 POL1
*
*      59.85353    164.44621    0.20861    0.00    0.00    0.00 PERIOD ALL    00000096 POL1
*
*      119.70705   328.89242    0.67388    0.00    0.00    0.00 PERIOD ALL    00000096 POL1
*
*      171.01007   469.84631    1.27452    0.00    0.00    0.00 PERIOD ALL    00000096 POL1
*
*      342.02014   939.69262    2.45702    0.00    0.00    0.00 PERIOD ALL    00000096 POL1
*
*      87.50000    151.55445    0.20576    0.00    0.00    0.00 PERIOD ALL    00000096 POL1
*
*      175.00000   303.10889    0.64322    0.00    0.00    0.00 PERIOD ALL    00000096 POL1
*
*      250.00000   433.01270    1.20422    0.00    0.00    0.00 PERIOD ALL    00000096 POL1
*
*      500.00000   866.02540    2.28880    0.00    0.00    0.00 PERIOD ALL    00000096 POL1
*
*      112.48783   134.05778    0.20172    0.00    0.00    0.00 PERIOD ALL    00000096 POL1
*
*      224.97566   268.11556    0.48027    0.00    0.00    0.00 PERIOD ALL    00000096 POL1
*
*      321.39380   383.02222    0.76067    0.00    0.00    0.00 PERIOD ALL    00000096 POL1
*
*      642.78761   766.04444    1.19405    0.00    0.00    0.00 PERIOD ALL    00000096 POL1
```

#### C.4 High value results for plotting (PLOTFILE option)

The OU PLOTFILE card for the AERMOD model allows the user the option of creating output files of highest concentration values suitable for importing into graphics software to generate contour plots. The

formatted plot files generated by the PLOTFILE include several lines of header information, each identified with an asterisk (\*) in column one. The header information includes the model name and version number, the first line of the title information for the run, the list of modeling option keywords applicable to the results, the averaging period and source group included in the file, the high value (e.g., 2ND highest) included for plotting, and the number of receptors included. The header also includes the format used for writing the data records, and column headers for the variables included in the file. The variables provided on each data record include the X and Y coordinates of the receptor location, the concentration value for that location, receptor terrain elevation, hill height scale, flagpole receptor height, averaging period, the source group ID, the high value included for short-term averages or the number of hours in the period for PERIOD averages, and the receptor network ID. For short-term averages, the PLOTFILE also includes the date variable for the end of the averaging period (in the form of YYMMDDHH). The PERIOD average PLOTFILE uses the same format for the data records as the PERIOD average formatted POSTFILE shown in the previous section. The following example from a plot file for high second highest 24-hour averages identifies the contents of the PLOTFILE:

```

* AERMOD ( 15181): A Simple Example Problem for the AERMOD-PRIME Model          06/09/16
* AERMET ( 15181):                                                              17:07:58
* MODELING OPTIONS USED:  NonDEFAULT CONC      FLAT      RURAL
*
*      PLOT FILE OF  HIGH  2ND HIGH 24-HR VALUES FOR SOURCE GROUP: ALL
*
*      FOR A TOTAL OF  144 RECEPTORS.
*
*      FORMAT: (3(1X,F13.5),3(1X,F8.2),3X,A5,2X,A8,2X,A5,5X,A8,2X,I8)
*
*      X          Y          AVERAGE CONC      ZELEV      ZHILL      ZFLAG      AVE      GRP      RANK      NET ID      DATE(CONC)
*
*      _____  _____  _____  _____  _____  _____  _____  _____  _____  _____  _____
*
*      30.38843    172.34136    0.34726    0.00    0.00    0.00    24-HR  ALL      2ND    POL1    88030324
*
*      60.77686    344.68271    0.75187    0.00    0.00    0.00    24-HR  ALL      2ND    POL1    88030124
*
*      86.82409    492.40388    1.18649    0.00    0.00    0.00    24-HR  ALL      2ND    POL1    88030124
*
*      173.64818   984.80775    1.19837    0.00    0.00    0.00    24-HR  ALL      2ND    POL1    88030124

```

The PLOTFILE output also includes a flag (\*\*\*) identifying the receptor with the highest concentration. For short-term averages, the flag precedes the date field. For period averages, the flag precedes the field with the number of hours in the period.

### C.5 TOXX model input files (TOXXFILE option)

The OU TOXXFILE card for the AERMOD model allows the user the option to generate an unformatted file or files of threshold violations for a specific averaging period for use with the TOXX model component of TOXST. The file consists of three header records, including the first line of the title information for the run, the number of source groups, receptors and averaging periods, information on the type of receptor network, and the threshold cutoff value. Following the header records are pairs of records identifying the specific averaging period, source group and receptor location and corresponding concentration value for the values exceeding the user- specified threshold. If any source group exceeds the threshold for a given averaging period and receptor location, then the concentrations for all source groups are output for that period and receptor. The structure of the unformatted file for the AERMOD model TOXXFILE option is described below:

Record	#	Description
	1	Title (80 characters)
	2	IYEAR, NUMGRP, NUMREC, NUMPER, ITAB, NXTOX, NYTOX, IDUM1, IDUM2, IDUM3
	3	CUTOFF, RDUM1, ..., RDUM9
where:		TITLE = First line of title (80 characters)
		IYEAR = Year of simulation
		NUMGRP = No. of source groups
		NUMREC = Total no. of receptors
		NUMPER = No. of averaging periods (e.g., number of hours in the year)
		ITAB = 1 for polar grid; 2 for Cartesian grid; 0 for discrete receptors or mixed grids
		NXTOX = No. of x-coordinates (or distances) in receptor network
		NYTOX = No. of y-coordinates (or directions) in receptor network
		IDUM1 = dummy integer variable, arbitrarily set equal to zero
		IDUM2 = dummy integer variable, arbitrarily set equal to zero
		IDUM3 = dummy integer variable, arbitrarily set equal to zero
		CUTOFF = User-specified threshold for outputting results (g/m <sup>3</sup> )
		RDUM1 = Dummy real variables (nine), arbitrarily set equal to zero
		.
		.
		.
		RDUM9 = Dummy real variables (nine), arbitrarily set equal to zero

Following the header records, the file consists of pairs of records including an ID variable identifying the data period, source group number and receptor number, and the corresponding concentration values. The

number of values included in each record is controlled by the NPAIR PARAMETER, which is initially set at 100 in MODULE MAIN1. The identification variable is determined as follows:

$$\text{IDCONC} = \text{IPER} * 100000 + \text{IGRP} * 1000 + \text{IREC}$$

where: IPER = the hour number for the year corresponding to the concentration value  
IGRP = the source group number (the order in which the group was defined on the SO pathway)  
IREC = the receptor number (the order in which the receptor was defined on the RE pathway)

### **C.6 Maximum values by rank (RANKFILE option)**

The OU RANKFILE card for the AERMOD model allows the user the option of creating output files of the maximum concentration values by rank, suitable for generating Q-Q or quantile plots. The data contained in the RANKFILE output is based on the MAXTABLE arrays, except that only one occurrence per data period is included. The formatted data files generated by the RANKFILE include several lines of header information, each identified with an asterisk (\*) in column one. The header information includes the model name and version number, the first line of the title information for the run, the list of modeling option keywords applicable to the results, the averaging period included in the file, and the number of ranked values included. The header also includes the format used for writing the data records, and column headers for the variables included in the file. The variables provided on each data record include the rank, concentration value, X and Y coordinates of the receptor location, receptor terrain elevation, hill height scale, flagpole receptor height, and the source group ID. Each RANKFILE includes results for all of the source groups for a particular averaging period. Since the RANKFILE only include one occurrence per data period, the file may not include the number of ranked values requested, especially for evaluation data bases of limited duration. The following example identifies the contents of the RANKFILE:

