

# **Final Negative Declaration/Application Summary Report World Oil Tank Installation Project Port of Long Beach**

**State Clearinghouse # 2020100119**

**Prepared for:**



Port of Long Beach  
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Long Beach, California 90802

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**September 2021**



**Final NEGATIVE DECLARATION**

**Prepared in Accordance with the  
California Environmental Quality Act of 1970  
as Amended**

**and**

**APPLICATION SUMMARY REPORT**

**Prepared in Accordance with the  
Certified Port Master Plan and California Coastal Act of 1976  
for the  
World Oil Tank Installation Project**

The narrative and attached documents, including the project description and staff analysis constitute a Negative Declaration prepared in accordance with the California Environmental Quality Act. Based upon the data contained herein, the proposed project has been determined not to have significant adverse environmental impacts and conforms to the stated policies of the Port Master Plan.

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DRAFT NEGATIVE DECLARATION AND APPLICATION SUMMARY REPORT ISSUED FOR  
PUBLIC REVIEW: OCTOBER 7, 2020 – NOVEMBER 20, 2020

BY: DIRECTOR OF ENVIRONMENTAL PLANNING: *Maitha Van*

APPLICATION SUMMARY REPORT ADOPTED ON: 10/28/2021

BY: CITY OF LONG BEACH BOARD OF HARBOR COMMISSIONERS

Application No. 19-066

State Clearinghouse No. 2020100119





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## Acronyms and Abbreviations

AB	Assembly Bill
AFFF	aqueous film forming foam
AQMP	Air Quality Management Plan
AST	aboveground storage tank
BACT	Best Available Control Technology
bbf	barrel
BMP	best management practice
CAAP	Clean Air Action Plan
CAL FIRE	California Department of Forestry and Fire Protection
CalARP	California Accidental Release Prevention
Cal/OSHA	California Division of Occupational Safety and Health
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCA	California Coastal Act
CCC	California Coastal Commission
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CGS	California Geological Survey
cm	centimeter
CNDDDB	California Natural Diversity Database
CO	carbon monoxide
CO <sub>2</sub> e	carbon dioxide equivalent
COPD	chronic obstructive pulmonary disease
CRP	Coastal Resiliency Plan
CTF	Clean Trucks Fund
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DIAL	Differential Absorption Light Detection and Ranging
DOC	California Department of Conservation
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
ECOS	Environmental Conservation Online System
EDR	Environmental Data Resources
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FTA	U.S. Department of Transportation, Federal Transit Administration
g	gravity

GHG	greenhouse gas
HAPC	Habitat Area of Particular Concern
<u>HDP</u>	<u>Harbor Development Permit</u>
I	Interstate
IP	Port-Related Industrial District
IS	Initial Study
<u>JAWM</u>	<u>Journal of Air and Waste Management</u>
JWPCP	Joint Water Pollution Control Plant
LACSD	Los Angeles County Sanitation District
LARWQCB	Los Angeles Regional Water Quality Control Board
Lbfd	Long Beach Fire Department
Lbmc	Long Beach Municipal Code
Lbpd	Long Beach Police Department
Lbusd	Long Beach Unified School District
Lbwd	Long Beach Water Department
Ldn	average 24-hour sound level
Leq	equivalent sound level
LF	linear feet
<u>LNAPL</u>	<u>light non-aqueous phase liquid</u>
Lmax	maximum noise level
Lmin	minimum noise level
LST	Localized Significance Threshold
<u>LUST</u>	<u>leaking underground storage tank</u>
µg	microgram
m <sup>3</sup>	cubic meter
MBTA	Migratory Bird Treaty Act
mils	one-thousandth of an inch
MND	Mitigated Negative Declaration
MP	Port Manufacturing
MRZ	Mineral Resource Zone
MT	metric tons
<u>MW</u>	<u>Megawatt</u>
<u>ND</u>	<u>Negative Declaration</u>
NO <sub>x</sub>	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
<u>NSR</u>	<u>New Source Review</u>
OEHHA	Office of Environmental Health Hazard Assessment
<u>PDTR</u>	<u>Port Drayage Truck Registry</u>
PM10	particulate matter 10 microns or less in diameter
PM2.5	particulate matter 2.5 microns or less in diameter
PMP	Port Master Plan
POLB/Port	Port of Long Beach
PPV	peak particle velocity
RAP	rammed aggregate pier
RAST	Risk Assessment Standalone Tool
RCRA	Resource Conservation and Recovery Act
<u>RVP</u>	<u>Reid Vapor Pressure</u>

RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
sec	second
SO <sub>x</sub>	sulfur oxide
<u>SRA</u>	<u>source receptor area</u>
SR	State Route
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TSDf	treatment, storage, and disposal facilities
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VMT	vehicle miles travelled
VOC	volatile organic compound
WRD	Water Replenishment District of Southern California
X/Q	Chi/Q



# Introduction to the Final Negative Declaration and Application Summary Report

The Port of Long Beach (POLB) prepared a Draft Initial Study/Negative Declaration (IS/ND) and Application Summary Report for the proposed World Oil Tank Installation Project (proposed Project) and originally circulated it for public review and comment from October 7, 2020 through November 5, 2020. Based on comments received, the POLB extended the review period to November 20, 2020 for a total of 45 days. The Draft IS/ND concluded that the proposed Project would not have any significant effects on the environment and that no mitigation measures are required. The public review period, during which interested agencies, organizations, and members of the public were invited to submit written comments, was noticed and conducted in compliance with the California Environmental Quality Act (CEQA) Section 21091, State CEQA Guidelines 15105, California Coastal Act, and certified Port Master Plan. Notified public agencies include the following:

- California Air Resources Board
- California Coastal Commission
- California Department of Conservation
- California Department of Fish and Wildlife, Marin Region 7
- California Department of Fish and Wildlife, South Coast Region 5
- California Department of Forestry and Fire Protection
- California Department of Parks and Recreation
- California Department of State Parks, Division of Boating and Waterways
- California Department of Water Resources
- California Governor's Office of Emergency Services
- California Highway Patrol
- California Native American Heritage Commission
- California Natural Resources Agency
- California Public Utilities Commission
- California Regional Water Quality Control Board, Los Angeles Region 4
- California State Lands Commission
- California Governor's Office of Emergency Services
- Department of Toxic Substances Control
- Office of Historic Preservation
- San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy
- State Water Resources Control Board, Division of Water Quality
- State Water Resources Control Board, Division of Water Rights
- California Department of Transportation, District 7
- US Environmental Protection Agency, Region 9
- South Coast Air Quality Management District
- Los Angeles County Sanitary District
- City of Long Beach Planning and Building Permit

During the 45-day public review period, 20 comment letters were received. Comments on the Draft IS/ND and responses to these comments have been incorporated into this Final IS/ND.

The Final IS/ND includes clarifications, including:

- Revisions to Section 2 (Project Description) to clarify the type of new petroleum storage tanks.
- Revisions to Section 2.9 (Project Overview) to clarify the types of petroleum products historically stored in the existing tanks and capacity of the largest tanks. The dimensions of the existing containment wall were corrected and additional detail on the structure was provided. Also, to clarify that the proposed Project would expand and realign World Oil's storage capacity.
- Revision to Section 2.9.1 (Project Objectives) to clarify that the proposed Project would expand and realign World Oil's storage capacity.
- Revisions to Section 2.11 (Operations and Maintenance) to clarify the purpose of the new tanks, truck trips for refinery crude balancing are expected to remain the same as current operations, the newly

leased tanks would continue to ship and receive the same or similar fuel oils, the proposed Project activities do not impact oil refinery activities, and there are no changes to existing permit conditions.

- Revisions to Section 4.3 (Air Quality) to clarify that the 10 percent increase over baseline in truck trips has been assumed as a worst-case assumption to account for atypical conditions. Operation emissions have been revised to reflect current South Coast Air Quality Management District emissions estimates completed as part of their review of World Oil's new application for a permit to construct/operate for the two new proposed tanks submitted in February 2021. Special Condition AQ-1 has been added to clarify that the proposed Project would be required to utilize Tier 4 non-road construction equipment consistent with the POLB's Clean Air Action Plan.
- Revisions to Section 4.6 (Energy) to clarify that long-term transportation fuel consumption from trucking would not increase, that a 10 percent increase over baseline in truck trips has been assumed as a worst-case, and new tank pumps and ancillary equipment have been considered in the analysis.
- Revision to Section 4.7 (Geology and Soils) to clarify that the geotechnical investigation report's recommendations would be implemented in the final Project design.
- Revisions to Section 4.8 (Greenhouse Gas Emissions) to clarify that a 10 percent increase over baseline in truck trips has been assumed as well as emissions associated with the two new tank pumps.
- Revisions to Section 4.9 (Hazards and Hazardous Materials) to compare the nearest U.S. Ecology waste facility's storage capacity with the proposed Project's projected generated waste. Additional details of fire suppression and emergency contingency plans as well as a discussion of the Port's assessment of the hazard footprint or vulnerability zone for the existing World Oil facility have been added.
- Revisions to Section 4.10 (Hydrology and Water Quality) to include a description of future sea level rise in combination with a 100-year storm event. The dimensions of the existing containment wall were corrected and additional detail on the structure was provided. Information from the report by the Joint Institute for the Study of the Atmosphere and National Oceanic and Atmospheric Administration/Pacific Marine Environmental Laboratory was added to further support the analysis of tsunami impacts related to the proposed Project.
- Revisions to Section 4.17 (Transportation) to clarify that a 10 percent increase over baseline in truck trips has been assumed as a worst-case and that the number of truck trips associated with crude oil balancing is not anticipated to increase during operations as a result of the proposed Project.
- Revisions to Section 4.21 (Mandatory Findings of Significance) to clarify the definition of "current" projects and to compare the capacity of the nearest treatment, storage, and disposal facility with the proposed Project's projected generated waste.
- Revisions to Section 5 (Application Summary Report) to include a description of the proposed new Climate Change Adaptation Element (proposed Port Master Plan Update), discussion of Special Condition AQ-1 (Tier 4 non-road construction equipment), and added new section on the Risk Management Plan. Also, to clarify that the proposed Project would expand and realign World Oil's storage capacity.
- Minor revisions to Section 6 (Report Preparation) under Project Management and Document Production.
- Minor editorial revisions to Section 7 (References) to formatting of references and addition of new references.



- Addition of Chapter 8 (Response to Comments), which includes all written comments that the POLB received on the Draft IS/ND, together with responses to each comment.

The aforementioned changes have been incorporated directly into the Final IS/ND. Changes made to the Draft IS/ND text are indicated in ~~strikeout~~ (deletion) and underlined (addition) text.

No significant revisions to the scope of the proposed Project have occurred since the Draft IS/ND was circulated for public review. The Final IS/ND has been revised due to minor editorial revisions and clarifications made to the Draft IS/ND, which do not change any of the impact findings in the Final IS/ND; therefore, no new adverse significant effects are introduced by these minor editorial revisions. As such, pursuant to the State CEQA Guidelines Section 15073.5, recirculation of the Draft IS/ND is not required.



# 1. Introduction

## 1.1 Proposed Project Overview

Ribost Terminal LLC, DBA World Oil Terminals (World Oil) filed an Application for a Harbor Development Permit with the Port of Long Beach (POLB) on August 14, 2019, to construct and operate the World Oil Tank Installation Project (proposed Project). World Oil Corporation primarily recycles oil-based waste including used motor oil, antifreeze, and oily waste water. The waste is then recycled into motor oil, marine diesel fuel, new antifreeze, and paving and roofing asphalt blending components. The asphalt blending components are used at the World Oil Refinery in South Gate, CA. As such, World Oil provides a service to the oil and gas industry as opposed to being a producer or refiner of crude oil or natural gas.

World Oil is proposing to construct and operate two new 25,000-barrel (bbl) petroleum storage tanks at the Ribost Terminal. ~~The new storage tanks would be connected to existing utilities, such as electrical lines and petroleum pipelines.~~ Construction of these two new tanks would include new tank foundations and pipeline connections to existing facility infrastructure, such as the truck loading racks. The proposed Project is located at the POLB within the existing Ribost Terminal at 1405 Pier C Street, Long Beach, California. The Ribost Terminal is approximately 261,000 square feet (6 acres) and contains seven existing petroleum tanks. Of these seven tanks, two tanks have a capacity of approximately 43,000 bbl each, two have a capacity of approximately 67,000 bbl each, and three have a capacity of approximately 94,000 bbl each, for a total storage capacity of 502,000 bbl. While the proposed Project would provide additional storage capacity of petroleum products for refining and distribution, the increased crude oil storage would ultimately provide for more efficient terminal operations by making more existing tanks available for lease by third-party vendors with no increase in throughput, due to limitations associated with the physical geometry of the site, physical limitations of the existing pipelines and truck loading racks, and permitted throughput limits.

## 1.2 Environmental Analysis

### 1.2.1 CEQA Process

This Initial Study (IS) has been prepared pursuant to the California Environmental Quality Act (CEQA), the amended State CEQA Guidelines (14 CCR 15000 et seq.). The purpose of the IS is to inform the decision-makers, responsible agencies, and the public of the proposed Project, the existing environment that would be affected by the Project, the environmental effects that would occur if the Project is approved, and proposed mitigation measures that would avoid or reduce environmental effects to the extent feasible.

If the Lead Agency finds that there is no evidence that the Project, either as proposed or as modified to include the mitigation measures identified in the IS, may cause a significant effect on the environment, the Lead Agency shall find that the proposed Project would not have a significant effect on the environment and shall prepare a Negative Declaration (or Mitigated Negative Declaration) for that project. If potentially significant impacts would occur as a result of implementation of the proposed Project, an Environmental Impact Report (EIR) shall be prepared. Such determination can be made only if “there is no substantial evidence in light of the whole record before the Lead Agency” that such impacts may occur (Section 21080, Public Resources Code).

