



## Memorandum

**Date:** May 13, 2024 **Revised September 20, 2024**

**To:** Corey Alvin, Environmental Coordinator, City of Oakland

**From:** Phil Ault, Director of Noise and Air Quality, FirstCarbon Solutions  
Tsui Li, Senior Air Quality Scientist, FirstCarbon Solutions

**Subject:** ConGlobal Technology Review for the Oakland Army Base Project

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FirstCarbon Solutions (FCS) staff have prepared the 2024 ConGlobal Technology Review. This memorandum has been prepared in consultation with ConGlobal and Prologis and is being submitted to the City of Oakland (City) on behalf of Prologis.

The Standard Conditions of Approval/Mitigation Monitoring and Reporting Program (SCA/MMRP) for the 2002 Oakland Army Base (OAB) Redevelopment Project (project) Environmental Impact Report (EIR) and the subsequent 2012 Addendum prepared for the project includes specific requirements to support the continued deployment of clean-air technology equipment at the OAB. Per the SCA/MMRP, and as outlined in Section 4.3 of the Air Quality Plan for Operations of the ConGlobal Container Depot and Repair Facility (referred here in as Air Quality Operations Plan), the OAB tenant, ConGlobal, shall: “use cleaner technology over time as it becomes more readily available, practical and economically feasible. To accomplish this, ConGlobal shall review new technology every 3 years and with equipment turnover (prior to acquisition of, or lease of, additional or replacement **off-road** equipment) to see if zero or near-zero equipment is economically feasible and practical.” In the Air Quality Operations Plan, near-zero or zero-emission equipment is defined as Tier 4 or 4i diesel equipment or the equivalent—electric, propane, bio-diesel, unleaded gasoline, or alternative-fueled equipment.

“ConGlobal shall investigate and make part of such analysis any grant, voucher, or other type of program that would help offset the cost and/or otherwise make such equipment available, practical, and economically feasible. ConGlobal shall submit such technology review to the City upon request. If the technology review demonstrates that new technology/equipment will be effective in substantially reducing emission, and is available, practical, and economically feasible as determined by ConGlobal, then ConGlobal shall implement such technology within 12 months from the date of the completed technology review.”

To this end, ConGlobal has reviewed the current equipment at their operations at the OAB. ConGlobal and Prologis would like to extend their appreciation to the City staff involved in the assessment of this Technology Review Memorandum.



## CONGLOBAL TECHNOLOGY REVIEW

ConGlobal leases the site from Prologis for use as a container storage depot where empty containers are stacked and stored on a short-term basis. ConGlobal also operates a repair facility which consists of an 8,650-square-foot open maintenance building for paint touch-up and minor repairs to the containers and has an outdoor container wash area adjacent to the maintenance building. Outdoors, and adjacent to the maintenance building, an area is used for repair, maintenance, and temperature setting of empty refrigerated containers. Empty chassis, which are the trailers upon which containers are placed, are also stacked and stored on-site.

The table below shows ConGlobal’s latest off-road equipment fleet. ConGlobal’s previous fleet is included in Attachment A.

**Table 1: ConGlobal Off-Road Equipment**

Vehicle Serial Number	Vehicle Type	Make (Model)	Model Year	Engine Make (Model)	Engine Year	Fuel Use	Horsepower
74149965	Container Handler	Taylor (XEC206/7)	2017	Cummins (QSB6.7)	2017	Diesel	225
22547689	Container Handler	Sany (SDCY90K8H4)	2024	SANY	2024	Diesel	225
46853525	Container Handler	Hyster (H450 ECS)	2014	Cummins (QSB6.7)	2013	Diesel	220
27782	Forklift	Toyota (8FGU30)	2013		2013	Diesel/Propane	57
L007E01566P	Forklift	Hyster (H280H2)	2016	Cummins	2016	Diesel	155
1Z9TA8EA6JR530038	Hostler Electric	Orange EV T-Series	2018	HS 518856	N/A	Electric	243-kWh battery
1Z9TA8EAXMR530080	Hostler Electric	Orange EV T-Series	2022	HS 522080	N/A	Electric	243-kWh battery

ConGlobal has removed several pieces of older equipment, and all equipment engines are now model year 2013 or newer. In accordance with United States Environmental Protection Agency (EPA) off-road equipment standards, off-road engines manufactured after 2011 must meet Tier 4 Interim emission standards and off-road engines manufactured after 2015 must meet Tier 4 Final emission standards.

Tier 4 Interim regulations call for 50–90 percent reductions in particulate matter (PM) emissions and up to 90 percent reduction in emissions of oxides of nitrogen (NO<sub>x</sub>), depending on the kilowatt rating of the engine/generator set. Tier 4 Final regulations call for further reductions in NO<sub>x</sub> emissions of up to 88

percent and further reductions in PM emissions of up to 70 percent, depending on the kilowatt rating of the engine/generator set.<sup>1</sup>

Specifically, ConGlobal has retired several older, 2014 Container Handlers, and acquired a 2024 Container Handler. The 2024 Container Handler has a diesel engine that meets Tier 4 Final regulations that drastically reduces PM and NO<sub>x</sub> emissions compared to the old models equipped with 2013 engine.