```

* AERMOD ( 15181): A Simple Example Problem for the AERMOD-PRIME Model                                06/09/16
* AERMET ( 15181):                                                                                                      17:11:08
* MODELING OPTIONS USED:  NonDEFAULT CONC          FLAT          RURAL
*           RANK-FILE OF UP TO    40 TOP  3-HR VALUES FOR      1 SOURCE GROUPS
*           INCLUDES OVERALL MAXIMUM VALUES WITH DUPLICATE DATA PERIODS REMOVED
*           FORMAT: (1X,I6,1X,F13.5,1X,I8.8,2(1X,F13.5),3(1X,F7.2),2X,A8)
* RANK  AVERAGE CONC  DATE          X              Y              ZELEV  ZHILL  ZFLAG  GRP
*-----
*      1      329.96009  88030112      433.01270      -250.00000      0.00   0.00   0.00  ALL
*      2      278.47891  88030115      469.84631      -171.01007      0.00   0.00   0.00  ALL
*      3      124.30430  88030118      433.01270      -250.00000      0.00   0.00   0.00  ALL

```

### C.7 Arc-maximum values for evaluation (EVALFIL option)

The OU EVALFILE card for the AERMOD model allows the user the option of creating output files of the arc-maximum concentration values for individual sources suitable for use in model evaluation studies. The data contained in the EVALFILE output is based on the maximum value along arcs of receptors, identified using the RE EVALCART card. Receptors may be grouped on arcs based on their distance from the source, or other logical grouping. The formatted EVALFILE output includes five records of information for each selected source and each hour of meteorological data. The information provided is as follows:

1. Source ID (12 characters)
2. Date (YYMMDDHH)
3. Arc ID (eight characters)
4. Arc maximum P/Q
5. Emission rate for arc maximum (including unit conversions)
6. Crosswind integrated concentration based on true centerline concentration
7. Normalized non-dimensional crosswind integrated concentration
8. Downwind distance corresponding to arc maximum (m)
9. Effective wind speed corresponding to arc maximum (m/s)
10. Effective  $F_v$  corresponding to arc maximum (m/s)
11. Effective  $F_w$  corresponding to arc maximum (m/s)
12.  $F_y$  corresponding to arc maximum (m)
13. Effective plume height corresponding to arc maximum (m)
14. Monin-Obukhov length for current hour (m)

15. Mixing height for current hour (m)
16. Surface friction velocity for current hour (m/s)
17. Convective velocity scale for current hour if unstable (m/s) or  $F_z$  for current hour if stable
18. Buoyancy flux for current hour ( $m^4/s^3$ )
19. Momentum flux for current hour ( $m^4/s^2$ )
20. Bowen ratio for current hour
21. Plume penetration factor for current hour
22. Centerline P/Q for direct plume
23. Centerline P/Q for indirect plume
24. Centerline P/Q for penetrated plume
25. Nondimensional downwind distance
26. Plume height/mixing height ratio
27. Non-dimensional buoyancy flux
28. Source release height (m)
29. Arc centerline P/Q
30. Developmental option settings place holder (string of 10 zeroes)
31. Flow vector for current hour (degrees)
32. Effective height for stable plume reflections (m)

The following Fortran WRITE and FORMAT statements are used to write the results to the EVALFILE output:

```

      WRITE( IELUNT( ISRC ), 9000 ) SRCID( ISRC ), KURDAT, ARCID( I ),
&                                ARCMAX( I ), QMAX( I ), CWIC, CWICN,
&                                DXMAX( I ), UOUT, SVMAX( I ),
&                                SWMAX( I ), SYOUT, HEMAX( I ),
&                                OBUOUT, ZI, USTAR, PWSTAR, FB, FM,
&                                BOWEN, PPF, CHIDML( I ), CHINML( I ), CHI3ML( I ),
&                                XNDIM, HEOZI, FSTAR, AHS( ISRC ), ARCCL( I ),
&                                AFV, HSBLMX( I )

9000  FORMAT( 1X, A12, 1X, I8.8, 1X, A8, 4( 1X, G12.6 ),
&          9X, 6( 1X, G12.4 ), 9X, 6( 1X, G12.4 ),
&          9X, 6( 1X, G12.4 ), 9X, 4( 1X, G12.4 ), 1X, '0000000000',
&          1X, G12.4, 1X, G12.4 )

```

## C.8 Results by season and hour-of-day (SEASONHR option)

The SEASONHR option is used to output a file containing the average results by season and hour-of-day. The formatted data files generated by the SEASONHR option include several lines of header information, each identified with an asterisk (\*) in column one. The header information includes the model name and version number, the first line of the title information for the run, the list of modeling option keywords applicable to the results, the source group included in the file, and the number of receptors. The header also includes the format used for writing the data records, and column headers for the variables included in the file. The variables provided on each data record include the X and Y coordinates of the receptor location, the average concentration value, receptor terrain elevation, hill height scale, flagpole receptor height, source group ID, number of non-calm and non-missing hours used to calculate the season-by-hour-of-day averages (the NHRS column), season index (the SEAS column with 1 for winter, 2 for spring, 3 for summer, and 4 for fall), the hour-of-day for the concentration value, and the receptor network ID. A sample from a SEASONHR output file is shown below:

```

* AERMOD ( 15181): A Simple Example Problem for the AERMOD-PRIME Model          06/09/16
* AERMET ( 14134):                                                              17:27:43
* MODELING OPTIONS USED:  NonDEFAULT CONC      FLAT      RURAL
*
*      FILE OF SEASON/HOUR VALUES FOR SOURCE GROUP: ALL
*
*      FOR A TOTAL OF   144 RECEPTORS.
*
*      FORMAT: (2(1X,F13.5),1(1X,F13.8),3(1X,F7.2),2X,A8,2X,3(I4,2X),A8)
*
*      X              Y      AVERAGE CONC    ZELEV    ZHILL    ZFLAG    GRP    NHRS  SEAS  HOUR  NET ID
*
*      -----
*      30.38843      172.34136    34.14568783    0.00    0.00    0.00    ALL     65    1    1    POL1
*      60.77686      344.68271    39.19676801    0.00    0.00    0.00    ALL     65    1    1    POL1
*      86.82409      492.40388    34.59785413    0.00    0.00    0.00    ALL     65    1    1    POL1
*      173.64818     984.80775    16.14253303    0.00    0.00    0.00    ALL     65    1    1    POL1
*      59.85353      164.44621    32.93762092    0.00    0.00    0.00    ALL     65    1    1    POL1
*      119.70705     328.89242    41.97750583    0.00    0.00    0.00    ALL     65    1    1    POL1

```

## C.9 Source group contribution for ranked averaged maximum daily values (MAXDCONT)

The OU MAXDCONT card of the AERMOD model allows the user to create output files that provide source contributions for the 24-hour PM<sub>2.5</sub>, 1-hour NO<sub>2</sub> and 1-hour SO<sub>2</sub> standards in which the design value is based on averages of ranked values across multiple years. Ranked concentrations and source contributions are based on a target source group specified by the user. The user can define the ranks to include or a range of ranks and an optional minimum threshold concentration value. The MAXDCONT output file includes several lines of header information, each identified with an asterisk (\*) in column one, including: the model name and version number, the first line of the title information, the list of modeling option keywords, the highest rank specified, the averaging period, target source group, and threshold value if applicable. The header also includes the total number of receptors and source groups and the Fortran format statement used to write the data records. The variables provided on each data record include the X and Y coordinates of the receptor location, the concentration value for the target source group at the receptor location, receptor terrain elevation, hill height scale, flagpole receptor height, averaging period, the source group ID, rank, receptor network ID, and the source contribution for each source modeled. The data records are grouped by rank in ascending order. Concentrations are displayed for all receptors for the highest rank, then the next highest rank, etc. The following example is a partial MAXDCONT file with a minimum threshold value of 35 µg/m<sup>3</sup> was specified for ranks 1 through 50. Results for the first two ranks are displayed for four the source groups that were modeled.