The environmental documentation, which is ultimately approved and/or certified by the City Lead Agency, in accordance with CEQA, is intended as an informational document undertaken to provide an

environmental basis for subsequent discretionary actions upon the Project. The resulting documentation is not, however, a policy document and its approval and/or certification neither presupposes nor mandates any actions on the part of those agencies from whom permits and other discretionary approvals would be required.

### 1.2.2 CEQA Lead Agency

The City of Long Beach, acting by and through its Harbor Department, the POLB, is the lead agency for review of the proposed Project under CEQA.

### 1.2.3 Initial Study

The IS presents an analysis of potential effects of the proposed Project on the environment. The IS is based on information from the Application filed August 14, 2019 and associated submittals, site visits, POLB data requests, and additional research.

Construction activities and project operation could have direct and indirect impacts on the environment. The following environmental parameters are addressed based on the potential effects of the proposed Project and potential growth-inducing or cumulative effects of the Project in combination with other projects:

- Aesthetics
- Agricultural & Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology/Soils
- Greenhouse Gas Emissions
- Hazards & Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Mineral Resources
- Noise
- Population/Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities/Service Systems
- Wildfire
- Mandatory Findings of Significance

The IS has been organized into the following sections:

- **Section 1: Introduction.** Provides an introduction and overview describing the proposed Project and the CEQA process and identifies key areas of environmental concern to be analyzed.
- **Section 2: Project Description.** Presents the Project objectives and provides an in-depth description of the proposed Project, including construction details and methods.
- **Section 3: Environmental Determination.** Presents the results of the analysis completed in Section 4.
- **Section 4: Environmental Analysis.** Provides an analysis of the proposed Project's potential environmental impacts.
- **Section 5: Application Summary Report.** Provides an assessment of the Project's conformance with the stated policies of the Port Master Plan (PMP) and the California Coastal Act (CCA).
- **Section 6: Report Preparation.** Lists the preparers of the IS.
- **Section 7: References.** Lists the sources of information used to prepare the IS.
- **Section 8: Responses to Comments.** Includes all comment letters received and responses to comments.

## 2. Project Description

Ribost Terminal LLC, DBA World Oil Terminals (World Oil or applicant) proposes to construct the World Oil Tank Installation Project (proposed Project), which would include the construction and operation of two new 25,000-barrel (bbl) internal floating roof petroleum storage tanks within the existing World Oil Terminal at the Port of Long Beach (POLB or Port), in Long Beach, California. Construction of these two new tanks would include new tank foundations and pipeline connections to existing facility infrastructure, such as the truck loading racks. The proposed Project would provide additional storage capacity to increase the efficiency of terminal operations with no increase in throughput, due to limitations associated with the physical geometry of the site, physical limitations of the existing pipelines and truck loading racks, and permitted throughput limits. The new tanks would supplant the terminal's existing tanks that provide crude oil storage to the World Oil Refinery in South Gate ~~through the truck loading racks~~. The existing tanks would then be removed from dedicated refinery service and become available for lease to third-party vendors.

### 2.1 Project Title

World Oil Tank Installation Project

### 2.2 Lead Agency Name and Address

Port of Long Beach  
415 W. Ocean Boulevard  
Long Beach, California 90802

### 2.3 Lead Agency Contact Person and Phone Number

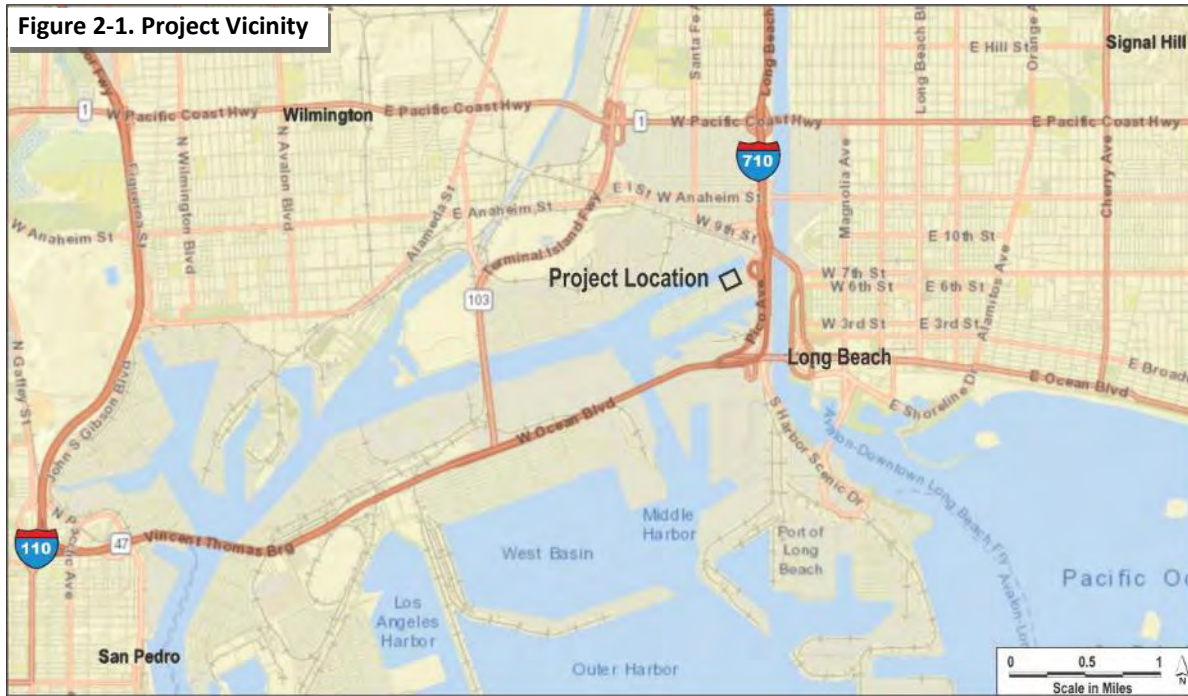
Jennifer Blanchard  
Environmental Specialist Associate  
(562) 283-~~7107~~7100

### 2.4 Project Location

The proposed Project is located in the southern portion of the County of Los Angeles in the Northeast Harbor Planning District (District 2) of Long Beach Harbor (POLB) (POLB, 1990). The proposed Project would be located within the existing World Oil Terminal at 1405 Pier C Street in Long Beach, California, just west of the Long Beach Freeway (I-710) and the Los Angeles River. The two new tanks would be installed in the generally vacant northwest corner of the existing petroleum bulk station and terminal. Figure 2-1 depicts a map of the Project site within the regional context of the vicinity. Figure 2-2 shows the Project site plan with the proposed tank locations, access routes, and staging area.

### 2.5 Project Applicant's Name and Address

Ribost Terminal, LLC, DBA World Oil Terminals (World Oil)  
John Dougherty, Terminal Manager  
1405 W. Pier C Street Berth C73  
Long Beach, CA 90813



## 2.6 General Plan Designation

The City of Long Beach General Plan Land Use Element, adopted in 2019, designates the POLB as a Regional-Serving Facility “PlaceType,” which is defined as a flexible zoning type including “facilities, businesses and operations that not only serve the City of Long Beach, but also the region and parts of the nation.” According to Table LU-6: PlaceTypes and Zoning Districts Consistency Matrix in the City of Long Beach General Plan Land Use Element, this PlaceType is consistent with Light, Medium, General, and Port-related Industrial Zoning Districts (City of Long Beach, 2019).

## 2.7 Zoning

The 1990 Port Master Plan designates the Project location as part of District 2: Northeast Harbor Planning District (POLB, 1990).

## 2.8 Surrounding Land Uses and Setting

The Port is the second-largest container port in the U.S. and consists of industrial and heavy commercial cargo shipping and trucking activity. The overall landscape is highly developed, with surrounding land uses similar to the proposed Project. The Project area is bounded by the Long Beach Harbor Channel 2 and Pier B to the north, the Matson Auto and Oversized Cargo Yard and the Long Beach Freeway (I-710) to the east, Inner Harbor Channel to the south, and SSA/Matson Container Yard to the immediate west.



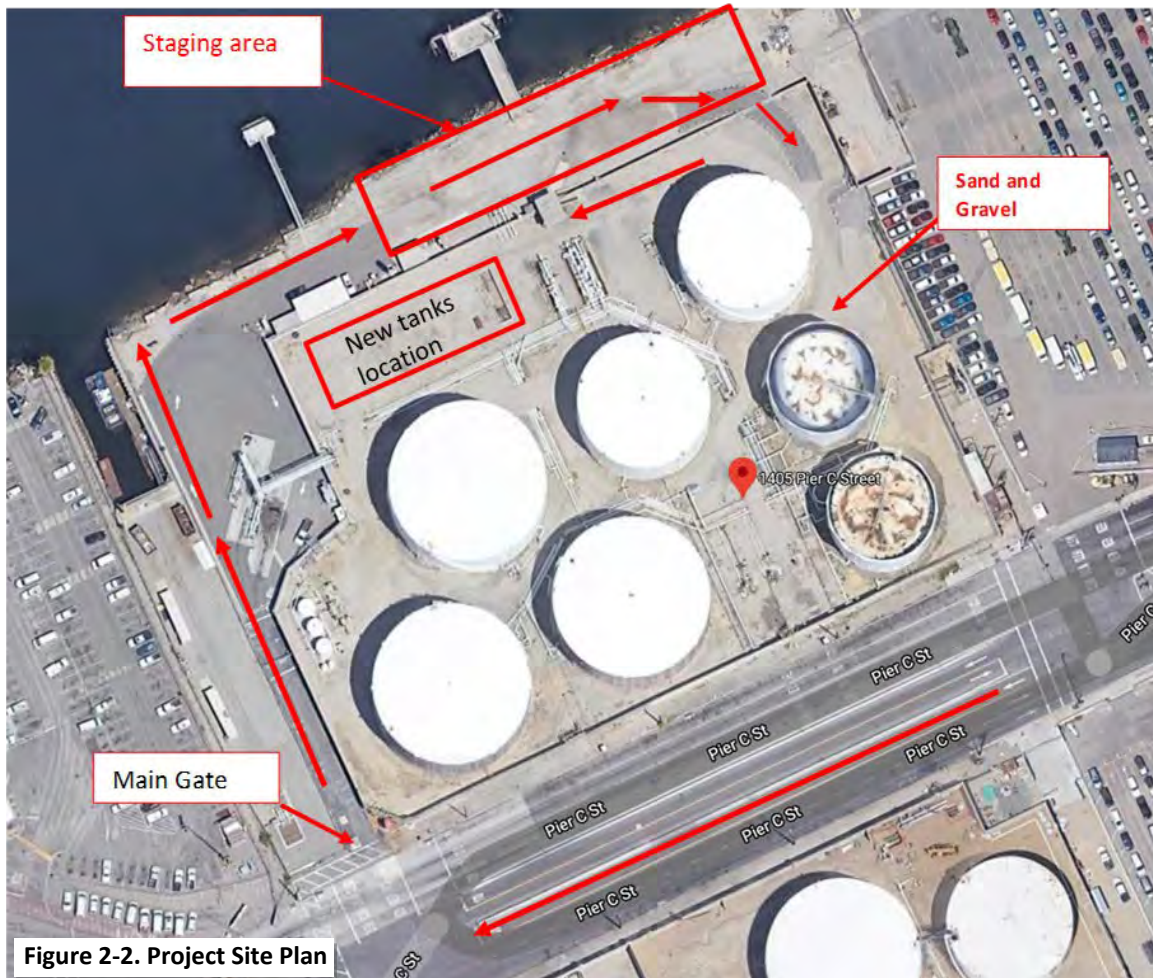


Figure 2-2. Project Site Plan

## 2.9 Project Overview

The World Oil Terminal is approximately 261,000 square feet (6 acres) and contains seven existing petroleum tanks (see Figure 2-3). Of these seven tanks, two tanks have a capacity of approximately 43,000 bbl each, two have a capacity of approximately 67,000 bbl each, and three have a capacity of approximately 94,000 bbl each, for a total storage capacity of 502,000 bbl. Three tanks contain crude oil and serve the World Oil Refinery in South Gate through the terminal truck loading racks. The remaining four tanks are leased to Marathon Petroleum and Glencore and store fuel oil received and shipped via pipeline. The leased tanks have historically stored different grades of marine fuels for lessees, such as marine diesel oil, bunker fuel oil, and low sulfur fuel oil. The existing tanks are surrounded by a containment wall that varies between



Figure 2-3. Existing Tanks

approximately 12.5 to 13 feet in height. The wall thickness tapers from approximately 1.5 feet wide at the base to 1 foot wide at the top. The wall includes a 12-to 12.5-foot-wide footing that is buried to a depth that runs from 1.5 feet below grade at the outer edges of the wall to a depth of approximately 3 feet towards the center of the facility. The wall and its footing make a large “L” shape that is continuous around the site which prevents the wall from falling over in the event of a spill. ~~by an approximately 8-foot wide, 6-foot deep containment wall with 50-foot deep foundations.~~ The containment wall was designed to hold the largest tanks capacity (90,000 barrels) plus a 100-year storm event. The new tanks would be located within the containment wall.

The majority of the 6-acre site is unpaved and covered with sand and gravel, whereas 0.83 acre is paved with concrete. The unpaved gravel surface lies atop riprap and fill. The paved surfaces cover the western portion of the terminal and provide access for trucks to enter the site, load, and exit from the same access point (one-way in, one-way out) (see red arrows in Figure 2-2). Each transport truck has a capacity of approximately 4,000 gallons. The terminal has a maximum truck capacity of five trucks due to the limited available area for queuing and to maintain fire lane access. The loading area has a berm that in the event of an accidental spill would contain the equivalent of one truckload of crude oil. A drainage device in the center of the berm collects the oil into a processing area and prevents it from permeating soil or contaminating seawater.