Replacing old equipment with Tier 4 equipment is one of the main ways to reduce air pollutions, according to the California Air Resources Board (ARB).<sup>2</sup> As shown in the above table, all ConGlobal off-road engines are manufactured between 2013 and 2024, meaning they would all meet the Tier 4 Interim or Tier 4 Final standards. All equipment with engines manufactured in 2008 or 2010 have been phased out (per previous fleet list in Attachment A). Therefore, ConGlobal is meeting its Air Quality Operations Plan requirement of continuously reviewing and phasing in zero or near-zero-emission equipment.

Nonetheless, information regarding ARB's incentive program for purchase of electric equipment (Clean Off-Road Equipment Voucher Incentive Project [CORE]) will be shared with ConGlobal. Prior to turnover of current Container Handler fleet, ConGlobal shall evaluate and apply for the incentives to purchase electric Container Handlers.

Furthermore, ConGlobal is required to comply with recent and upcoming State regulations aimed at reducing off-road emissions. For example, ConGlobal is currently in compliance with the In-Use Off-Road Diesel-Fueled Fleets regulation, which was enacted to accelerate retirement of older, higher-emitting engines and increase use of newer, cleaner engines (see certificate in Attachment A). Recent 2022 amendments<sup>3</sup> require the use of R99 or R100 renewable diesel in off-road diesel vehicles at the beginning of 2024.

The ARB is also considering a zero-emission forklift measure to drive greater deployment of zero-emission forklifts within fleets throughout the State. The intent of this proposed rule is to phase out any propane forklifts 13 years or older for use in California beginning in 2026. The new change would also mean facilities would not be able to purchase new propane forklifts beginning in 2026. Once adopted, ConGlobal will be required to comply with this regulation and transition to the use of zero-emission forklifts, further reducing operation emissions.

To this end, ConGlobal has completed its review of off-road equipment used on-site, and the preceding documentation demonstrates that they have satisfied the relevant requirements of ConGlobal's Air

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<sup>1</sup> Caterpillar. 2010. Tier 4 Interim Requirement EPA Emissions Requirements for Diesel Generator Sets. Website: <https://s7d2.scene7.com/is/content/Caterpillar/LEXE0152-00>. Accessed May 3, 2024.

<sup>2</sup> California Air Resources Board (ARB). Cargo Handling Equipment (CHE) Best Practices to Improve Air Quality. Website: <https://www.epa.gov/ports-initiative/cargo-handling-equipment-che-best-practices-improve-air-quality>. Accessed September 20, 2024.

<sup>3</sup> California Air Resources Board (ARB). 2022. Website: <https://ww2.arb.ca.gov/news/carb-approves-amendments-road-regulation-further-reduce-emissions>. Accessed May 3, 2024.

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Quality Plan and the Development Agreement (DA) to investigate and use cleaner technology wherever feasible.

We hope that this document provides sufficient information to support the City's review and approval of the 2024 ConGlobal Technology Review.

Please feel free to contact me at [pault@fcs-intl.com](mailto:pault@fcs-intl.com), or Tsui Li, Senior Air Quality Scientist, at [tli@fcs-intl.com](mailto:tli@fcs-intl.com), with any additional questions or comments. We appreciate the City's review and coordination on this compliance effort.

Sincerely,



Phil Ault, Director of Noise and Air Quality  
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Attachment A: Supporting Materials



**Attachment A:  
Supporting Materials**



**Table 1: 2022 ConGlobal Off-Road Equipment Fleet**

Vehicle Serial Number	Vehicle Type	Make (Model)	Model Year	Engine Make (Model)	Engine Year
46868069	Forklift	Taylor (TEX-300 M)	2007	Cummins (QSB6.7)	2008
73148712	Forklift	Taylor (TEC-155H)	2010	Cummins (QSB6.7)	2010
73133731	Forklift	Taylor (TX300)	2010	Cummins (QSB6.7)	2010
46918524	Forklift	Taylor (TEC SP 155HD)	2008	Cummins (QSB6.7)	2008
22114212	Container Handler	Hyster (H450 ECS)	2014	Cummins (QSB6.7)	2013
22108837	Container Handler	Hyster (H450 ECS)	2014	Cummins (QSB6.7)	2013
22130457	Container Handler	Hyster (H450 ECS)	2014	Cummins (QSB6.7)	2013
73964230	Yard truck	Capacity (Sabre)	2016	Cummins (ISB6.7)	2016
22184160	Forklift	Hyster (H280 ED)	2016	Cummins (QSB4.5f)	2015
22206258	Container Handler	Hyster (H450HD-EC)	2016	Cummins (QSB6.7)	2016
74149965	Container Handler	Taylor (XEC206/7)	2017	Cummins (QSB6.7)	2017

### Certificate of Reported Compliance Validation

\* Please fill in one of the following fields.

DOORS ID:	
Company Name: (full or partial name)	<input type="text"/>
	<input type="button" value="Search"/>

DOORS ID	Company Name	Regulation*	Certificate Status
529	ConGlobal Industries, Inc.	ORD	This company <b>has received</b> the Certificate of Reported Compliance valid to March 1, 2025.

\*Regulation  
 ORD: In-Use Off-Road Diesel-Fueled Fleets Regulation  
 LSI: Large Spark-Ignition Engine Fleet Requirements Regulation