```

* AERMOD ( 15181): PM-2.5 Test Case for the AERMOD Model using single met file      07/30/15
* AERMET ( 13350):                                                                    13:50:57
* MODELING OPTIONS USED: NonDEFAULT CONC      FLAT      RURAL
*
*      MAXDCONT FILE OF 1ST-HIGHEST 24-HR VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ; ABOVE THRESH = 35.00000
*
*      FOR A TOTAL OF 16 RECEPTORS AND 3 SOURCE GROUPS; WITH CONTRIBUTIONS FROM OTHER SOURCE GROUPS PAIRED IN TIME & SPACE
*
*      FORMAT: (3(1X,F13.5),3(1X,F8.2),2X,A6,2X,A8,2X,A5,5X,A8,2X, 3(F13.5,2X:))
*
*      X          Y      AVERAGE CONC  ZELEV  ZHILL  ZFLAG  AVE  GRP  RANK  NET ID  CONT STACK1  CONT STACK2  CONT ALL
*
*      200.00000    0.00000    9.76902    0.00    0.00    0.00  24-HR  ALL   1ST  POL1      0.00000    0.00000    0.00000
*      500.00000    0.00000    25.61401    0.00    0.00    0.00  24-HR  ALL   1ST  POL1      0.00000    0.00000    0.00000
*     1000.00000    0.00000    26.86548    0.00    0.00    0.00  24-HR  ALL   1ST  POL1      0.00000    0.00000    0.00000
*     3000.00000    0.00000    8.85979    0.00    0.00    0.00  24-HR  ALL   1ST  POL1      0.00000    0.00000    0.00000
*      0.00000   -200.00000    20.50162    0.00    0.00    0.00  24-HR  ALL   1ST  POL1      0.00000    0.00000    0.00000
*      0.00000   -500.00000    51.65594    0.00    0.00    0.00  24-HR  ALL   1ST  POL1     21.15838    30.49757    51.65594
*      0.00000  -1000.00000    52.82753    0.00    0.00    0.00  24-HR  ALL   1ST  POL1     13.99357    38.83396    52.82753
*      0.00000  -3000.00000    19.91409    0.00    0.00    0.00  24-HR  ALL   1ST  POL1      0.00000    0.00000    0.00000
*     -200.00000   -0.00000    8.64428    0.00    0.00    0.00  24-HR  ALL   1ST  POL1      0.00000    0.00000    0.00000
*     -500.00000   -0.00000    14.58084    0.00    0.00    0.00  24-HR  ALL   1ST  POL1      0.00000    0.00000    0.00000
*    -1000.00000   -0.00000    11.59131    0.00    0.00    0.00  24-HR  ALL   1ST  POL1      0.00000    0.00000    0.00000
*    -3000.00000   -0.00000    12.28970    0.00    0.00    0.00  24-HR  ALL   1ST  POL1      0.00000    0.00000    0.00000
*     -0.00000    200.00000    67.53734    0.00    0.00    0.00  24-HR  ALL   1ST  POL1     67.53733    0.00002    67.53734
*     -0.00000    500.00000    67.83252    0.00    0.00    0.00  24-HR  ALL   1ST  POL1     64.45844    3.37408    67.83252
*     -0.00000   1000.00000    52.28291    0.00    0.00    0.00  24-HR  ALL   1ST  POL1     28.94476    23.33815    52.28291
*     -0.00000   3000.00000    29.08609    0.00    0.00    0.00  24-HR  ALL   1ST  POL1      0.00000    0.00000    0.00000
*
* AERMOD ( 15181): PM-2.5 Test Case for the AERMOD Model using single met file      07/30/15
* AERMET ( 13350):                                                                    13:50:57
* MODELING OPTIONS USED: NonDEFAULT CONC      FLAT      RURAL
*
*      MAXDCONT FILE OF 2ND-HIGHEST 24-HR VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ; ABOVE THRESH = 35.00000

```

* FOR A TOTAL OF 16 RECEPTORS AND 3 SOURCE GROUPS; WITH CONTRIBUTIONS FROM OTHER SOURCE GROUPS PAIRED IN TIME & SPACE												
* FORMAT: (3(1X,F13.5),3(1X,F8.2),2X,A6,2X,A8,2X,A5,5X,A8,2X, 3(F13.5,2X:))												
* X	Y	AVERAGE CONC	ZELEV	ZHILL	ZFLAG	AVE	GRP	RANK	NET ID	CONT STACK1	CONT STACK2	CONT ALL
200.00000	0.00000	7.91782	0.00	0.00	0.00	24-HR	ALL	2ND	POL1	0.00000	0.00000	0.00000
500.00000	0.00000	22.53064	0.00	0.00	0.00	24-HR	ALL	2ND	POL1	0.00000	0.00000	0.00000
1000.00000	0.00000	24.26451	0.00	0.00	0.00	24-HR	ALL	2ND	POL1	0.00000	0.00000	0.00000
3000.00000	0.00000	8.10584	0.00	0.00	0.00	24-HR	ALL	2ND	POL1	0.00000	0.00000	0.00000
0.00000	-200.00000	16.96505	0.00	0.00	0.00	24-HR	ALL	2ND	POL1	0.00000	0.00000	0.00000
0.00000	-500.00000	43.25276	0.00	0.00	0.00	24-HR	ALL	2ND	POL1	14.36197	28.89079	43.25276
0.00000	-1000.00000	43.82672	0.00	0.00	0.00	24-HR	ALL	2ND	POL1	10.92254	32.90417	43.82672
0.00000	-3000.00000	17.32480	0.00	0.00	0.00	24-HR	ALL	2ND	POL1	0.00000	0.00000	0.00000
-200.00000	-0.00000	6.77421	0.00	0.00	0.00	24-HR	ALL	2ND	POL1	0.00000	0.00000	0.00000
-500.00000	-0.00000	11.56687	0.00	0.00	0.00	24-HR	ALL	2ND	POL1	0.00000	0.00000	0.00000
-1000.00000	-0.00000	9.72229	0.00	0.00	0.00	24-HR	ALL	2ND	POL1	0.00000	0.00000	0.00000
-3000.00000	-0.00000	8.03098	0.00	0.00	0.00	24-HR	ALL	2ND	POL1	0.00000	0.00000	0.00000
-0.00000	200.00000	51.19765	0.00	0.00	0.00	24-HR	ALL	2ND	POL1	51.19763	0.00002	51.19765
-0.00000	500.00000	59.15581	0.00	0.00	0.00	24-HR	ALL	2ND	POL1	57.67153	1.48428	59.15581
-0.00000	1000.00000	41.49519	0.00	0.00	0.00	24-HR	ALL	2ND	POL1	18.49276	23.00243	41.49519
-0.00000	3000.00000	23.24160	0.00	0.00	0.00	24-HR	ALL	2ND	POL1	0.00000	0.00000	0.00000

### **C.10 Daily maximum 1-hour values (MAXDAILY)**

The OU MAXDAILY card of the AERMOD model generates a file of daily maximum 1-hour concentrations for a specified source group, useful for analyzing the 1-hour NO<sub>2</sub> and SO<sub>2</sub> NAAQS. The MAXDAILY file includes several lines of header information, each identified with an asterisk (\*) in column one, including: the model name and version number, the first line of the title information, the list of modeling option keywords, and the source group. The header also includes the total number of receptors and the Fortran format statement used to write the data records. The variables provided on each data record include the X and Y coordinates of the receptor location, the concentration value for the target source group at the receptor location, receptor terrain elevation, hill height scale, flagpole receptor height, averaging period, the source group ID, day of the year, hour, date, and receptor network ID. The following example is a sample from a MAXDAILY output file.

```

* AERMOD ( 15181): AERMOD OLM/OLMGROUP ALL Test Case, with BACKGROUND                                07/30/15
* AERMET ( 13350):                                                                                                                            13:50:48
* MODELING OPTIONS USED: NonDEFAULT CONC      FLAT      OLM      RURAL
*
*   MAXDAILY FILE OF DAILY MAXIMUM 1-HR VALUES BY DAY FOR SOURCE GROUP: ALL
*
*   FOR A TOTAL OF      16 RECEPTORS.
*
*   FORMAT: (3(1X,F13.5),3(1X,F8.2),2X,A6,2X,A8,2X,I4,2X,I3,2X,I8.8,2X,A8)
*
*   X           Y           AVERAGE CONC      ZELEV      ZHILL      ZFLAG      AVE      GRP      JDAY      HR      DATE      NET ID
*
*   -----
*   100.00000    0.00000    50.00000    35.00    35.00    0.00    1-HR  ALL      1    13    99010113  POL1
*   300.00000    0.00000    50.00159    35.00    35.00    0.00    1-HR  ALL      1    13    99010113  POL1
*   1000.00000   0.00000    50.20117    35.00    35.00    0.00    1-HR  ALL      1    13    99010113  POL1
*   3000.00000   0.00000    50.12314    35.00    35.00    0.00    1-HR  ALL      1    13    99010113  POL1
*   0.00000     -100.00000    50.00000    35.00    35.00    0.00    1-HR  ALL      1    13    99010113  POL1
*   0.00000     -300.00000    50.00259    35.00    35.00    0.00    1-HR  ALL      1    13    99010113  POL1
*   0.00000     -1000.00000    50.22100    35.00    35.00    0.00    1-HR  ALL      1    13    99010113  POL1
*   0.00000     -3000.00000    68.29389    35.00    35.00    0.00    1-HR  ALL      1     7    99010107  POL1
*  -100.00000   -0.00000    50.00000    35.00    35.00    0.00    1-HR  ALL      1    13    99010113  POL1
*  -300.00000   -0.00000    50.00258    35.00    35.00    0.00    1-HR  ALL      1    13    99010113  POL1
* -1000.00000  -0.00000    50.20079    35.00    35.00    0.00    1-HR  ALL      1    13    99010113  POL1
* -3000.00000  -0.00000    50.12262    35.00    35.00    0.00    1-HR  ALL      1    13    99010113  POL1
*  -0.00000    100.00000    50.00000    35.00    35.00    0.00    1-HR  ALL      1    13    99010113  POL1
*  -0.00000    300.00000    50.00159    35.00    35.00    0.00    1-HR  ALL      1    13    99010113  POL1
*  -0.00000    1000.00000    50.20117    35.00    35.00    0.00    1-HR  ALL      1    13    99010113  POL1
*  -0.00000    3000.00000    50.12314    35.00    35.00    0.00    1-HR  ALL      1    13    99010113  POL1
*   100.00000    0.00000    50.00000    35.00    35.00    0.00    1-HR  ALL      2    13    99010213  POL1
*   300.00000    0.00000    50.00001    35.00    35.00    0.00    1-HR  ALL      2    13    99010213  POL1
*  1000.00000    0.00000    50.00008    35.00    35.00    0.00    1-HR  ALL      2    13    99010213  POL1
*  3000.00000    0.00000    50.00280    35.00    35.00    0.00    1-HR  ALL      2    13    99010213  POL1
*   0.00000     -100.00000    50.00000    35.00    35.00    0.00    1-HR  ALL      2    13    99010213  POL1
*   0.00000     -300.00000    50.00001    35.00    35.00    0.00    1-HR  ALL      2    13    99010213  POL1
*   0.00000     -1000.00000    50.00009    35.00    35.00    0.00    1-HR  ALL      2    13    99010213  POL1
*   0.00000     -3000.00000    50.00285    35.00    35.00    0.00    1-HR  ALL      2    13    99010213  POL1
*  -100.00000   -0.00000    50.00000    35.00    35.00    0.00    1-HR  ALL      2    13    99010213  POL1

```

### **C.11 Maximum daily 1-hour concentration by year (MAXDYBYR)**

The OU MAXDYBYR card of the AERMOD model generates a file with a summary of daily maximum 1-hour concentrations by year for each rank specified on the RECTABLE keyword for a specified source group. This is another output file type that is applicable to the 1-hour NO<sub>2</sub> and 1-hour SO<sub>2</sub> NAAQS. The ranks included in the MXDYBYR file are the ranks used in the MAXDCONT postprocessing option. The MAXDYBYR file includes several lines of header information, each identified with an asterisk (\*) in column one, including: the model name and version number, the first line of the title information, the list of modeling option keywords, and the source group. The header also includes the total number of receptors and the Fortran format statement used to write the data records. The variables provided on each data record include the X and Y coordinates of the receptor location, the concentration value for the target source group at the receptor location, receptor terrain elevation, hill height scale, flagpole receptor height, rank, the source group ID, day of the year, hour, date, and receptor network ID. The data records are grouped by rank in ascending order. Concentrations are displayed for all receptors for the highest rank, then the next highest rank, etc. The following example is a sample from a MAXDAILY output file for which ranks 4, 8 12, and 50 were specified on the MAXDCONT keyword.