World Oil proposes to construct the proposed Project, which would include the construction and operation of two new 25,000 bbl internal floating roof petroleum storage tanks at the existing World Oil Terminal located at 1405 Pier C Street in Long Beach, California. The new tanks would store crude oil and be installed in the generally vacant northwest corner of the existing petroleum bulk station and terminal.

Construction of the new tanks would include new tank foundations, two pumps, and connections to the existing pipelines leading to the existing truck loading racks. Each tank would be approximately 60 feet in diameter with a height of 56 feet and a maximum fluid height of 50 feet. A 25-horsepower pump would be installed for each tank to pump crude oil from existing lines to and from the new tanks. Approximately 40 linear feet (LF) of piping would be installed to connect the tanks to existing pipe infrastructure. A short electrical conduit connection would be required between the new tanks and the existing subpanel located just outside the containment wall to the north. No other new overhead electrical lines or pipelines would be needed. The proposed Project would ~~expand and realign~~ World Oil’s storage capacity needs, which would improve the efficiency of terminal operations, ~~by where the two new smaller tanks would provide the adequate capacity for World Oil by replacing two larger currently underutilized storage tanks that transport crude to the World Oil refinery. This would allowing~~ World Oil to lease the larger existing tanks to third-party vendors. These third-party vendors would import/export via existing pipelines ~~and truck loading racks for off-site storage~~, as is currently done for several of the existing tanks at the facility.

### 2.9.1 Project Objectives

The objectives of the proposed Project are:

- To increase efficiency of terminal operations;
- To expand ~~crude oil~~ and realign storage capacity needs; and
- To make more existing tanks available for lease by third-party vendors.

### 2.10 Project Construction

Prior to tank installation, the Project site would be prepared according to the recommendations provided in the Albus-Keefe & Associates geotechnical update reports from 2018 (Albus-Keefe & Associates, Inc.,



2018). Figure 2-4 shows the existing area where the tanks would be installed. All earthwork and grading would be performed in compliance with applicable requirements of California Division of Occupational Safety and Health (Cal/OSHA) and specifications of POLB's Grading Codes.



**Figure 2-4. Project Site – View Looking West**

The site would be prepared by initially clearing debris, such as concrete and abandoned underground components. For example, an existing out-of-service oil/water concrete separator sump at the Project site would be demolished to accommodate the new tanks (see Figure 2-5). During ground preparation, the upper approximately four feet of earth material would be excavated and removed to accommodate locally imported sandy engineered fill that would serve as a stable base for the new tanks. Existing materials may also be mixed with the sandy engineered fill to reduce the need to

dispose of excess soil. After initial removal of earth material, approximately six inches in depth of debris would be removed from the exposed grade. The exposed grade would be brought to at least 110 percent of the optimum moisture content, and then compacted to at least 90 percent of the laboratory standard. The locally imported sandy engineered fill would consist of fine particles and placed in loose lifts (i.e., layers to be compacted with soil fill) no greater than approximately eight inches in thickness. Each lift would either be watered or air-dried as necessary to achieve at least 100 percent of the optimum moisture content and then compacted in place to at least 90 percent of the laboratory standard. Subsequent lifts would not be placed until the geotechnical consultant has tested the preceding lift. Lifts would be maintained relatively level and would not exceed a gradient of 20:1 (horizontal-to-vertical).

Because the site is underlain by compressible earth materials that are susceptible to liquefaction, implementation of a ground improvement system may reduce the effects of static and seismic settlements. Construction of the ground improvement system would consist of vibratory stone column Geopiers, also known as vibro piers, or equivalent rammed aggregate piers (RAPs). The vibro pier process involves the construction of dense aggregate columns (i.e., stone columns) with a down-hole vibrator (or equivalent, such as a hydraulic break hammer or mounted impact hammer (hoe ram) suspended from a crane or specially built rig. Vibro replacement would increase the soil's ability to support heavy loads and resist shear force, decrease settlement, and reduce liquefaction. Typical vibro pier construction would begin with pre-drilling the pier location to create a full-depth hole with a diameter that is equal to the final pier design diameter. Stone is then introduced to the hole and compacted in layers by repetitive ramming with a powerful, specially designed vibrator or equivalent equipment. Vibro replacement stone columns may be constructed with the bottom feed process in soils in which the



**Figure 2-5. Oil/Water Concrete Separator Sump (to be demolished)**

pre-drilled hole will not stay open. The bottom-feed process feeds stone to the vibrator tip through an attached feed pipe. Pre-drilling of dense soil layers at the column location may be required for the vibrator to penetrate to the design depth. This method of construction creates a stone column that reinforces the treatment zone and densifies surrounding granular soils. The vibro replacement process is repeated in lifts until a dense stone column is constructed to the ground surface.

The backfilled areas around the tank foundations would be graded to allow for proper drainage. Because the Project site is completely unpaved and covered in gravel, water runoff can infiltrate the soil. No excess water would be directed toward or allowed to pool against structures such as walls, foundations, or flatwork.

The two tank foundations would be installed on top of a ring-wall-type foundation. Approximately 40 LF of above-ground pipes per tank would be field-fitted to connect the tanks to existing lines, which connect to the truck loading racks. In the event that pipes must go beneath the ramp just to the south of the new tanks, the pipes would be coated and wrapped. A short electrical connection would be provided between the new tanks and the existing subpanel located just outside the containment wall to the north. No other new overhead electrical lines or pipelines would be needed.

The two tanks would undergo a National Pollutant Discharge Elimination System (NPDES) permitted hydrotest. The hydrotest, or hydrostatic test, would check for leaks and structural integrity. Approximately 50,000 bbl of water sourced from the Long Beach Water Department would be used for the hydrotest. Once conducted, the hydrotest discharge would be tested for any contaminants and then dechlorinated. ~~The water test results would be sent to POLB as proof of meeting NPDES permit requirements prior to discharge into the harbor.~~

The tank exteriors would be shop-blasted and painted off-site with primer, and then painted on-site with two coats of paint. The first coat would have a thickness of approximately 4 to 6 mils (one-thousandth of an inch), and the second coat would have a thickness of approximately 2 to 4 mils. The tank interiors would be coated with an approximately 16 to 22-mil coat of paint, which would cover the tank floors and up the sidewalls approximately 48 inches.

After completion of tank construction, all construction debris such as trash, scrap metal, abrasive blasting material, paint, pallets, concrete, and general construction scrap would be disposed of or recycled according to the California Green Building Standards Code and the City of Long Beach Construction and Demolition Debris Recycling Program (City of Long Beach, 2007).

**Schedule.** The proposed tanks would be constructed in two phases, as shown in Table 2-1, starting in ~~January~~ September 2021 and lasting for approximately 10 months. Construction activities would occur Monday through Friday between 7:00 a.m. and 5:00 p.m. (one 10-hour shift/day).

**Table 2-1. Construction Schedule and Personnel**

Project Alternative/Construction Phase	Work Activity (subphase)	Start Date	End Date	No. Workdays	Shifts <sup>1</sup>	Workers Per Day
Phase 1	Excavation/Foundation	<del>1/2/2021</del> <u>9/6/2021</u>	<del>5/8/2021</del> <u>1/14/2022</u>	91	1/10	8
Phase 2	Tank Erection/Painting	<del>4/25/2021</del> <u>1/3/2022</u>	<del>10/27/2021</del> <u>7/8/2022</u>	134	1/10	8

<sup>1</sup>Five-day work weeks

**Equipment.** The proposed Project would require the use of both on-road and off-road trucks and equipment to transport construction materials and debris. Table 2-2 shows the breakdown of equipment to be used during construction activities.

**Table 2-2. Construction Equipment**

Project Activity	Equipment Type	Estimated Number	Schedule (# of Days Equipment Operates)
Excavation	Bobcat	2	43
	Crane	1	43
	Skip Loader	1	43
	Flat Bed Truck	1	1
	Dump Truck	1	43
	Excavator	1	43
	Foundation	Pile Driver	1
Crane		1	55
Bobcat		1	55
Concrete		1	40
Dump Truck		1	4
Flat Bed Truck		2	4
Tank Erection	Crane	2	60
	Manlift	1	120
	Flat Bed Truck	1	24
	Flat Bed Truck	2	2
	Air Compressor	2	120
	Generator	1	120

Source: World Oil Terminals, 2019.

**Staging Area.** Workers would access the Project site from Pier C Street at the existing entrance to the World Oil Terminal property. The entrance is gated to provide security during Project construction and operations. During the day shift, the operator, supervisor, and terminal manager are present on-site. During the night shift, one operator is present on-site. The unpaved area north of the control building would serve as an approximately 6,940-square-foot (770 square-yards) staging area for construction vehicles (see Figure 2-6).



**Figure 2-6. Staging Area**

## 2.11 Operations and Maintenance

Overall terminal operations include shipping and receiving of crude oil and fuel oils through pipeline and/or truck loading racks to and from onsite tanks, some of which are leased to third-party vendors. These operations would remain similar once the proposed Project is implemented. Once the two petroleum tanks are installed, anticipated operations would involve storage of crude oil in the new tanks and leasing of the existing tanks to third-party vendors. The new tanks would be permitted to store a variety of petroleum products including crude oil and fuel oil, allowing operational flexibility to shift which tanks are leased in the future. Although n

Normal operation of the leased tanks would involve pipeline transfers, and such that there would be no increase in required site staffing levels or truck trips. However, as a worst-case assumption for the purposes of impact analysis, truck trips are estimated to increase 10 percent during proposed Project operations, which may occur during atypical operations such as when a pipeline is being serviced. to accommodate vendors not connected to the pipeline. Current operations for tanks allocated to the World Oil Refinery include the transport of crude oil to the tanks by pipeline and daily truck trips to and from the terminal to the offsite World Oil Refinery located in South Gate, California. These operations would remain similar once the proposed Project is implemented. Periodically, crude oil may be returned to the tanks by daily truck trips for refinery crude balancing. Truck trips anticipated for refinery crude balancing are expected to remain the same as current operations (approximately one truck per month). Table 2-3 displays the existing monthly and daily average loading rack truck count and barrels transported.

**Table 2-3. Existing Loading Rack Truck Traffic**

2017-2019	Average Truck Count		Barrels	
	Monthly	Daily	Monthly	Daily
Minimum	474	15	74,537	2,404
Maximum	847	28	133,529	4,315
Overall Average	702	23	110,320	3,626

As described in Section 2.9, the existing leased tanks have historically stored different grades of marine fuels for lessees, such as marine diesel oil, bunker fuel oil, and low sulfur fuel oil. The newly leased tanks would continue to primarily ship and receive the same or similar fuel oils through either the two inbound and outbound Marathon Petroleum pipelines serving the Marathon Petroleum Carson Refinery and/or Marathon Petroleum pipeline and terminal assets; or the Glencore bidirectional pipeline serving the Glencore Long Beach Marine Terminal and Glencore Carson Marine Terminal. A third pipeline, RT-1, is owned and operated by World Oil and is a receive-only pipeline that would deliver crude oil to the new tanks. Activities at refineries such as the Marathon Petroleum Carson Refinery and at terminals such as Glencore Long Beach Marine Terminal are separate from activities at the World Oil Terminal. Refinery processing capabilities are limited by factors such as equipment design capacity, permit conditions, firing rates for combustion sources, and maintenance schedules of the various operating units within the refineries. Therefore, refinery processes are not influenced by the proposed Project's storage capacity.

The proposed Project would not debottleneck the facility to allow for greater actual crude oil throughput beyond the permitted limits through the pipelines, tanks, or loading racks. Each of the existing crude tanks at the World Oil Terminal has an air quality permit that limits throughput, vapor pressure of materials, and the types of materials (based on volatilities, Reid Vapor Pressure or RVP) that are permitted to be

stored. No changes to existing permit conditions have been requested or are needed to implement the proposed Project; the existing tanks would continue to operate as currently permitted. Additionally, the World Oil Terminal is limited to loading up to 10,000 bbl/day of crude oil into trucks; this limit does not change with implementation of the proposed Project.

After proposed Project implementation, the newly leased tanks may also ship product through the truck loading racks, similar to how shipping occurs for the existing tanks. As a worst-case scenario, such as an atypical condition involving a pipe being serviced, and would result in a 10 percent increase in operational truck traffic has been assumed to accommodate vendors not connected to the pipeline. Table 2-4 displays the projected future monthly and daily average loading rack truck count and barrels transported including this 10 percent increase.

**Table 2-4. Proposed New Loading Rack Truck Traffic**

	Average Truck Count		Barrels	
	Monthly	Daily	Monthly	Daily
Minimum	521	17	81,991	2,645
Maximum	932	31	146,882	4,746
Overall Average	772	26	121,351	3,989

World Oil’s existing emergency contingency plans include the Emergency Response Action Plan, Facility Response Plan, Illness and Injury Prevention Plan, and Spill Prevention Control and Countermeasure Plan. These existing plans would be updated to reflect the additional tanks and continue to be implemented. World Oil would continue to conduct annual trainings and quarterly/annual emergency drills, have evacuation plans, and shutdown procedures.

Maintenance activities for the new tanks would be the same as those for the existing tanks, including cleaning sludge from tank bottoms, dewatering, routine visual inspections, and standard quarterly inspections in compliance with the South Coast Air Quality Management District (SCAQMD) Air Quality Permit. World Oil would adopt all existing maintenance procedures for the proposed Project. Pumps and piping would be inspected, repaired, replaced, or upgraded as needed. Currently, approximately 300 gallons of water per tank per day are dewatered, as estimated from current wastewater meter discharge flow meter readings on existing tanks. Therefore, it is anticipated that a smaller amount would be dewatered from the two proposed smaller 25,000-bbl tanks per day. The dewatered wastewater would be piped into the existing three 10,000-gallon wastewater treatment storage tanks and then discharged to the Los Angeles County Sanitation District for treatment in compliance with the facility’s discharge permit, as is currently done for the existing tanks. Approximately every 10 years, the tanks would be cleaned of sludge, repaired, and/or hydrotested. Sludge tank bottom quantities are estimated to be approximately 1,500 bbl every ten years and are disposed of at permitted treatment, storage, and disposal facilities (TSDF) such as a U.S. Ecology waste facility. TSDFs may be in any number of locations in the U.S. depending on the type of treatment required. This waste is regulated by the State of California (non-Resource Conservation and Recovery Act (RCRA) hazardous waste). Other risk management procedures include the American Petroleum Institute 653 Standard inspection, daily operator inspections, and annual cathodic protection surveys.

Tank life is estimated to be greater than 50 years. Upon decommissioning, tank sludge, contractor waste, and scrap steel for recycling would be generated.



## 2.12 Other Permits and Approvals

The POLB is the lead agency for CEQA review of this Project. The POLB has exclusive authority to approve or deny World Oil’s application; however, various permits from other agencies may also need to be obtained by the applicant for the proposed Project. If the POLB issues a Harbor Development Permit, it would provide overall project approval and certify compliance of the Project with CEQA. In addition to the Harbor Development Permit, Table 2-5 summarizes the permits from other federal, State, and local agencies that may be needed for the Project.

**Table 2-5. Permits that May Be Required for the Proposed Project**

Agency	Jurisdiction	Requirements
<b>Federal / State Agencies</b>		
Environmental Protection Agency Region 9	Hazardous Waste	Facility has EPA ID, storage <90 days
California Department of Toxic Substances Control	Hazardous Waste	Facility has EPA ID, storage <90 days
<b>Local / Regional Agencies</b>		
South Coast Air Quality Management District	Air quality	Limit air emissions from new tanks
Los Angeles Regional Water Quality Control Board	Tank hydrotest water	Discharge to Long Beach Harbor
Los Angeles County Sanitary District	Wastewater treatment	Wastewater discharge limits
City of Long Beach Planning and Building Permit	Construction	Tank construction building codes

### 3. Environmental Determination

#### 3.1 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is a “Potentially Significant Impact” and requiring implementation of mitigation as indicated by the checklist on the following pages.

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Aesthetics                | <input type="checkbox"/> Agriculture & Forestry Resources | <input type="checkbox"/> Air Quality                        |
| <input type="checkbox"/> Biological Resources      | <input type="checkbox"/> Cultural Resources               | <input type="checkbox"/> Energy                             |
| <input type="checkbox"/> Geology/Soils             | <input type="checkbox"/> Greenhouse Gas Emissions         | <input type="checkbox"/> Hazards & Hazardous Materials      |
| <input type="checkbox"/> Hydrology/Water Quality   | <input type="checkbox"/> Land Use/Planning                | <input type="checkbox"/> Mineral Resources                  |
| <input type="checkbox"/> Noise                     | <input type="checkbox"/> Population/Housing               | <input type="checkbox"/> Public Services                    |
| <input type="checkbox"/> Recreation                | <input type="checkbox"/> Transportation                   | <input type="checkbox"/> Tribal Cultural Resources          |
| <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Wildfire                         | <input type="checkbox"/> Mandatory Findings of Significance |

#### 3.2 Environmental Determination

On the basis of this initial evaluation:

- I find that the proposed Project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.
- I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.
- I find that the proposed Project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.
- I find that the proposed Project **MAY** have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or **NEGATIVE DECLARATION** pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are imposed upon the Proposed Project, nothing further is required.



Matthew Arms, Director of Environmental Planning  
Port of Long Beach

10/5/2021

Date





## 4. Environmental Setting and Environmental Impacts

### 4.1 Aesthetics

#### AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

#### Discussion

##### **a. Would the project have a substantial adverse effect on a scenic vista?**

*NO IMPACT.* The Project site is not located within an officially designated scenic vista. The Port Master Plan identifies three sensitive views within the POLB: (1) predominant structures visible to the east from downtown Long Beach and along the ocean bluffs, (2) ground level views along the boundary of Queensway Bay, and (3) ground level views along Harbor Scenic Drive from southbound lanes south of Anaheim Street (POLB, 1990). Additionally, the General Plan Mobility Element designates the segment of Ocean Boulevard from Nimitz Road on the west to State Route 1 (SR-1) on the east as a City-designated scenic route (City of Long Beach, 2013).

Downtown Long Beach and its coastal areas are located to the east of the Project site across the Los Angeles River and the Long Beach Freeway (I-710). Given the distance and visual obstructions from existing buildings and infrastructure, the Project site is not visible from these sensitive viewpoints.

The Project site is also not adjacent to Queensway Bay and would not obstruct ground-level views of this scenic resource. Queensway Bay is approximately 1.6 miles southeast of the Project site, south of the Seaside Freeway/Ocean Boulevard, the Queensway Bridge, and many other intervening structures, including elevated roadways, gantry cranes, and oil refineries. The existing infrastructure inhibits views to or from the Project site and Queensway Bay. Therefore, the proposed Project would not impact ground-level views near Queensway Bay.

The segment of Harbor Scenic Drive (I-710), south of Anaheim Street, is approximately 0.21 mile east of the Project site. The Project site is visible from a portion of I-710, but the existing taller storage tanks to the south and east of the new tanks would obstruct views of the new smaller tanks. Overall, the Project site is in a highly industrialized area with features typical of marine container terminals, including storage tanks, cranes, and other container-moving equipment, trucks, elevated roadways, and other port-related

facilities. The overall viewshed from I-710 is characterized by the highly industrialized and developed environment of the Port. Similarly, views of the Project site from Ocean Boulevard are primarily obscured by distance as well as intervening structures. The addition of the new tanks would not detract from the overall viewshed from Harbor Scenic Drive and Ocean Boulevard.

Project construction activities would temporarily alter the visual character of the site, but construction equipment such as dump trucks, cranes, and excavators would generally be consistent with the existing industrial and port-related activities and facilities in the Project area. Once completed, the two new tanks would blend in with the existing seven tanks on-site and would not substantially impact the scenic character of the area. The new tanks would be smaller than the existing tanks and would not be highly visible from public viewsheds. The Project would not result in any new prominent features that may impact the scenic viewshed along Harbor Scenic Drive or Ocean Boulevard, and the Project site would continue to be consistent with the industrial nature of the viewshed. The two new approximately 56-foot tall tanks would be smaller than the existing tanks, which range from 80 to 118 feet tall. Similar to existing structures on-site, the proposed tanks would be consistent with the POLB's highly industrialized visual character. Views of the Project site would be generally the same as existing conditions. The proposed Project would not obstruct views of any specific scenic resources, either natural or man-made, and would blend in with the surrounding industrial character. Due to other intervening structures such as raised roadways, cranes, and other storage structures, views of the Project site would be intermittently obstructed from the roadways. Therefore, the proposed Project would result in no impact on scenic vistas.

**Mitigation Measures:** No mitigation is required.

***b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?***

*NO IMPACT.* According to the California Department of Transportation (Caltrans) Scenic Highway Mapping System, there are no designated State scenic highways within the POLB or the City of Long Beach. The closest State-designated scenic highway is SR-91 beginning at SR-55 east of the Anaheim city limit, which is more than 20 miles to the northeast of the Project site (Caltrans, 2019). The City of Long Beach General Plan Mobility Element designates the segment of Ocean Boulevard from Nimitz Road on the west to SR-1 on the east as a City-designated scenic route (City of Long Beach, 2013). The closest eligible State scenic highway is the segment of SR-1, located approximately five miles to the east of the Project site that follows the coastline from Orange County into Los Angeles County and terminates at SR-22 in the City of Long Beach (Caltrans, 2019). The Project site is not visible from either of these State scenic highways due to distance and obstructions from existing structures and topography; therefore, the proposed Project would not impact any scenic resources within a State scenic highway.

The General Plan Mobility Element Map 12, *Context-Sensitive Street Classification System*, identifies scenic routes within the City of Long Beach (City of Long Beach, 2013). The closest City-designated scenic route to the Project site is Ocean Boulevard from Nimitz Road (western City limit) to SR-1 (eastern City limit), which is located approximately 0.55 mile south of the Project site. As discussed in Section 4.1(a), views of the Project site from Ocean Boulevard are mainly obstructed and include features typical of marine container terminals and other industrial and port-related facilities.

Furthermore, there are no scenic resources at the Project site such as trees, rock outcropping, historic buildings, or other aesthetic features, and therefore, construction and operation of the proposed Project would not damage scenic resources. No impact would occur.

**Mitigation Measures:** No mitigation is required.

**c. In non-urbanized areas, would the project substantially degrade the existing visual character or quality of the public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?**

*LESS THAN SIGNIFICANT IMPACT.* The Project site's visual character and surroundings are dominated by highly industrial features, resulting in low visual quality. Main components of the site consist of the tank storage area, truck access route, truck loading racks, and office building. The tank storage area occupies the majority of the Project site area and is unpaved. Smaller wastewater tanks, piping, meters, walkways, and ladders are located within this area. The truck access route begins at the entrance from Pier C Street, runs north to the turnaround, circles back to the truck loading racks, and terminates at the entrance. On-site structures do not have any defining architectural features.

The proposed Project would construct and install two additional smaller tanks that measure approximately 56 feet tall and 60 feet in diameter. These tanks would be obstructed by the existing tanks, which range from 80 to 118 feet tall. The new tanks would be connected with approximately 40 linear feet of new piping to existing pipe infrastructure. The storage tanks would be visually similar to the existing tanks and have similar uses (i.e., storage of crude oil). Construction activities would temporarily alter the visual character of the Project area through the presence and use of large equipment such as a crane, skip loader, dump truck, excavator, and pile driver. However, these activities would generally blend in with the existing industrial and port-related facilities in the area and would be temporary, lasting approximately 10 months. Upon completion, the terminal would be visually similar to existing conditions with the exception of two new, smaller storage tanks.

The surroundings of the Project site are defined by industrial features consistent with a maritime container terminal. Structures vary in height, form, color, and orientation to roadways. The new storage tanks would be consistent with the visual character of the Project site, as they would be installed in an area surrounded by seven existing on-site storage tanks. Furthermore, the proposed Project would also be visually consistent with the surrounding uses because other large storage tanks are located on other properties opposite the Project site. The Project would not conflict with the site's overall industrial scenic nature.

The terminal would have similar operational activities with additional storage capacity to lease to third-party vendors. The site would continue to be compatible with neighboring port-related industrial uses. The addition of two new crude oil storage tanks would not result in the visual degradation of the Project area's industrial character. Impacts would be less than significant.

**Mitigation Measures:** No mitigation is required.

**d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

*LESS THAN SIGNIFICANT IMPACT.* The Project site and surroundings are predominantly characterized by industrial uses that currently use nighttime lighting. Existing lighting on-site consist of tall pole lights scattered around the site and smaller lights at the truck loading racks that provide lighting for nighttime operations. In addition, there is a large amount of nighttime lighting associated with the highly industrialized POLB, which has activities occurring 24 hours a day, seven days a week. The surrounding urbanized sites adjacent to the terminal and along Pier C Street all contain various sources of light and glare. Tall pole lights exist throughout the vicinity, which provide nighttime illumination. The main source of daytime glare comes from the Matson Auto and Oversized Cargo Yard, due to sunlight reflecting off of

densely parked vehicles. The proposed Project would not exacerbate nighttime or daytime glare because it does not propose any nighttime illumination or materials that cause daytime glare.

According to the City of Long Beach Municipal Code (LBMC) Section 8.80.202, *Construction Activity – Noise Regulation*, construction activities are limited to occur only between 7:00 a.m. and 7:00 p.m. on weekdays and Federal holidays, and between 9:00 a.m. and 6:00 p.m. on Saturdays; no construction activities shall occur on Sundays. Construction of the proposed Project would occur between 7:00 a.m. and 5:00 p.m. from Monday through Friday. Lighting and glare impacts related to construction activities would be less than significant because construction would occur within the permitted time and would stop earlier than 7:00 p.m., minimizing the need for nighttime lighting.

No new lighting is proposed as part of the Project. Compliance with LBMC Section 8.80.202 would ensure light and glare impacts associated with construction and operation of the Project are minimized to less-than-significant levels.

**Mitigation Measures:** No mitigation is required.

## 4.2 Agriculture and Forestry Resources

### AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. **Would the project:**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined by Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code §51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### Discussion

**a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as Shown on the Maps Prepared Pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to Non-agricultural use?**

**NO IMPACT.** The Project is located in a highly developed area of the POLB with existing petroleum storage and transport operations occurring at the site. According to the California Department of Conservation's Farmland Mapping and Monitoring Program, the Project site is not within any area designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (DOC, 2016). The developed, urban character of the surrounding area suggest that the appropriate Farmland Mapping and Monitoring Program mapping designation would be Urban and Built-Up Land. Thus, the proposed Project would have no impact on Farmland.

**Mitigation Measures:** No mitigation is required.

**b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?**

*NO IMPACT.* The Project site and its surrounding areas are located with District 2 and zoned “MP – Port Manufacturing” (POLB, 1990). Permitted uses within District 2 and MP zones include primary port facilities, port-related uses, hazardous cargo facilities, ancillary port facilities, oil production, and navigation. No agricultural use occurs within the Project site and surrounding areas. As such, the Project site is not a part of a Williamson Act contract. Thus, no impacts would occur.