```

* AERMOD ( 15181): AERMOD OLM/OLMGROUP ALL Test Case, with BACKGROUND                                07/30/15
* AERMET ( 13350):                                                                                                                            13:50:48
* MODELING OPTIONS USED: NonDEFAULT CONC      FLAT      OLM      RURAL
*
*   MXDYBYR FILE OF RANKED DAILY MAXIMUM 1-HR  VALUES BY YEAR FOR SOURCE GROUP: ALL
*
*   FOR A TOTAL OF      16 RECEPTORS.
*
*   FORMAT: (3(1X,F13.5),3(1X,F8.2),2X,A6,2X,A8,2X,I4,2X,I3,2X,I8.8,2X,A8)
*
*   X           Y           AVERAGE CONC      ZELEV      ZHILL      ZFLAG      RANK      GRP      JDAY      HR      DATE      NET ID
*
*   100.00000    0.00000    76.74205    35.00    35.00    0.00    4TH  ALL    236    14    99082414  POL1
*
*   300.00000    0.00000    174.62886    35.00    35.00    0.00    4TH  ALL    136    14    99051614  POL1
*
*   1000.00000   0.00000    146.90191    35.00    35.00    0.00    4TH  ALL    147    14    99052714  POL1
*
*   3000.00000   0.00000    91.97719     35.00    35.00    0.00    4TH  ALL    104    13    99041413  POL1
*
*   0.00000     -100.00000    99.52361     35.00    35.00    0.00    4TH  ALL    252    15    99090915  POL1
*
*   0.00000     -300.00000    171.76063     35.00    35.00    0.00    4TH  ALL    107    11    99041711  POL1
*
*   0.00000     -1000.00000    152.93801     35.00    35.00    0.00    4TH  ALL     65    13    99030613  POL1
*
*   0.00000     -3000.00000    111.73167     35.00    35.00    0.00    4TH  ALL    293    16    99102016  POL1
*
*  -100.00000   -0.00000     91.59388     35.00    35.00    0.00    4TH  ALL     62    14    99030314  POL1
*
*  -300.00000   -0.00000    154.65265     35.00    35.00    0.00    4TH  ALL     62    15    99030315  POL1
*
* -1000.00000   -0.00000    131.73020     35.00    35.00    0.00    4TH  ALL    360    13    99122613  POL1
*
* -3000.00000   -0.00000     86.11262     35.00    35.00    0.00    4TH  ALL    312    16    99110816  POL1
*
*   -0.00000    100.00000     80.06381     35.00    35.00    0.00    4TH  ALL    203     8    99072208  POL1
*
*   -0.00000    300.00000    166.86210     35.00    35.00    0.00    4TH  ALL    139    16    99051916  POL1
*
*   -0.00000    1000.00000    156.54681     35.00    35.00    0.00    4TH  ALL    110    15    99042015  POL1
*
*   -0.00000    3000.00000    102.04635     35.00    35.00    0.00    4TH  ALL     23    15    99012315  POL1
*
*   100.00000    0.00000     65.46639     35.00    35.00    0.00    8TH  ALL    250    17    99090717  POL1
*
*   300.00000    0.00000    164.95260     35.00    35.00    0.00    8TH  ALL    147    14    99052714  POL1
*
*   1000.00000   0.00000    137.02622     35.00    35.00    0.00    8TH  ALL    145    16    99052516  POL1
*
*   3000.00000   0.00000     79.71649     35.00    35.00    0.00    8TH  ALL    102    19    99041219  POL1
*
*   0.00000     -100.00000     90.20572     35.00    35.00    0.00    8TH  ALL    175     9    99062409  POL1
*
*   0.00000     -300.00000    167.99537     35.00    35.00    0.00    8TH  ALL     81    14    99032214  POL1
*
*   0.00000     -1000.00000    147.76997     35.00    35.00    0.00    8TH  ALL    107    18    99041718  POL1
*
*   0.00000     -3000.00000    108.50074     35.00    35.00    0.00    8TH  ALL    272    17    99092917  POL1
*
*  -100.00000   -0.00000     86.21569     35.00    35.00    0.00    8TH  ALL    251    12    99090812  POL1
*
*  -300.00000   -0.00000    147.43347     35.00    35.00    0.00    8TH  ALL     63    13    99030413  POL1
*
* -1000.00000   -0.00000    113.23071     35.00    35.00    0.00    8TH  ALL    144     8    99052408  POL1
*
* -3000.00000   -0.00000     80.46493     35.00    35.00    0.00    8TH  ALL    251    12    99090812  POL1
*
*   -0.00000    100.00000     62.77470     35.00    35.00    0.00    8TH  ALL    213    15    99080115  POL1
*
*   -0.00000    300.00000    164.12251     35.00    35.00    0.00    8TH  ALL    212    12    99073112  POL1
*
*   -0.00000    1000.00000    147.60345     35.00    35.00    0.00    8TH  ALL     84    15    99032515  POL1
*
*   -0.00000    3000.00000     92.37244     35.00    35.00    0.00    8TH  ALL    264    19    99092119  POL1

```

100.00000	0.00000	63.04954	35.00	35.00	0.00	12TH	ALL	213	15	99080115	POL1
300.00000	0.00000	158.05318	35.00	35.00	0.00	12TH	ALL	182	15	99070115	POL1
1000.00000	0.00000	132.45210	35.00	35.00	0.00	12TH	ALL	123	15	99050315	POL1
3000.00000	0.00000	75.06520	35.00	35.00	0.00	12TH	ALL	56	14	99022514	POL1
0.00000	-100.00000	81.79820	35.00	35.00	0.00	12TH	ALL	230	14	99081814	POL1
0.00000	-300.00000	163.58691	35.00	35.00	0.00	12TH	ALL	150	13	99053013	POL1
0.00000	-1000.00000	143.66477	35.00	35.00	0.00	12TH	ALL	63	11	99030411	POL1
0.00000	-3000.00000	103.84510	35.00	35.00	0.00	12TH	ALL	359	10	99122510	POL1
-100.00000	-0.00000	66.87945	35.00	35.00	0.00	12TH	ALL	210	13	99072913	POL1
-300.00000	-0.00000	134.34226	35.00	35.00	0.00	12TH	ALL	192	11	99071111	POL1
-1000.00000	-0.00000	112.42027	35.00	35.00	0.00	12TH	ALL	90	10	99033110	POL1
-3000.00000	-0.00000	69.14045	35.00	35.00	0.00	12TH	ALL	70	12	99031112	POL1
-0.00000	100.00000	57.29793	35.00	35.00	0.00	12TH	ALL	80	13	99032113	POL1
-0.00000	300.00000	161.46688	35.00	35.00	0.00	12TH	ALL	46	12	99021512	POL1
-0.00000	1000.00000	141.04997	35.00	35.00	0.00	12TH	ALL	165	14	99061414	POL1
-0.00000	3000.00000	89.51271	35.00	35.00	0.00	12TH	ALL	109	19	99041919	POL1
100.00000	0.00000	51.04396	35.00	35.00	0.00	50TH	ALL	132	13	99051213	POL1
300.00000	0.00000	126.14782	35.00	35.00	0.00	50TH	ALL	175	15	99062415	POL1
1000.00000	0.00000	105.50261	35.00	35.00	0.00	50TH	ALL	267	17	99092417	POL1
3000.00000	0.00000	56.90880	35.00	35.00	0.00	50TH	ALL	236	14	99082414	POL1
0.00000	-100.00000	56.69467	35.00	35.00	0.00	50TH	ALL	287	13	99101413	POL1
0.00000	-300.00000	137.18380	35.00	35.00	0.00	50TH	ALL	204	13	99072313	POL1
0.00000	-1000.00000	120.65746	35.00	35.00	0.00	50TH	ALL	268	13	99092513	POL1
0.00000	-3000.00000	85.42463	35.00	35.00	0.00	50TH	ALL	156	1	99060501	POL1
-100.00000	-0.00000	51.20790	35.00	35.00	0.00	50TH	ALL	169	14	99061814	POL1
-300.00000	-0.00000	72.61516	35.00	35.00	0.00	50TH	ALL	32	13	99020113	POL1
-1000.00000	-0.00000	72.14476	35.00	35.00	0.00	50TH	ALL	270	10	99092710	POL1
-3000.00000	-0.00000	52.15505	35.00	35.00	0.00	50TH	ALL	265	13	99092213	POL1
-0.00000	100.00000	50.39602	35.00	35.00	0.00	50TH	ALL	180	14	99062914	POL1