**Mitigation Measures:** No mitigation is required.

**c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?**

*NO IMPACT.* As discussed in Section 4.2(b), the Project site is not located within lands zoned for forest land or timberland. As such, the proposed Project would not cause rezoning of forest land, timberland, or timberland zoned Timberland Production. No impact would occur.

**Mitigation Measures:** No mitigation is required.

**d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?**

*NO IMPACT.* As discussed in Section 4.2(b), the Project site is not located within lands zoned for forest land. The proposed Project would not result in the loss of forest land or convert forest land to non-forest use. No impact would occur.

**Mitigation Measures:** No mitigation is required.

**e. Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?**

*NO IMPACT.* As discussed in Sections 4.2(a) through 4.2(d), the Project site is located in an urbanized area with no land zoned for agricultural or forest uses. The Project would not result in the conversion of Farmland to non-agricultural use, and no impact would occur.

**Mitigation Measures:** No mitigation is required.

## 4.3 Air Quality

### AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. **Would the project:**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

#### **a. Would the project conflict with or obstruct implementation of the applicable air quality plan?**

#### Discussion

The South Coast Air Quality Management District (SCAQMD) implements, and periodically updates, the Air Quality Management Plan (AQMP) for the South Coast Air Basin, which is comprised of portions of Los Angeles, Riverside and San Bernardino Counties, and Orange County. The AQMP uses projections of population growth and trends in energy and transportation demand to predict future emissions and determine control strategies to eventually achieve attainment with the ambient air quality standards for ozone and particulate matter. The ambient air quality standards are set at levels to adequately protect the health of the public, and AQMP control strategies are designed to achieve the requisite reductions in emissions of ozone precursors, such as organic compounds and nitrogen oxides, and reductions in particulate matter. The control strategies are then either codified into the SCAQMD's rules and regulations, or otherwise set forth as formal recommendations to other agencies, such as those contained in the SCAQMD CEQA Guidelines.

The SCAQMD rules and regulations include requirements for stationary equipment, certain materials used (such as paints/coatings), and for fugitive dust and nuisance control. These regulations contain both requirements and exemptions for certain types of equipment that may be used during implementation of the proposed Project. Portable equipment with small internal combustion engines (under 50 horsepower) that may be used during construction would be exempt from permitting through SCAQMD Rule 219. Compliance with the applicable SCAQMD rules, for projects that otherwise are within the growth projections for the air basin, indicates a project would not conflict with the applicable air quality plan.

*LESS THAN SIGNIFICANT IMPACT.* Project construction would be required to comply with the applicable air quality regulations and all applicable Clean Air Action Plan (CAAP) construction Best Management Practices (BMPs). Compliance with these regulations and CAAP BMPs ensures construction practices and emissions would conform with the AQMP.

The proposed Project includes the installation of two new floating roof crude oil storage tanks but does not increase the permitted crude oil throughput for the crude oil loading racks or tanker truck transportation requirements for crude oil. The tanks are required to obtain SCAQMD permits and comply with all SCAQMD regulations. The World Oil facility is not a Major Source as defined by the Clean Air Act



and SCAQMD permitting requirements; therefore, the facility does not require a federal Title V air quality permit.

~~The proposed project is also expected to cause a 10 percent increase over baseline in truck trips has been assumed as a worst-case assumption for the purposes of impact analysis. the use of the loading racks over baseline to deliver fuel oil products from the two existing crude oil tanks that would be repurposed to leased fuel oil storage after the new crude oil tanks are installed and operating. This increase is equal to a maximum of three additional truck loading events per day. This increase in trucking Trucks associated with operation of the proposed Project would be required to ing would be performed in compliance compliance\_ with all state and local regulations, the truck loading would be performed in compliance with including the existing SCAQMD permits for the existing truck loading rack permits, and it would be performed with trucks meeting the Ports Clean Trucks Program requirements. Therefore, this is the nominal increase in trucks transporting fuel oil trucking would not conflict with the AQMP.~~

The proposed Project's operation would increase the number of petroleum storage tanks at the site and increase the total fugitive volatile organic compound (VOC) emissions from the tanks. This emissions increase has been addressed in the permit application submitted by World Oil to the SCAQMD (Yorke, 2021). ~~two SCAQMD permits to construct granted for the two tanks (SCAQMD, 2020a; SCAQMD, 2020b).~~ The SCAQMD reviewed the design and operation specifications for the new tanks, along with the proposed emissions offset plan, to ensure that the tanks would comply with all SCAQMD rules and regulations ~~and SCAQMD approved permits to construct for the two tanks.~~ This includes the requirement that the new tanks have Best Available Control Technology (BACT), which for ~~these~~ the proposed new tanks are an internal floating roof tanks with a mechanic shoe seal. ~~and that~~ In addition, the proposed Project would be required by the SCAQMD to offset the estimated new tanks VOC emissions, including the fugitive emissions associated with the new piping components (pumps, valves, etc.), at a ratio of 1.2 to 1 using approved emissions reduction credits (SCAQMD, 2021b, 2021c). The SCAQMD New Source Review (NSR) permitting program is designed to create net stationary source emissions reductions for non-attainment air pollutants, such as VOC.

The proposed Project would not cause substantial directly or indirectly ~~substantial~~ growth within the air basin. Therefore, the proposed Project's operation would not conflict with the AQMP.

**Mitigation Measures:** No mitigation is required.

***b. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?***

## Discussion

SCAQMD has recommended daily emissions significance thresholds for construction and operation emissions that address the air basin's federal and state non-attainment pollutants. The proposed Project's construction and operation emissions are compared to these thresholds for the determination of significance herein.

## Construction

The proposed Project's construction emissions have been estimated using the SCAQMD-approved California Emissions Estimator Model (CalEEMod Version 2016.3.2). The construction equipment, vehicle



trip, and tank coating assumptions have been determined through coordination with the Project applicant and are provided in Appendix A. The emissions estimate does not include any off-road equipment or on-road vehicle engine mitigation; however, the emissions estimate does include control measures for fugitive dust and VOC in compliance with SCAQMD Rule 403 (Fugitive Dust) and Rule 1113 (Architectural Coatings). The assumed fugitive dust control measure is watering of working areas and excavated materials. The VOC emissions control measure requires the use of low-VOC content compliant coatings for the interior and exterior of the tanks.

*LESS THAN SIGNIFICANT IMPACT.* Table 4.3-1 provides the maximum daily emissions estimated for Project construction. The worst-case emissions for all criteria pollutants, except VOC, for the proposed Project would occur during an overlap of the excavation/foundation preparation construction phase and the tank erection construction phase. The VOC emissions peak occurs during an overlap of tank coating and tank erection, where tank coating for the first tank starts before the tank erection phase for the second tank is complete. The specific emissions assumptions (construction phase schedule, off-road equipment, on-road vehicle trips, paint type and use quantities) for each of the Project’s construction phases are provided in Appendix A.

**Table 4.3-1. Summary of Unmitigated Maximum Daily Construction Emission Estimates (Pounds Per Day)**

	VOC	CO	NO <sub>x</sub>	SO <sub>x</sub>	PM10	PM2.5
On-road	0.1	1.7	1.9	0.01	0.1	0.0
Off-road	1.1	21.5	30.3	0.05	1.3	1.2
Architectural Coatings	35.3	--	--	--	--	--
Fugitive Dust	--	--	--	--	0.5	0.1
Total Emissions	36.5	23.2	32.3	0.06	1.8	1.3
Significance Threshold	75	550	100	150	150	55
Exceeds Threshold?	NO	NO	NO	NO	NO	NO

Source: Appendix A; SCAQMD, 2019a.

Acronyms: VOC – volatile organic compounds, CO – carbon monoxide, NO<sub>x</sub> – nitrogen oxides, SO<sub>x</sub> – sulfur oxides, PM10 – particulate matter 10 microns or less in diameter, PM 2.5 – particulate matter 2.5 microns or less in diameter.

~~The proposed project would comply with SCAQMD Rule 403 (Fugitive Dust) for the watering of unpaved areas and hauled bulk materials to reduce dust from earthmoving and transport operations. In addition, low VOC paints would be used to comply with SCAQMD Rule 1113 (Architectural Coatings) VOC limits.~~ The proposed Project’s unmitigated construction emissions are estimated to be well below the SCAQMD daily emissions significance thresholds.

As a special condition of the HDP, the applicant will be required to use off-road construction equipment that meet United States Environmental Protection Agency Tier 4 Final off-road emission standards, as specified below in Special Condition AQ-1.

**Special Condition AQ-1. Non-Road Engine Emission Standards.** Permittee shall ensure that all construction equipment meet the United States Environmental Protection Agency Tier 4 non-road engine standards. Prior to construction, Permittee shall instruct construction crews on the implementation of Special Conditions.

Special Condition AQ-1 would further reduce the off-road equipment engine emissions, particularly the NO<sub>x</sub> and particulate matter (PM10 and PM2.5) emissions. However, since the unmitigated emissions are

below the SCAQMD emissions significance thresholds no emissions mitigation is required and Special Condition AQ-1 is not identified as a CEQA mitigation measure, and its implementation has not been assumed to determine the construction emissions significance findings.

**Mitigation Measures:** No mitigation is required.

### Operation

The proposed Project would not increase site staffing or the crude oil throughput for the facility, but it has the potential to increase fuel oil throughput at the loading racks during atypical operations, such as when a pipeline is being serviced, which would increase fugitive VOC emissions, increase use of and emissions from the thermal oxidizer loading rack vapor control device, and increase on-road truck emissions. This increase has been estimated at a 10 percent increase in daily loading rack use that corresponds to an increase in three truck loading visits, at 15-30 miles per round trip, per day. Additionally, the two new tanks would create additional fugitive VOC emissions from tank operations. The new tank VOC emissions were estimated by SCAQMD as part of the review of the Applicant's revised permit to construct/operate application for the proposed Project's new tanks. SCAQMD used the current USEPA AP-42 Section 7.1 Organic Liquid Storage Tanks (USEPA, 2020) methodology, assuming a Gasoline Reid Vapor Pressure (RVP) of 10, "average" paint condition, and August as the maximum monthly emissions (SCAQMD, 2021b, 2021c). ~~by the Applicant using the U.S. Environmental Protection Agency (USEPA) TANKS program and have been approved by the SCAQMD during their tank permitting process (SCAQMD, 2019b).~~ The new tanks permits to operate the tanks would be approved after the tanks are constructed and inspected by SCAQMD.

~~The SCAQMD approved peak month maximum daily VOC potential to emit for these two tanks was estimated to be 9.7-10.8 pounds per day, which is well below the SCAQMD daily operation emissions significance threshold of 55 pounds per day. The VOC emissions are above the SCAQMD BACT emissions threshold of one pound per day. The proposed BACT for these two tanks is the tank design comprised of an internal floating roof tank with mechanical seals. The BACT emissions controls are required by SCAQMD regulation and therefore are not considered a CEQA mitigation measure, and the unmitigated emissions estimate includes the proposed BACT tank design.~~

The facility's existing potential to emit is above the SCAQMD New Source Review Rule VOC offset emissions threshold of 4 tons per year; therefore, the new tank emissions were required to be offset. These emissions offsets were procured from the SCAQMD emissions reduction credit bank. The quantity of offsets required is 1.2 times the permitted potential to emit or 132 pounds per day after rounding; SCAQMD has approved the transfer of 12 pounds per day of VOC credits for this proposed Project and World Oil is in the process of transferring an additional pound of VOC credits which are registered at another one of their facilities (SCAQMD, 2021b, 2021c). The SCAQMD required emissions offsets are not considered a CEQA mitigation measure for the Project, and the emissions reduction created using these offsets are not included in the operation emissions significance assessment.

*LESS THAN SIGNIFICANT IMPACT.* Table 4.3-2 provides the maximum daily emissions increase estimated for proposed Project operation. The specific operation emissions increase assumptions are provided in Appendix A.

**Table 4.3-2. Summary of Unmitigated Maximum Daily Operation Emissions Increase Estimates (Pounds Per Day)**

	VOC	CO	NO <sub>x</sub>	SO <sub>x</sub>	PM10	PM2.5
On-road	0.04202	0.1809	1.210.60	0.00	0.0904	0.0304
Tank Fugitive VOC <sup>1</sup>	10.829.70	--	--	--	--	--
Loading Racks/Vapor Control	0.09	0.16	0.20	0.00	0.01	0.01
Total Emissions	10.95939.81	0.3425	1.410.81	0.00	0.1006	0.0403
Significance Threshold	75	550	100	150	150	55
Exceeds Threshold?	NO	NO	NO	NO	NO	NO

Source: Appendix A; SCAQMD, 2019a; SCAQMD, 2019b; SCAQMD, 2021b; SCAQMD, 2021c; and Yorke, 2021.

1-These emissions will be have been offset at a 1.2:1 ratio (132 pounds per day of VOC emissions reduction credits) per SCAQMD NSR regulation requirements, so that the offset emissions total would be minus 2.19 pound per day.

SCAQMD performed independent calculations to estimate hydrogen sulfide (H<sub>2</sub>S) emissions assuming a worst-case of 3 percent sulfur of H<sub>2</sub>S from the SDS Gas Oil, Virgin Tesoro product and August emissions due to warmer temperatures (SCAQMD, 2021b, 2021c). The H<sub>2</sub>S emissions total from the two tanks was estimated to be 0.0135 pounds per hour and 0.0116 pounds per year.

The proposed Project's unmitigated operation emissions are estimated to be well below the SCAQMD daily emissions significance thresholds.

**Mitigation Measures:** No mitigation is required.

**c. Would the project expose sensitive receptors to substantial pollutant concentrations?**

**Discussion**

The Project site is on Pier C within the Port. The Port is surrounded by a buffer of industrial/commercial areas and natural boundaries such as the Los Angeles River Channel between most Port operating areas and nearby sensitive receptors. For the purposes of CEQA analysis, sensitive receptors include residences (including senior care facilities), schools, daycares, and hospitals. The nearest residential receptors (911 W. Chester Place, Long Beach) are located approximately 0.5 mile (800 meters) from the new tank area. The nearest school, Edison Elementary School, is located more than a half-mile (over 880 meters) from the new tank area. The nearest hospital and known daycare facility are located further than the nearest residences and school.

SCAQMD has recommended localized emissions significance thresholds for construction and operation emissions based on modeled maximum Project concentration levels to address potentially significant Project-level criteria pollutant health impacts. SCAQMD has developed tabulated emissions thresholds based on the construction site size and distance to receptor (in meters). The proposed Project's construction and operation emissions are compared to these thresholds for the determination of significance. Additionally, SCAQMD has significance criteria for toxic air contaminants (TACs). The TACs of concern for the proposed Project during construction is diesel particulate matter (DPM) and during operation is the speciated VOC emissions from the new crude oil tanks. The proposed Project's TAC emissions health risk impacts are assessed against the SCAQMD significance criteria below.

## Construction

*LESS THAN SIGNIFICANT IMPACT.* Table 4.3-3 presents the maximum daily construction emissions compared to the SCAQMD Localized Significance Threshold (LST) emissions for a one-acre construction site located 500 meters from the nearest sensitive receptor.

**Table 4.3-3. Summary of Maximum Localized Daily Construction Emission Estimates (Pounds Per Day)**

	NO <sub>x</sub>	CO	PM10	PM2.5
Total Emissions	32.3	23.2	1.8	1.3
Localized Significance Threshold	142	7,558	158	55
Exceeds Threshold?	NO	NO	NO	NO

Source: Appendix A; SCAQMD, 2009.

Table 4.3-3 conservatively includes all construction emissions, both on-site and off-site emissions, while the LST significance criteria is based on only on-site construction emissions.

The on-site DPM emissions during construction would occur over a relatively short period (approximately 10.5 months) in relation to life-time exposure periods; however, DPM has a high cancer potency. Therefore, a screening health risk assessment of the proposed Project's construction DPM emissions was completed. Health risk assessments can be completed using more conservative screening level methods to more sophisticated refined modeling methods that include air dispersion modeling techniques. An initial screening level approach from SCAQMD risk assessment guidance, using California Office of Environmental Health Hazard Assessment (OEHHA) risk assessment methods guidance for short-term projects (OEHHA, 2015), was completed. A conservative worst-case DPM concentration was estimated based on annualized on-site DPM emissions of 0.0663 tons (per the CalEEMod emissions estimate in Appendix A for all exhaust particulate emissions) multiplied by the SCAQMD published Chi/Q (X/Q) dispersion factor (units of  $[\mu\text{g}/\text{m}^3]/[\text{ton}/\text{year}]$ ) for diesel engines (rating between 300 and 400 break horsepower and use less than 12 hours per day) that have a downwind distance of approximately 800 meters at the Project area's Source Receptor Area (SRA) nearest meteorological station (Long Beach Airport). This Chi/Q value in Table 10.3 A in the SCAQMD guidance manual appendix is interpolated as 0.04 (SCAQMD, 2017). Therefore, the maximum DPM concentration value using this screening technique is  $0.0663 \text{ tons/year} \times 0.04 = 2.65 \times 10^{-3} \mu\text{g}/\text{m}^3$ . Using this concentration of DPM in the OEHHA/CARB Risk Assessment Standalone Tool (RAST) model, assuming the worst-case one-year exposure period which starts in the third trimester of pregnancy, the worst-case screening level risks are calculated to be  $4.72 \times 10^{-7}$  for cancer and a chronic health index of  $5.30 \times 10^{-4}$  (DPM emissions do not have acute health risk reference exposure levels, so acute impacts are not provided in RAST for DPM emissions). For off-site workers, at 100 meters from the construction area, the Chi/Q values would be 1.79 with a resulting annual concentration of  $0.119 \mu\text{g}/\text{m}^3$ . Using the same methods and modeling procedures the maximum worker risks were determined to be  $3.07 \times 10^{-7}$  for cancer and a chronic health index of  $2.38 \times 10^{-2}$ . SCAQMD has published TACs health risk significance thresholds of 10 in a million ( $10 \times 10^{-6}$ ) for increased cancer risk and health index values of more than 1.0 for chronic and acute risk (SCAQMD, 2019a). Therefore, the screening-level cancer risk for maximum exposed residents is over 20 times below the cancer risk significance threshold and the screening-level chronic risk is over 1,800 times below the significance level; and the maximum cancer risk for maximum exposed workers is over 30 times below the cancer risk significance threshold and the screening-level chronic risk is over 40 times below the significance level.

The proposed tank coatings are low VOC coatings that do not have substantial amounts of TACs. However, they do contain small amounts of ethyl benzene, xylene, and methyl ethyl ketone that all have California approved risk assessment cancer slope or exposure level factors for chronic and/or acute health risks. However, these risk factors are much higher (i.e., less conservative) than those for DPM. As such, the risks from the coating TAC emissions would cause impacts well below SCAQMD health risk significance thresholds. Therefore, construction emissions would not expose sensitive receptors to substantial pollutant concentrations, and construction impacts would be less than significant.

**Operation**

*LESS THAN SIGNIFICANT IMPACT.* Table 4.3-4 presents the maximum daily operation on-site emissions increase compared to the SCAQMD Localized Significance Threshold (LST) emissions for a one-acre operating area located 500 meters from the nearest sensitive receptor.

**Table 4.3-4. Summary of Maximum Localized Daily Operation On-Site Emission Increase Estimates (Pounds Per Day)**

	NO <sub>x</sub>	CO	PM10	PM2.5
Total Emissions	0.20	0.16	0.01	0.01
Localized Significance Threshold	142	7,558	38	23
Exceeds Threshold?	NO	NO	NO	NO

Source: Appendix A; SCAQMD, 2009.

There are no SCAQMD LST thresholds for VOC emissions, and the VOC emissions for the proposed Project are below the SCAQMD daily emissions threshold of 55 pounds per day as noted above in Section 4.3(b). Therefore, the non-speciated VOC emissions increase from the proposed Project’s operation have less than significant emissions. Furthermore, SCAQMD performed a cancer health risk assessment for the new tanks, using a conservative assumption for the TACs emissions rates by assuming TAC fractions from gasoline rather than crude oil, and found that health risks were well below the CEQA cancer health risk CEQA significance threshold of  $10 \times 10^{-6}$  for the maximum exposed sensitive receptors ( $1.585 \times 10^{-7}$ ) (SCAQMD, 2019, 2021b, 2021c). The increase in loading rack emissions, from fuel oil vapors, would have negligible TAC emissions and the trucking emissions occur over a large area and would not create substantial localized health impacts. The combined construction and operation emissions health risks ( $3.07 \times 10^{-7} + 1.5 \times 10^{-7} = 4.57 \times 10^{-7}$ ) would be well below the SCAQMD health risk CEQA significance thresholds. Therefore, operation emissions would not expose sensitive receptors to substantial pollutant concentrations, and operation impacts would be less than significant.

**Mitigation Measures:** No mitigation is required.

**d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?**

*LESS THAN SIGNIFICANT IMPACT.* During construction there would be a short-term increase in air pollutants primarily due to the combustion of diesel fuel from construction equipment and from tank interior and exterior coating. There is potential for some individuals to find diesel combustion emissions or the coating VOC emissions as objectionable odors. However, given the quantity of odorous emissions and the distance between Project emission sources and the nearest sensitive residential receptors (i.e., approximately 800 meters), adequate dispersion of these emissions to below objectionable odor levels would be anticipated. Furthermore, the Project site is located within the Port where existing industrial operations at nearby

container terminals include freight and goods movement activities (i.e., use of diesel trucks and diesel cargo-handling equipment) which generate similar odors. Therefore, impacts from construction would be less than significant.

During proposed Project operation there would be an increase in fugitive VOC and H<sub>2</sub>S emissions from the two new tanks, and the loading racks, and an increase in the exhaust emissions from the loading rack vapor control thermal oxidizer and the increase in tanker truck trips. The thermal oxidizer exhaust would not have substantial odors and the truck emissions odors would be minor and would be dispersed over a long transportation route, so these emissions sources would not have the potential to adversely affect a substantial number of people. The crude oil fugitive VOC and H<sub>2</sub>S emissions and increased loading rack fuel oil fugitive VOC emissions include a mixture of odorous substances and the smell of crude and fuel oils are something most Southern Californians have experienced and recognize due to the extensive oil production, refining, and fuel storage and marketing facilities in Southern California. H<sub>2</sub>S has a rotten egg odor that most people find offensive. Therefore, if the downwind concentration of these substances would be high enough there could be. ~~Regardless, there is the potential for individuals to find such odors as objectionable. Using SCAQMD Rule 1402 screening-level risk assessment procedures the 1-hour acute concentration for all VOCs and for H<sub>2</sub>S have been predicted (see Appendix A) with the following results:~~

- Total VOC < 5 µg/m<sup>3</sup>
- H<sub>2</sub>S < 1.4 x 10<sup>-5</sup> µg/m<sup>3</sup>

The mean odor threshold for the organic compounds in crude oil typically range from the low hundreds of µg/m<sup>3</sup>, naphthalene has a mean odor threshold of approximately 200 µg/m<sup>3</sup> (0.038 ppm), to hundreds of thousands of µg/m<sup>3</sup> or more; benzene has a mean odor threshold over 300,000 µg/m<sup>3</sup> (97 ppm). The acute concentration of each these odorous organic substances will be a small fraction of the total VOC concentrations, so there is no potential for any of these substances to cause objectionable odors to a substantial number of people.

The California Ambient Air Quality Standard (CAAQS) for H<sub>2</sub>S is 0.03 ppm (30 ppb, 42 µg/m<sup>3</sup>) for one hour, adopted with the purpose of decreasing odor annoyance, was based on the geometric mean odor threshold measured in adults. The predicted acute H<sub>2</sub>S concentration is over three million times less than the mean odor threshold. SCAQMD also performed independent calculations of H<sub>2</sub>S concentrations (only) of 2.08 ppb on-site (9.1 meters), 0.14 ppb at closest commercial receptor 90 meters away; 0.008 ppb at closest residential receptor 763 meters away (on W. Chester Place), and 0.007 ppb at closest school 838 meters from the source (Edison Elementary School) (SCAQMD, 2021b, 2021c).

The predicted maximum acute concentration of operation emissions odorous substances at the nearest sensitive receptor location would be several orders of magnitude below the respective odor thresholds. Therefore, ~~However,~~ given the Project's emissions rates and the distance between Project emission sources and the nearest sensitive receptors (i.e., approximately 800 meters), it is predicted that the downwind concentrations of the Project's operation odorous emissions would be well ~~adequate dispersion of these odorous emissions to below objectionable odor thresholds, levels would be~~ and substantial numbers of people would not be adversely affected by odors from the proposed Project. Therefore, impacts from operation would be less than significant.

**Mitigation Measures:** No mitigation is required.



## 4.4 Biological Resources

BIOLOGICAL RESOURCES		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>Would the project:</b>					
a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c.	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d.	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f.	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### Discussion

- a. *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?***

*LESS THAN SIGNIFICANT IMPACT.* A site visit was conducted by Aspen Environmental Group on March 3, 2020. An updated records search of the California Natural Diversity Database was conducted on March 16, 2020. The Project area is covered by gravel or paved with concrete with patches of invasive grasses and herbaceous weeds. The site is surrounded by a heavily industrial area containing multiple commercial and private businesses and other operations facilities. The Project area is bordered by paved roads and is adjacent to Channel 2 of the Cerritos Channel in the Port of Long Beach (MBC and Merkel & Associates, 2016). Construction of the two new oil tanks would occur in the northwestern corner of an existing petroleum bulk station (see Figure 2-2).

### Special-Status Plants

The proposed Project would not directly or indirectly impact plants identified as special-status species by the California Department of Fish and Wildlife (CDFW) or the United States Fish and Wildlife Service (USFWS). All plant species observed during the site visit in 2020 consisted of non-native grasses and herbaceous weedy species. These included but are not limited to common mallow (*Malva* sp.), brome

grasses (*Bromus* spp.), dandelion (*Taraxacum* spp.), and burclover (*Medicago* spp). Where vegetation was present it was most commonly found in shaded gravel-filled areas and along fences. No special-status plant species were identified during the site visit and no suitable habitat is present. Therefore, no impacts would occur to special-status plants.

### Special-Status Wildlife

Some of the wildlife detected on or near the site included gulls (*Larus* spp.), rock pigeon (*Columba livia*), and house sparrow (*Passer domesticus*). Wildlife species known to occur on or near the site include, but are not limited to, mallard duck (*Anas platyrhynchos*), barn swallow (*Hirundo rustica*), house finch (*Haemorhous mexicanus*), western gull (*Larus occidentalis*), great blue heron (*Ardea herodias*), and snowy egret (*Egretta thula*) (The Cornell Lab of Ornithology, 2020). Additionally, species such as osprey (*Pandion haliaetus*), Cooper's hawk (*Accipiter cooperii*), and peregrine falcon (*Falco peregrinus*) have been observed flying over the site (Dougherty, 2020) but are not expected to nest at the site. No special-status wildlife was observed on-site and is not expected to occur due to the lack of suitable habitat. Therefore, impacts to wildlife would be less than significant.