-0.00000	300.00000	125.74471	35.00	35.00	0.00	50TH	ALL	247	14	99090414	POL1
-0.00000	1000.00000	117.67662	35.00	35.00	0.00	50TH	ALL	143	1	99052301	POL1
-0.00000	3000.00000	70.84420	35.00	35.00	0.00	50TH	ALL	127	2	99050702	POL1

**APPENDIX D. Overview of AERMOD revisions in version 24142**

Model Change Bulletin (MCB) 18  
 AERMOD version 24142 (May 21, 2024)

Changes are listed by type and with each change are the affected pollutants and source types:

**Bug Fixes**

Item	Modification	Pollutants	Source Types
1	Corrected a bug in subroutine PLUME_CONCENTRATION that was causing mixing height to be potentially reset each time the subroutine was called.	ALL	RLINE, RLINEXT
2	Corrected 2-digit year conversion for year 2000 when meteorological data crosses from 1999 to 2000.	ALL	ALL
3	Corrected bug in which EMISUNIT keyword was not working with the BUOYLINE source type. EMISUNIT keyword was ignored.	ALL	BUOYLINE
4	GRSM PLUMESIZES and DoGRSMChem code modified to prevent not-a-number (NaNs) concentration values for ground releases from volume, area, and openpit source types.	NO2	ALL

**Enhancements**

Item	Modification	Pollutants	Source Types
1	Updated the warning message for 24-hour average to state the date and time information when less than 18 hours of data are used in the average.	ALL	ALL
2	Add warning messages for 3- and 8-hour averages. Warning issued if less than 6 hours used to compute 8-hour average or less than 3 hours used to compute 3-hour average.	ALL	ALL

**Formulation updates – Regulatory**

<b>Item</b>	<b>Modification</b>	<b>Pollutants</b>	<b>Source Types</b>
1	Remove BETA flag restriction for RLINE source type. RLINE promulgated as a regulatory option in 2024 update to the <i>Guideline</i> (40 CFR Part51, Appendix W).	ALL	RLINE
2	Remove BETA flag restriction for GRSM NO2 conversion option. GRSM promulgated as a regulatory option in 2024 update to the <i>Guideline</i> (40 CFR Part51, Appendix W).	ALL	ALL
3	Remove BETA flag restriction for COARE processing of overwater meteorology in AERMET. COARE in AERMET promulgated as a regulatory option in 2024 update to the <i>Guideline</i> (40 CFR Part51, Appendix W).	ALL	ALL

**Formulation updates – BETA**

None

**Formulation updates – ALPHA**

None

## APPENDIX E. Glossary

AERMAP -- AMS/EPA Regulatory Model (AERMOD) Terrain Preprocessor. AERMET -- AMS/EPA Regulatory Model (AERMOD) Meteorological Preprocessor. AERMOD -- AMS/EPA Regulatory Model.

ASCII -- American Standard Code for Information Interchange, a standard set of codes used by computers and communication devices. Sometimes used to refer to files containing only such standard codes, without any application-specific codes such as might be present in a document file from a word processor program.

Card -- A single input record within the input control file.

CO -- **C**ontrol, the 2-character pathway ID for input control file commands used to specify overall job control options.

CO Pathway -- Collective term for the group of input control file commands used to specify the overall job control options, including titles, dispersion options, terrain options, etc.

Directory -- A logical subdivision of a disk used to organize files stored on a disk.

Dispersion Model -- A group of related mathematical algorithms used to estimate (model) the dispersion of pollutants in the atmosphere due to transport by the mean (average) wind and small scale turbulence.

DOS -- Disk Operating System. Software that manages applications software and provides an interface between applications and the system hardware components, such as the disk drive, terminal, and keyboard.

Echo of inputs -- By default, the AERMOD model will echo the input control file commands, character by character, into the main printed output file. This serves as a record of the inputs as originally entered by the user, without any rounding of the numerical values. The echoing can be suppressed with the NO ECHO option.

EOF -- End-of-File.

EPA -- U. S. Environmental Protection Agency.

Error message -- A message written by the model to the error/message file whenever an error is encountered that will inhibit data processing.

Error/Message File -- A file used for storage of messages written by the model.

EV -- **E**Vent, the 2-character pathway ID for input control file commands used to specify event inputs for the Short-Term EVENT model.

EV Pathway -- Collective term for the group of input control file commands used to specify the event periods and location for the Short-Term EVENT model.

EVENT Processing -- An option in the AERMOD model specifically designed to provide source contribution (culpability) information for specific events of interest, e.g., design values or threshold violations.

Extended Memory -- Additional memory on 80386 and 80486 PCs that allows programs to address memory beyond the 640 KB limit of DOS. Special software is required to utilize this extra memory.

Fatal Error -- Any error which inhibits further processing of data by the model. Model continues to read input images to check for errors during setup and will continue to read input meteorological data during calculation phase.

Flow Vector -- The direction towards which the wind is blowing. GMT  
-- Greenwich Mean Time, the time at the 0° meridian.

Informational Message -- Any message written to the error/message file that may be of interest to the user, but which have no direct bearing on the validity of the results, and do not affect processing.

Input Image -- User supplied input, read through the default input device, controlling the model options and data input. A single card or record from the input control file. Each input image consists of a pathway ID (may be blank indicating a continuation of the previous pathway), a keyword (may also be blank for continuation of a keyword), and possibly one or more parameter fields.

Input control file -- The basic input file to the AERMOD model controlling the modeling options, source data, receptor locations, meteorological data file specifications, and output options. Consists of a series of input images grouped into functional pathways.

Julian Day -- The number of the day in the year, i.e., Julian Day = 1 for January 1 and 365 (or 366 for leap years) for December 31.

KB -- Kilobyte, 1000 bytes, a unit of storage on a disk

Keyword -- The 8-character codes that follow immediately after the pathway ID in the input run stream data.