The nearest designated nesting site for a special-status species is located on a portion of Pier 400 of the Port of Los Angeles for the endangered California least tern (*Sternula antillarum browni*) (MBC and Merkel & Associates, 2016). The nesting site is approximately 4.4 miles southwest of the Project area.

The federal Migratory Bird Treaty Act (MBTA) prohibits take of any migratory bird, including active nests, except as permitted by regulation (e.g., waterfowl or upland game bird hunting). The MBTA broadly defines "migratory bird" as "any species or family of birds that live, reproduce or migrate within or across international borders at some point during their annual life cycle" and thus applies to most native bird species. California Fish and Game Code Section 3503.5 prohibits take or possession of birds of prey or their eggs; and Section 3513 prohibits take or possession of any migratory nongame bird. With the exception of a few non-native birds such as the house sparrow (*Passer domesticus*), the take of any birds or active bird nests or young is regulated by these statutes. Due to the highly industrialized nature of the Project site being an active petroleum bulk station and terminal, impacts to nesting birds would be less than significant.

However, should any demolition, excessive noise, or heavy plant trimming occur during the nesting season (typically February 1 to August 31), as a special condition of the HDP, the Applicant will be required to follow the requirements of the Migratory Bird Treaty Act as specified below in Special Condition BIO-1.

**Special Condition BIO-1. Nesting Bird Surveys.** To prevent taking active bird nests during the nesting season (approximately February 1 through August 31), the following measures shall be implemented by the Applicant as appropriate:

- Prior to the onset of construction activities (i.e., mobilization, staging, demolition, or heavy plant trimming) during the nesting season, the Applicant shall retain a qualified avian biologist to conduct pre-construction surveys in all areas located within 300 feet of the Project area. The required survey dates may be modified based on local conditions, as determined by the qualified avian biologist.
- If breeding birds with active nests are found prior to or during construction, the qualified avian biologist will establish a species-appropriate non-disturbance buffer and will periodically monitor the nest during construction activity.



- During construction within the nesting season, activities will be periodically monitored to ensure that no new nest building occurs within work areas.
- The Applicant shall provide weekly reports describing monitoring actions, relevant observations, and any protective actions taken to the POLB Director of Environmental Planning.

The open water areas of the Port provide important nursery and foraging habitat for coastal marine fish and nesting and foraging habitat for many resident and migratory birds. The waterways in and around the Port also provide habitat for marine mammals, which are protected under the Marine Mammal Protection Act (MBC and Merkel & Associates, 2016). The Project area is separated from the water's edge by occupied industrial-use lots and the proposed Project does not include in-water or over-water construction or operations. As described under Section 4.10(a), no water quality impacts would occur during construction or operations that could have potential impacts on adjacent marine systems. Therefore, no impacts to special-status marine species would occur.

***b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?***

*NO IMPACT.* The site consists of an industrial-use area and does not contain any riparian habitat or other sensitive natural communities identified in local or regional plans, policies, regulations or by the CDFW or the USFWS (USFWS, 2019a; 2019b). Eelgrass beds (*Zostera marina*), a special aquatic site (vegetated shallows) pursuant to the Clean Water Act and a Habitat Area of Particular Concern (HAPC), a subset of Essential Fish Habitat (EFH), are located in the Inner Harbor/Back Channel, approximately 1 mile from the Project area, and in the Cerritos Channel, approximately 1.5 miles from the Project area (MBC and Merkel & Associates, 2016). Kelp beds (*Laminariales* ssp.), another marine HAPC, are also present within the various harbors and basins at the POLB and Port of Los Angeles. The nearest kelp bed is approximately 2.5 miles south of the Project area in West Basin (MBC and Merkel & Associates, 2016). Any potential pollutants from site run-off during construction would be removed prior to draining into any water system, in compliance with the Construction Storm Water Pollution Prevention Plan (SWPPP) requirements. Therefore, no impacts would occur.

**Mitigation Measures:** No mitigation is required.

***c. Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) either individually or in combination with the known or probable impacts of other activities through direct removal, filling, hydrological interruption, or other means?***

*NO IMPACT.* There are no federally protected wetlands on the Project site as defined by Section 404 of the Clean Water Act. The nearest recognized wetland to the Project site is the Golden Shore Marine Biological Reserve, a 3.07-acre estuarine and marine wetland located approximately one mile southeast of the Project area (USFWS, 2020). The Project area is adjacent to the water, but construction activity would not significantly impact water quality with implementation of proper SWPPP measures (see Section 4.10, Hydrology and Water Quality, for details). Construction of the proposed Project would be confined to the immediate Project area and no in- or over-water construction or operations are proposed. No activities would occur within or near wetlands. The proposed Project would not have a substantial adverse effect on any state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means. Therefore, no impact would occur.

**Mitigation Measures:** No mitigation is required.

***d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?***

*NO IMPACT.* The Project area is within a dense, highly developed industrial area and does not overlap with an established migratory wildlife corridor or nursery. The Project site is entirely terrestrial, and implementation would not impact any marine species that may be present (MBC and Merkel & Associates, 2016). Due to the lack of suitable habitat, the proposed Project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Therefore, no impact would occur.

**Mitigation Measures:** No mitigation is required.

***e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?***

*NO IMPACT.* The proposed Project involves the construction of two additional tanks on the existing petroleum bulk station. Some patches of non-native weedy species would be removed to allow for construction activity to occur. The City of Long Beach Municipal Code (LMBC Section 14.28.060) prohibits the cutting, trimming, pruning, removing, or in any way interfering with the natural growth of any tree planted along City streets or on other City property without having first obtained a permit from the Director of Public Works. No trees would be removed as a result of proposed Project activities. Any non-native vegetation that may be removed is not protected by City ordinances (LBCMC, 2020a). Therefore, the proposed Project would not conflict with any local policies or ordinances protecting biological resources, and no impact would occur.

**Mitigation Measures:** No mitigation is required.

***f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or State habitat conservation plan?***

*NO IMPACT.* There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other similar plans that overlap with the Project area in the Port of Long Beach (USWFS, 2019a; 2019b). The nearest conservation plan area is the Rancho Palos Verdes Natural Community Conservation Plan area, which is located approximately 6.5 miles west of the Project area (City of Rancho Palos Verdes, 2018). Therefore, no impact would occur.

**Mitigation Measures:** No mitigation is required.

## 4.5 Cultural Resources

### CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### Discussion

**a. *Would the project cause a substantial adverse change in the significance of an historical resource pursuant to §15064.5 [§15064.5 generally defines historical resource under CEQA]?water***

*NO IMPACT.* The proposed Project would not cause a substantial adverse change or affect a historical resource. The Project site is located in the southern portion of the County of Los Angeles in the Northeast Harbor Planning District (District 2) of Long Beach Harbor (POLB), which is an artificial landform composed of hydraulic and import capping fill measuring 39 feet thick (Albus-Keefe, 2018). Aspen obtained a record search and literature information from the South Central Coastal Information Center (SCCIC) on April 1, 2020, which did not show the presence of any eligible or listed historic properties within the Project area (see Appendix B). Since there are no significant historical resources located within the Project area, the proposed Project would not cause a substantial adverse change in the significance of a historical resource.

**Mitigation Measures:** No mitigation is required.

**b. *Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?***

*NO IMPACT.* The proposed Project would not cause substantial adverse change or affect an archaeological resource. As discussed above, the Project area is located within the existing World Oil Terminal, which is an artificial landform composed of hydraulic and imported capping fill (Albus-Keefe, 2018). The record search and literature information obtained from SCCIC did not show the presence of any significant archaeological resources within the Project area. Since there are no significant archaeological resources located within the Project area and planned ground disturbance is within hydraulic and import fill, the proposed Project would not cause a substantial adverse change in the significance of an archaeological resource.

**Mitigation Measures:** No mitigation is required.

**c. *Would the project disturb any human remains, including those interred outside of formal cemeteries?***

*NO IMPACT.* The proposed Project would not disturb any human remains. The Project area is within an already disturbed context and the soil within the Project area is hydraulic and imported fill. The proposed Project has ground disturbance planned within fill soils only, and background archival research failed to find any potential for human remains (e.g., the existence of formal cemeteries). Therefore, the proposed Project would not disturb any human remains.

**Mitigation Measures:** No mitigation is required.

## 4.6 Energy

### ENERGY

Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### Discussion

**a. Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?**

*LESS THAN SIGNIFICANT IMPACT.* The proposed Project would consume energy in the form of on-road vehicle and off-road equipment fuels, diesel and gasoline, during construction. The proposed Project is designed to be constructed as efficiently as possible and would reuse or recycle construction waste to the extent feasible and according to state and City of Long Beach Municipal Code requirements (see Section 4.19, Utilities and Service Systems), such as the reuse of excavated soil and concrete waste spoils.

The proposed Project would not increase the facility operations and maintenance personnel requirements, would not substantially increase on-site electricity use, and would ~~not only~~ increase long-term transportation fuel consumption from trucking. As described in the Section 2.11 (Operations and Maintenance), fuel delivery truck trips are not anticipated to increase because of the proposed Project; however, as a worst-case assumption to account for atypical operations such as when a pipeline is out of service, a 10 percent increase in maximum daily truck trips has been assumed. ~~by an estimated 10 percent due to the anticipated increase in fuel oil transport related to the proposed project's increase in available leased tank storage.~~ The proposed Project does not increase World Oil's crude oil throughput transported by crude oil tanker trucks. All operations fuel~~This additional~~ delivery trucking would be completed using newer more fuel-efficient trucks that comply with the ~~Port's Clean Truck Program~~ California Air Resources Board Drayage Truck Regulation. The proposed Project would also cause a small increase in the maximum daily, but not long-term, use of natural gas used by the loading rack vapor control thermal oxidizer, which is an emissions control device mandated for use by SCAQMD. Therefore, the proposed Project would not include the wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation.

**Mitigation Measures:** No mitigation is required.

**b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?**

*LESS THAN SIGNIFICANT IMPACT.* The proposed Project does not include renewable energy production, does not restrict renewable energy projects or production, and does not restrict the use of renewable energy. The Project does not include energy consumption sources during construction that are directly subject to state or local energy efficiency plans.

The proposed Project would not increase crude oil trucking or notably increase current on-site energy use. The proposed Project would increase total fuel oil storage capacity and ~~may is expected to~~ create a small maximum daily, but not long-term, increase to the leased fuel oil storage load out and truck transport from the facility. The new storage tanks are not subject to State of California Green Building regulations (California Code of Regulations [CCR] Title 24); and the proposed Project does not include the construction of any new structures that would be subject to these regulations. The proposed Project includes ~~Additionally, the proposed project does not include the construction/installation of a few small any-new~~ energy consumption sources, ~~namely such as fuel pipeline-~~ two new pumps that will be dedicated to the new tanks and associated throughput metering and piping controls electronics. ~~These new energy consumption sources are not subject to state or local regulations, such as the , that would be subject to~~ State of California efficiency regulations (CCR Title 20) that apply to consumer appliances, but do not apply to industrial equipment. Indirectly, on-road vehicles used during construction and operation would have to meet the ongoing federal and state fuel efficiency requirements. Therefore, the proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

**Mitigation Measures:** No mitigation is required.

## 4.7 Geology and Soils

### GEOLOGY AND SOILS

Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Be located on geologic units or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

\*Geology and Soils question (d) reflects the current 2016 California Building Code (CBC), which is based on the International Building Code (2015), effective January 1, 2017. The CBC is updated every three years. Significance criteria established by CEQA Guidelines, Appendix G.

### Discussion

**a. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:**

**i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

*NO IMPACT.* Fault rupture is the surface displacement that occurs when movement on a fault within the earth breaks through to the surface. Fault rupture and displacement almost always follows preexisting faults, which are zones of weakness. The proposed Project is located within an area of Southern California with numerous active and potentially active faults of the north-northwest trending San Andreas Fault system and the east-west trending Transverse Ranges Fault system.

The Project site is not located within a mapped Alquist-Priolo Earthquake Fault Zone, nor do any active faults cross the Project site (CGS, 1999a). The closest Alquist-Priolo zoned faults include the Newport-Inglewood Fault located approximately 3 miles southwest and the Palos Verdes Fault located approximately 4 miles to the northwest (USGS and CGS, 2015). The proposed Project would not include habitable structures and would therefore not result in a change or increase in the seismic hazard to people. No active or potentially active faults cross or are in close proximity to the Project site. Therefore, there is no potential impact from surface fault rupture.

**Mitigation Measures:** No mitigation is required.

***ii) Strong seismic ground shaking?***

*LESS THAN SIGNIFICANT IMPACT.* The proposed Project is in a seismically active area of Southern California in close proximity to active faults of the San Andreas Fault System, Newport-Inglewood, and Palos Verdes Fault Zones. The Project site is not located within nor crossed by any active faults and the Newport-Inglewood fault is located approximately 3 miles northeast of the Project site. Strong ground shaking should be expected in the event of a large earthquake on any of the major faults in the region or on the faults near the Project site.

The intensity of the seismic shaking, or strong ground motion, during an earthquake is dependent on the distance between the Project area and the epicenter of the earthquake, the magnitude of the earthquake, and the geologic conditions underlying and surrounding the Project area. Earthquakes occurring on faults closest to the Project area would most likely generate the largest ground motion. The California Geological Survey (CGS) Probabilistic Seismic Hazards Ground Motion Interpolator website was used to estimate peak ground accelerations at the Project site for a large regional or local earthquake (CGS, 2020). Peak ground acceleration is the maximum acceleration experienced by a particle on the Earth's surface during the course of an earthquake, and the units of acceleration are most commonly measured in terms of fractions of g, the acceleration due to gravity (980 cm/sec<sup>2</sup>). The interpolator uses data from the 2008 Probabilistic Seismic Hazard Assessment Maps to interpolate peak ground accelerations with a two percent probability of exceedance in 50 years which corresponds to a return interval of 2,475 years for a maximum considered earthquake. Peak ground accelerations at the proposed Project site is approximately 0.7 g, which corresponds to strong to very strong ground shaking (CGS, 2020).