LST -- Local Standard Time.

Math Co-processor -- A computer chip used to speed up floating point arithmetic in a personal computer.

MB -- Megabyte, one million bytes, a unit of storage on a disk

ME -- **ME**eteorology, the 2-character pathway ID for input control file commands used to specify meteorological data options

ME Pathway -- Collective term for the group of input control file commands used to specify the input meteorological data file and other meteorological variables, including the period to process from the meteorological file for the AERMOD model.

Meteorological Data File -- Any file containing meteorological data, whether it be mixing heights, surface observations or on-site data.

Missing Value -- Alphanumeric character(s) that represent breaks in the temporal or spatial record of an atmospheric variable.

Mixing Height -- The depth through which atmospheric pollutants are typically mixed by dispersive processes.

NCDC -- National Climatic Data Center, the federal agency responsible for distribution of the National Weather Service upper air, mixing height and surface observation data.

NO ECHO -- Option to suppress echoing of the control file commands to the main printed output file.

NWS -- National Weather Service.

On-site Data -- Data collected from a meteorological measurement program operated in the vicinity of the site to be modeled in the dispersion analysis.

OU -- **OU**tput, the 2-character pathway ID for input control file commands used to specify output options.

OU Pathway -- Collective term for the group of input control file commands used to specify the output options for a particular run.

Overlay -- One or more subprograms that reside on disk and are loaded into memory only when needed.

Pasquill Stability Categories -- A classification of the dispersive capacity of the atmosphere, originally defined using surface wind speed, solar insolation (daytime) and cloudiness (nighttime). They have since been reinterpreted using various other meteorological variables.

Pathway -- One of the six major functional divisions in the input control file for the AERMOD model. These are **C**ontrol, **S**ource, **R**eceptor, **M**eteorology, **E**vent, and **O**utput (see these entries in this section for a description).

PC -- Personal Computer, a wide-ranging class of computers designed for personal use, typically small enough to fit on a desktop.

Quality Assessment -- Judgment of the quality of the data.

Quality Assessment Check -- Determining if the reported value of a variable is reasonable (see also Range Check).

Quality Assessment Message -- Message written to the error/message file when a data value is determined to be suspect.

Quality Assessment Violation -- Occurrences when data values are determined to be suspect (see also Range Check Violation).

RAM -- Random Access Memory on a personal computer.

RAMMET -- Meteorological processor program used for regulatory applications capable of processing twice-daily mixing heights and hourly surface weather observations for use in dispersion models such as AERMOD, CRSTER, MPTER and RAM.

Range Check -- Determining if a variable falls within predefined upper and lower bounds.

Range Check Violation -- Determination that the value of a variable is outside range defined by upper and lower bound values (see also Quality Assessment Violation).

RE -- **RE**ceptor, the 2-character pathway ID for input control file commands used to specify receptor locations.

RE Pathway -- Collective term for the group of input control file commands used to specify the receptor locations for a particular run.

Regulatory Applications -- Dispersion modeling involving regulatory decision-making as described in the Guideline on Air Quality Models, which is published as Appendix W of 40 CFR Part 51 (as revised).

Regulatory Model -- A dispersion model that has been approved for use by the regulatory offices of the EPA, specifically one that is included in Appendix A of the Guideline on Air Quality Models, (as revised), such as the AERMOD model.

R-LINE -- Research LINE-source dispersion model for near surface releases.

Control file -- Collectively, all input images required to process input options and input data for the AERMOD model.

SCRAM -- Support Center for Regulatory Air Models - part of EPA's website on the internet, used by EPA for disseminating air quality dispersion models, modeling guidance, and related information.

Secondary Keyword -- A descriptive alphabetical keyword used as a parameter for one of the main control file keywords to specify a particular option.

SO -- **SO**urce, the 2-character pathway ID for input control file commands used to specify input source parameters and source groups.

SO Pathway -- Collective term for the group of input control file commands used to specify the source input parameters and source group information.

Station Identification -- An integer or character string used to uniquely identify a station or site as provided in the upper air, mixing height, and surface weather data formats available from NCDC. There are no standard station numbers for on-site data or card image/screening data, and the user may include any integer string

Subdirectory -- A directory below the root, or highest level, directory or another subdirectory, used for organization of files on a storage medium such as a PC hard disk.

Surface Weather Observations -- A collection of atmospheric data on the state of the atmosphere as observed from the earth's surface. In the U.S. the National Weather Service collect these data on a regular basis at selected locations.

Surface Roughness Length -- Height at which the wind speed extrapolated from a near-surface wind speed profile becomes zero.

Syntax -- The order, structure and arrangement of the inputs that make of the input control file, specifically, the rules governing the placement of the various input elements including pathway IDs, keywords, and parameters.

Unformatted File -- A file written without the use of a FORTRAN FORMAT statement, sometimes referred to as a binary file.

Upper Air Data (or soundings) -- Meteorological data obtained from balloon- borne instrumentation that provides information on pressure, temperature, humidity, and wind away from the surface of the earth.

Vertical Potential Temperature Gradient -- The change of potential temperature with height, used in modeling the plume rise through a stable layer, and indicates the strength of the stable temperature inversion. A positive value means that potential temperature increases with height above ground and indicates a stable atmosphere.

Warning Message -- A message written by the model to the error/message file whenever a problem arises that may reflect an erroneous condition but does not inhibit further processing.

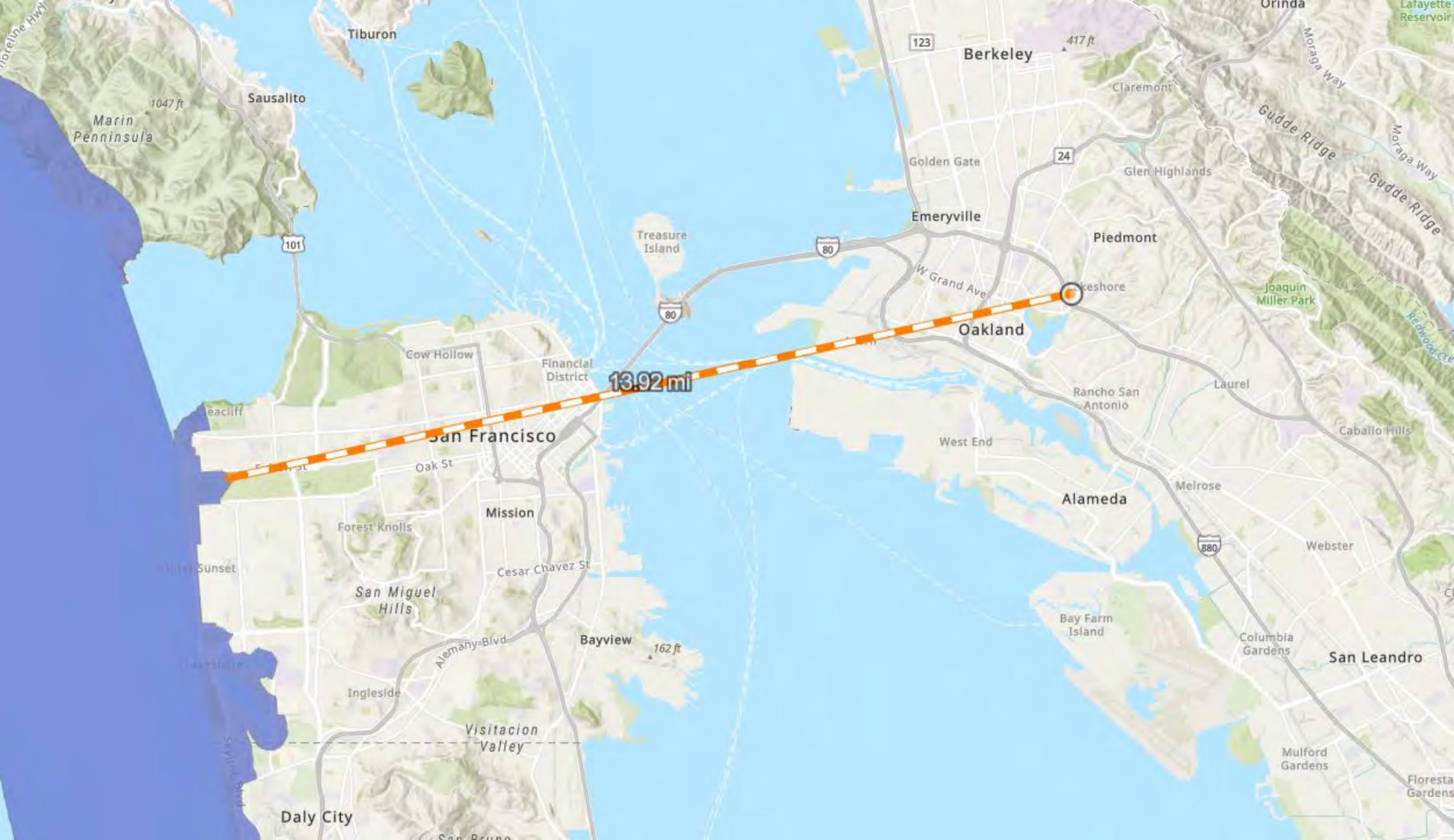
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United States  
Environmental Protection  
Agency

Office of Air Quality Planning and Standards  
Air Quality Assessment Division  
Research Triangle Park, NC

Publication No. EPA-454/B-24-007  
November 2024

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13.92 mi

Sausalito

Tiburon

Berkeley

417 ft

Golden Gate

24

Glen Highlands

Emeryville

Piedmont

Treasure Island

80

W Grand Ave

Rockshore

Oakland

Rancho San Antonio

Laurel

101

Cow Hollow

Financial District

Seacliff

San Francisco

Oak St

Mission

Forest Knolls

Outer Sunset

San Miguel Hills

Cesar Chavez St

West End

Alameda

Melrose

Webster

San Leandro

Bay Farm Island

Columbia Gardens

Mulford Gardens

Floresta Gardens

Daly City

Bayview

162 ft

Visitacion Valley

Ingleside

Alemany Blvd

Orinda

Moraga Way

Gudde Ridge

Moraga Way

Gudde Ridge

Redwood Creek

Joaquin Miller Park

Caballo Hills

Clayton

Marin Peninsula

Marin Peninsula

1047 ft

Lafayette Reservoir

Floresta Gardens

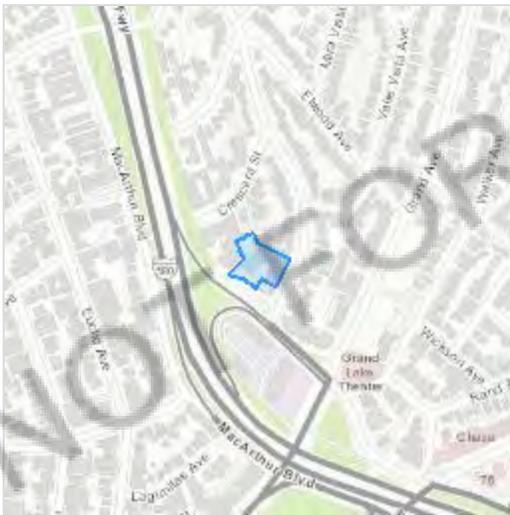
# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

## Location

Alameda County, California



## Local office

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📅 (916) 414-6713

Federal Building  
2800 Cottage Way, Room W-2605  
Sacramento, CA 95825-1846

# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

## Mammals

NAME	STATUS
Salt Marsh Harvest Mouse <i>Reithrodontomys raviventris</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/613">https://ecos.fws.gov/ecp/species/613</a>	Endangered

## Birds

NAME	STATUS
California Least Tern <i>Sternula antillarum browni</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/8104">https://ecos.fws.gov/ecp/species/8104</a>	Endangered
California Ridgway's Rail <i>Rallus obsoletus obsoletus</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/4240">https://ecos.fws.gov/ecp/species/4240</a>	Endangered
Western Snowy Plover <i>Charadrius nivosus nivosus</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. <a href="https://ecos.fws.gov/ecp/species/8035">https://ecos.fws.gov/ecp/species/8035</a>	Threatened

## Reptiles

NAME	STATUS
Alameda Whipsnake (=striped Racer) <i>Masticophis lateralis euryxanthus</i> Wherever found There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. <a href="https://ecos.fws.gov/ecp/species/5524">https://ecos.fws.gov/ecp/species/5524</a>	Threatened
Northwestern Pond Turtle <i>Actinemys marmorata</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/1111">https://ecos.fws.gov/ecp/species/1111</a>	Proposed Threatened

## Amphibians

NAME	STATUS
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California Red-legged Frog *Rana draytonii*

Threatened

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/2891>

Foothill Yellow-legged Frog *Rana boylei*

Threatened

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/5133>

## Fishes

NAME

STATUS

Tidewater Goby *Eucyclogobius newberryi*

Endangered

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/57>

## Insects

NAME

STATUS

Monarch Butterfly *Danaus plexippus*

Candidate

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9743>

## Crustaceans

NAME

STATUS

Vernal Pool Fairy Shrimp *Branchinecta lynchi*

Threatened

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/498>

## Flowering Plants

NAME

STATUS

Pallid Manzanita *Arctostaphylos pallida*

Threatened

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/8292>

Presidio Clarkia *Clarkia franciscana*

Endangered

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/3890>

Robust Spineflower *Chorizanthe robusta* var. *robusta*

Endangered

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/9287>

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

## Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act<sup>1</sup> and the Migratory Bird Treaty Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats<sup>3</sup>, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds  
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds  
<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC  
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
<b>Bald Eagle</b> <i>Haliaeetus leucocephalus</i>	Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<b>Golden Eagle</b> <i>Aquila chrysaetos</i>	Breeds Jan 1 to Aug 31
--	------------------------

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1680>

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

### Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

### Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

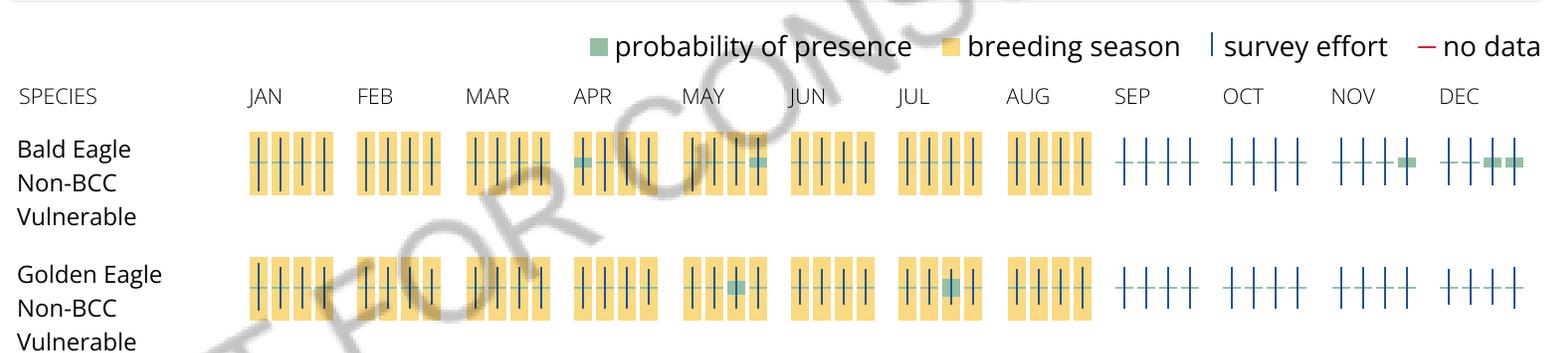
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

### No Data (—)

A week is marked as having no data if there were no survey events for that week.

### Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



### What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply). To see a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

### What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects,

and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

### What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the [Eagle Act](#) should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

## Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats<sup>3</sup> should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
<b>Allen's Hummingbird</b> <i>Selasphorus sasin</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9637">https://ecos.fws.gov/ecp/species/9637</a>	Breeds Feb 1 to Jul 15
<b>Bald Eagle</b> <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Aug 31
<b>Belding's Savannah Sparrow</b> <i>Passerculus sandwichensis beldingi</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/8">https://ecos.fws.gov/ecp/species/8</a>	Breeds Apr 1 to Aug 15
<b>Black Oystercatcher</b> <i>Haematopus bachmani</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9591">https://ecos.fws.gov/ecp/species/9591</a>	Breeds Apr 15 to Oct 31
<b>Black Skimmer</b> <i>Rynchops niger</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/5234">https://ecos.fws.gov/ecp/species/5234</a>	Breeds May 20 to Sep 15
<b>Black Turnstone</b> <i>Arenaria melanocephala</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
<b>Brandt's Cormorant</b> <i>Urile penicillatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 15 to Sep 15
<b>Bullock's Oriole</b> <i>Icterus bullockii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 21 to Jul 25
<b>California Gull</b> <i>Larus californicus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31

<p><b>California Thrasher</b> <i>Toxostoma redivivum</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	<p>Breeds Jan 1 to Jul 31</p>
<p><b>Clark's Grebe</b> <i>Aechmophorus clarkii</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	<p>Breeds Jun 1 to Aug 31</p>
<p><b>Common Yellowthroat</b> <i>Geothlypis trichas sinuosa</i>  This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/2084">https://ecos.fws.gov/ecp/species/2084</a></p>	<p>Breeds May 20 to Jul 31</p>
<p><b>Elegant Tern</b> <i>Thalasseus elegans</i>  This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/8561">https://ecos.fws.gov/ecp/species/8561</a></p>	<p>Breeds Apr 5 to Aug 5</p>
<p><b>Golden Eagle</b> <i>Aquila chrysaetos</i>  This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.  <a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a></p>	<p>Breeds Jan 1 to Aug 31</p>
<p><b>Gull-billed Tern</b> <i>Gelochelidon nilotica</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9501">https://ecos.fws.gov/ecp/species/9501</a></p>	<p>Breeds May 1 to Jul 31</p>
<p><b>Heermann's Gull</b> <i>Larus heermanni</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	<p>Breeds Mar 15 to Aug 31</p>
<p><b>Lawrence's Goldfinch</b> <i>Spinus lawrencei</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9464">https://ecos.fws.gov/ecp/species/9464</a></p>	<p>Breeds Mar 20 to Sep 20</p>
<p><b>Marbled Godwit</b> <i>Limosa fedoa</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9481">https://ecos.fws.gov/ecp/species/9481</a></p>	<p>Breeds elsewhere</p>

<p><b>Northern Harrier</b> <i>Circus hudsonius</i>  This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/8350">https://ecos.fws.gov/ecp/species/8350</a></p>	<p>Breeds Apr 1 to Sep 15</p>
<p><b>Nuttall's Woodpecker</b> <i>Dryobates nuttallii</i>  This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/9410">https://ecos.fws.gov/ecp/species/9410</a></p>	<p>Breeds Apr 1 to Jul 20</p>
<p><b>Oak Titmouse</b> <i>Baeolophus inornatus</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9656">https://ecos.fws.gov/ecp/species/9656</a></p>	<p>Breeds Mar 15 to Jul 15</p>
<p><b>Olive-sided Flycatcher</b> <i>Contopus cooperi</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/3914">https://ecos.fws.gov/ecp/species/3914</a></p>	<p>Breeds May 20 to Aug 31</p>
<p><b>Red Knot</b> <i>Calidris canutus roselaari</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/8880">https://ecos.fws.gov/ecp/species/8880</a></p>	<p>Breeds elsewhere</p>
<p><b>Santa Barbara Song Sparrow</b> <i>Melospiza melodia graminea</i>  This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/5513">https://ecos.fws.gov/ecp/species/5513</a></p>	<p>Breeds Mar 1 to Sep 5</p>
<p><b>Short-billed Dowitcher</b> <i>Limnodromus griseus</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9480">https://ecos.fws.gov/ecp/species/9480</a></p>	<p>Breeds elsewhere</p>
<p><b>Tricolored Blackbird</b> <i>Agelaius tricolor</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/3910">https://ecos.fws.gov/ecp/species/3910</a></p>	<p>Breeds Mar 15 to Aug 10</p>
<p><b>Western Grebe</b> <i>aechmophorus occidentalis</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/6743">https://ecos.fws.gov/ecp/species/6743</a></p>	<p>Breeds Jun 1 to Aug 31</p>

**Western Gull** *Larus occidentalis*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Apr 21 to Aug 25

**Western Screech-owl** *Megascops kennicottii cardonensis*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds Mar 1 to Jun 30

**Willet** *Tringa semipalmata*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

**Wrentit** *Chamaea fasciata*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Mar 15 to Aug 10

**Yellow-billed Magpie** *Pica nuttalli*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Apr 1 to Jul 31

<https://ecos.fws.gov/ecp/species/9726>

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

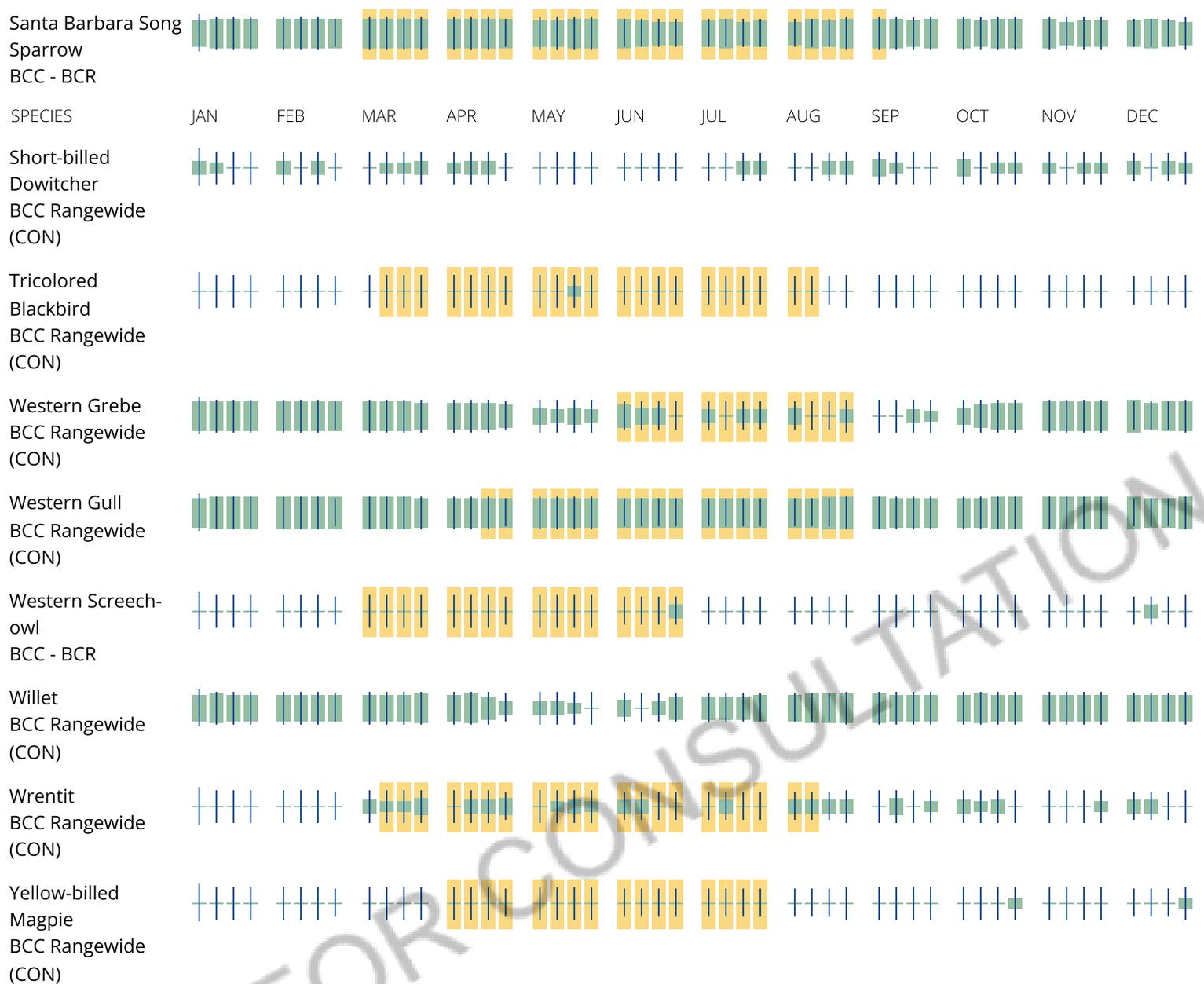
Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week







**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects,

and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

### **What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

### **How do I know if a bird is breeding, wintering or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### **Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review.

Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

### What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

### Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

## Facilities

### National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

### Fish hatcheries

There are no fish hatcheries at this location.

# Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

This location did not intersect any wetlands mapped by NWI.

**NOTE:** This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

## Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

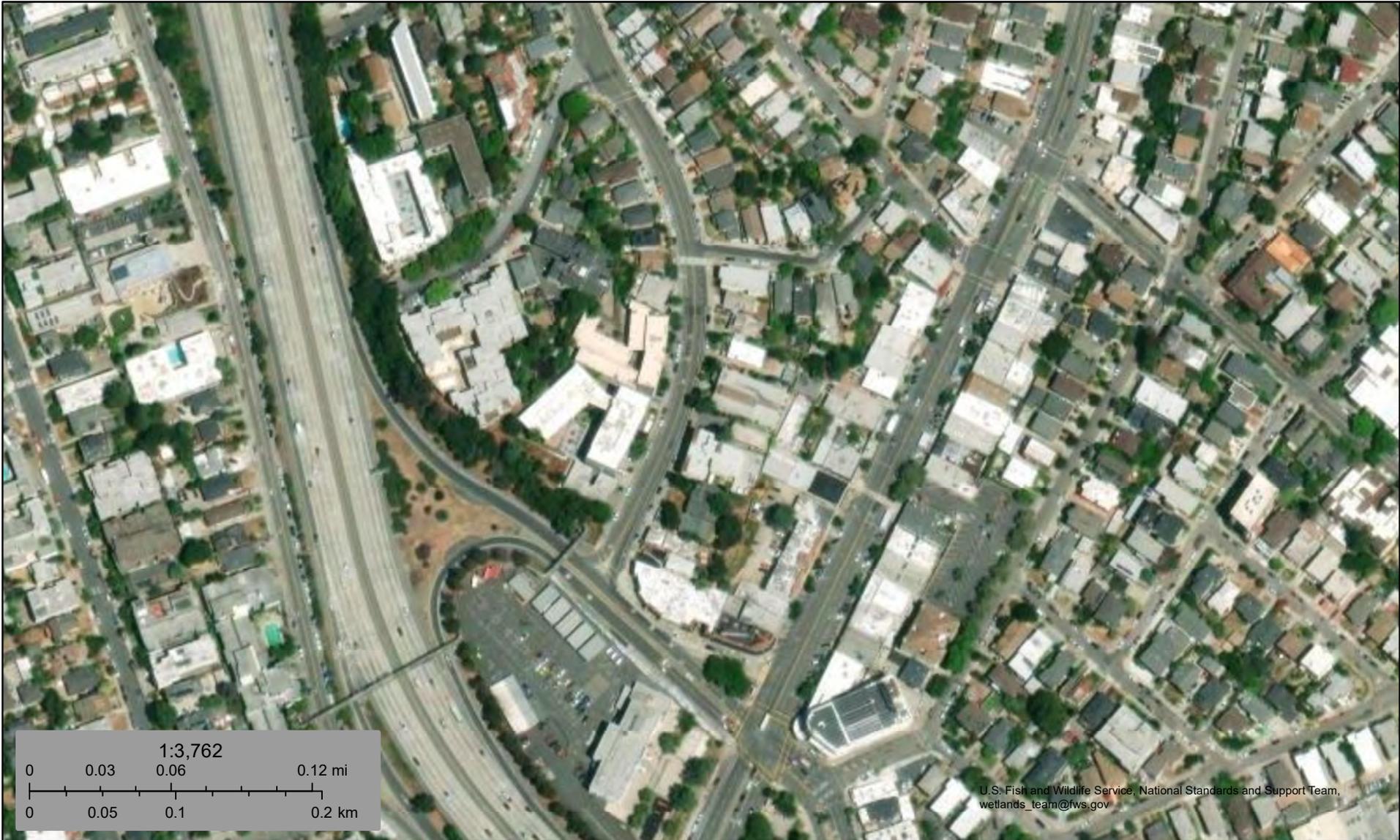
Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

## Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

## Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.



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September 11, 2024

**Wetlands**

- |   |                                |   |                                   |   |          |
|---|--------------------------------|---|-----------------------------------|---|----------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland       |  | Lake     |
|  | Estuarine and Marine Wetland   |  | Freshwater Forested/Shrub Wetland |  | Other    |
|   |                                |  | Freshwater Pond                   |  | Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.