A ground improvement system consisting of Geopiers or the equivalent rammed aggregate piers would reduce the effects of static and seismic settlement at the Project site (Albus-Keefe, 2018). Additionally, a mat-raft foundation system consisting of a mat supported by caissons/piles for the two tanks would reduce the potential for seismically induced damage to the new tanks from seismic shaking, liquefaction, or lateral spreading (Albus-Keefe, 2018). The final Project design would incorporate all geotechnical recommendations provided in the Albus-Keefe & Associates geotechnical update report from 2018 (Albus-Keefe & Associates, 2018). ~~The final project design would be reviewed by Albus-Keefe & Associates, as the design implements recommendations of the geotechnical investigation report (Matrix, 2019).~~ Although the site is likely to experience strong to very strong ground shaking within its lifetime, implementation of the geotechnical investigation report's recommendations in the final Project design ensures that impacts from ground shaking would be less than significant.

**Mitigation Measures:** No mitigation is required.



**iii) Seismic-related ground failure, including liquefaction?**

*LESS THAN SIGNIFICANT IMPACT.* Liquefaction is the phenomenon in which saturated granular sediments temporarily lose their shear strength during periods of earthquake-induced strong ground shaking. The susceptibility of a site to liquefaction is a function of the depth, density, and water content of the granular sediments, and the magnitude and frequency of earthquakes in the surrounding region. Saturated, unconsolidated silts, sands, and silty sands within 50 feet of the ground surface are most susceptible to liquefaction. Liquefaction-related phenomena include lateral spreading, ground oscillation, flow failures, loss of bearing strength, subsidence, and buoyancy effects. In addition, densification of the soil resulting in vertical settlement of the ground can also occur. This phenomenon can result in damage to infrastructure, including foundations. The Project area is mapped as being in a liquefaction hazard area on the CGS Seismic Hazard Map (CGS, 1999b). Liquefaction analyses conducted as part of the geotechnical investigation for the proposed Project by Albus-Keefe & Associates in September 2018 indicates that various layers below a depth of 5 feet are potentially liquefiable (Albus-Keefe, 2018). The geotechnical investigation report states that ground improvements should be considered to help mitigate the effects of liquefaction (Albus-Keefe, 2018). The final Project design would incorporate all geotechnical recommendations provided in the Albus-Keefe & Associates geotechnical update report from 2018 (Albus-Keefe & Associates, 2018). ~~The final project design would be reviewed by Albus-Keefe & Associates, as the design implements recommendations of the geotechnical investigation report (Matrix, 2019).~~ Therefore, the impacts from seismic related ground failure, including liquefaction, would be less than significant.

**Mitigation Measures:** No mitigation is required.

**iv) Landslides?**

*NO IMPACT.* The slope stability of an area is influenced by the steepness of the slope, the relative strength of the underlying rock material, and the thickness and cohesion of the overlying artificial fill and alluvium. Alluvium is material carried by running water, such as rivers or streams. The steeper the slope and/or the less strong the rock, the more likely the area is susceptible to landslides. An indication of unstable slopes is the presence of old or recent landslides or debris flows. The proposed Project is adjacent to Channel 2 of the Cerritos Channel to the north. The Project site is located on flat terrain and more than 50 feet from the rock dike slopes of Channel No. 2. Although the site is underlain by varying thickness of artificial fill overlying alluvial sediments that may be susceptible to liquefaction and lateral spreading as discussed above, the rock dike stabilizes the channel slopes and the slope is not subject to landslides. The Project site is not subject to slope stability issues. The CGS seismic hazard mapping indicates that there are no areas of potential earthquake-induced landslides in the POLB (CGS, 1999b). No potential impact from earthquake-induced landslides or landslides triggered by other factors would occur at the Project site.

**Mitigation Measures:** No mitigation is required.

**b. Would the project result in substantial soil erosion or the loss of topsoil?**

*LESS THAN SIGNIFICANT IMPACT.* Construction of the proposed Project, including drilling and excavation, could result in erosion at the Project site. Construction vehicles and equipment may degrade and disturb soils, which may subsequently be transported by wind and/or surface water runoff (in response to precipitation), accelerating the erosion processes. It is not anticipated that the proposed Project would result in substantial soil erosion, but temporary and site-specific impacts may occur. The proposed Project would be constructed in compliance with a Construction SWPPP, which includes Best Management Practices (BMPs) to reduce or avoid effects associated with erosion. Implementation of the construction-level SWPPP and associated BMPs would reduce potential erosion. Additionally, the NPDES permit



obtained for the Project would require BMP measures to control erosion during construction. Therefore, potential impacts would be less than significant.

**Mitigation Measures:** No mitigation is required.

**c. *Would the project be located on geologic units or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?***

*LESS THAN SIGNIFICANT IMPACT.* The site is underlain by hydraulic fill as deep as 48 feet below the existing ground surface and is very compressible (Albus-Keefe, 2018). Additional site conditions including shallow groundwater, potential for liquefaction, lateral spreading, and estimates of significant static and seismic settlements, requires structural foundations to mitigate settlement and the effects of liquefaction for the proposed tanks (Albus-Keefe, 2018). To reduce the effects of static and seismic settlement at the Project site, a ground improvement system consisting of Geopiers or the equivalent rammed aggregate piers is recommended in the geotechnical investigation report (Albus-Keefe, 2018). Additional recommendations include a mat-raft foundation system consisting of a mat supported by caissons/piles for the two tanks, which would reduce the potential for seismically induced damage to the proposed Project from seismic shaking, liquefaction, or lateral spreading (Albus-Keefe, 2018). The final Project design would incorporate all geotechnical recommendations provided in the Albus-Keefe & Associates geotechnical update report from 2018 (Albus-Keefe & Associates, 2018). ~~The final project design would be reviewed by Albus-Keefe & Associates, as the design implements recommendations of the geotechnical investigation report (Matrix, 2019).~~ The final Project design would implement the recommendations of the geotechnical investigation report. Therefore, the impacts would be less than significant.

**Mitigation Measures:** No mitigation is required.

**d. *Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?***

*LESS THAN SIGNIFICANT IMPACT.* The near-surface soils underlying the Project site have a moderate expansion potential based on Unified Soil Classification System visual manual classification (Albus-Keefe, 2018). Expansive soils are characterized by their ability to undergo significant volume change (shrink and swell) due to variation in soil moisture content. Changes in soil moisture could result from a number of factors, including rainfall, landscape irrigation, utility leakage, and/or perched groundwater. Expansive soils are typically very fine grained with a high to very high percentage of clay. Soils with moderate to high shrink-swell potential would be classified as expansive soils.

The recommendations in the geotechnical report include the placement of compacted sand beneath the proposed tanks as well as a deep foundation; therefore, soil expansion would not be an issue (Albus-Keefe, 2018). Additionally, the geotechnical recommendations require additional testing for soil expansion to be required subsequent to rough grading and prior to the construction of foundations and other concrete flatwork (Albus-Keefe, 2018). The final Project design would incorporate all geotechnical recommendations provided in the Albus-Keefe & Associates geotechnical update report from 2018 (Albus-Keefe & Associates, 2018). ~~The final project design would be reviewed by Albus-Keefe & Associates, as the design implements recommendations of the geotechnical investigation report (Matrix, 2019).~~ The final Project design would implement the recommendations of the geotechnical investigation report. Therefore, the impacts from expansive soils would be less than significant.

**Mitigation Measures:** No mitigation is required.

***e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?***

*NO IMPACT.* The Sanitation Districts of Los Angeles County (LACSD) maintains and operates the municipal wastewater collection system in the Project area and would continue to serve the proposed Project. LACSD would continue to provide wastewater services to the Project site upon Project completion. The proposed Project does not involve the installation of a septic tank or alternative wastewater disposal system; therefore, no impact would occur.

**Mitigation Measures:** No mitigation is required.

***f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?***

*NO IMPACT.* The proposed Project would not result in potentially significant effects to paleontological resources. The proposed Project is located on Pier C within the POLB and is entirely underlain by artificial fill. Artificial fill has zero paleontological significance due to its young age and disturbed nature (engineered placement). Albus-Keefe & Associates geotechnical update report from 2018 states that alluvial soils underlay the artificial fill and extend below the maximum depths (66.5 feet) encountered in the exploration borings (Albus-Keefe, 2018). Since the ground improvement system does not extend to a depth beyond 50 feet, only artificial fill would be encountered at the Project site during construction (Albus-Keefe, 2018). Therefore, no potential impacts related to paleontological resources or unique geologic features would occur.

**Mitigation Measures:** No mitigation is required.

## 4.8 Greenhouse Gas Emissions

### GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### Discussion

The proposed Project is an industrial stationary source project that requires a permit to construct/permit to operate permitting by SCAQMD. Therefore, the SCAQMD greenhouse gas (GHG) emissions significance threshold for industrial facilities of 10,000 metric tons per year (MT/year) would apply (SCAQMD, 2019a).

The proposed Project would generate GHG emissions during construction from use of off-road equipment (such as cranes, backhoes, and welders) and from on-road construction vehicle trips (such as heavy haul trips for delivery of concrete, and commute trips by construction employees). The GHG emissions for construction were estimated along with the criteria pollutant emissions using the SCAQMD approved California Emissions Estimator Model (CalEEMod version 2016.3.1), a statewide land-use emission model developed in collaboration with several local air districts. Please see Section 4.3, Air Quality Section, for additional discussion of the construction emissions estimate methodology and assumptions, and Appendix A for the CalEEMod emissions estimate output.

The proposed Project would not increase World Oil's permitted throughput of crude oil at the truck loading racks. The proposed Project would not debottleneck the facility to allow greater actual crude oil throughput through the pipelines, tanks, or loading racks. The proposed Project would also not increase required site staffing levels. Therefore, the crude oil trucking trips and staff commute vehicle miles traveled would not increase due to the proposed Project.

The proposed Project would allow the two existing World Oil crude oil tanks that would be replaced by this project, to serve as leased remote fuel oil product storage for other pipeline-connected facilities (Marathon Petroleum Carson Refinery and/or Marathon Petroleum Terminal assets, and the Glencore Long Beach Marine Terminal and Glencore Carson Marine Terminal). Other tanks at the Ribost Terminal are currently used in this manner. World Oil has estimated that the maximum daily total loading rack use would increase up to be 10 percent above baseline use to account for atypical operations such as when a pipeline is out of service (see Section 2.11), due to the proposed project additional leased fuel oil storage. However, no increase in long-term fuel trucking is assumed. This increased leased storage also involves the pumping of fuel oils to and from these storage tanks through existing pipelines. There would also be a minor amount of increased indirect GHG emissions from the electricity used to power the two new pumps associated with the new tanks. pipeline pumps, but the amount of these increased emissions cannot be estimated as the future use of these two existing tanks is not known. Additionally, t The GHG footprint for this increased electricity use will decrease over time as the renewable energy fraction of supplied electricity increases.

The fugitive methane GHG emissions from crude oil storage and loading are negligible due to the partially processed crude oil containing only trace amounts of methane and would not increase from existing

conditions given that the proposed Project would not cause an increase in World Oil’s crude oil throughput. Therefore, there would be no operating GHG emissions increase from the proposed Project’s new tanks fugitive emissions.

**a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

*LESS THAN SIGNIFICANT IMPACT.* Table 4.8-1 provides a summary of the proposed Project’s estimated carbon dioxide equivalent (CO<sub>2</sub>e) GHG emissions, including the annual amortized construction emissions in metric tons (MT). The direct proposed Project construction GHG emissions are amortized over the Project life of 30 years for comparison with the GHG emissions significance threshold within Table 4.8-1. This project life assumption is the default assumption recommended by SCAQMD, which may be conservatively short for this Project. The Project applicant noted that storage tank life is variable but can often exceed 50 years.

Table 4.8-1 shows that the proposed Project would not create GHG emissions that would exceed the GHG emissions significance criteria; therefore, the proposed Project would have less than significant GHG emissions impacts.

<b>Table 4.8-1. Summary of Project Greenhouse Gas Emission Estimates</b>	
Emissions Type	CO <sub>2</sub> e
Total Construction Emissions	270.5 MT
30-Year Amortized Construction Emissions	9.0 MT/Year
Increase in Annual Operating Emissions	98.962.8 MT/Year <del>8</del>
Total Annual Emissions	108.071.8 MT/Year
Significance Criteria	10,000 MT/Year

Source: Appendix A; SCAQMD, 2019a; SCAQMD, 2021b; and SCAQMD, 2021c.

**Mitigation Measures:** No mitigation is required.

**b. Would the project conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?**

*LESS THAN SIGNIFICANT IMPACT.* A summary of project compliance with all potentially applicable GHG emissions reductions plans, strategies, policies, and regulations is provided in Table 4.8-2.

<b>Table 4.8-2. Applicable GHG Emissions Reduction Strategies</b>	
Strategy	Compliance with Strategy
<b>State AB 32 Strategies</b>	
Vehicle Climate Change Standards	These are CARB enforced standards; vehicles that access the Project site are required to comply with the standards and would comply with these strategies.
Limit Idling Time for Commercial Vehicles	The construction contractors and fuel delivery truck operators would be required to comply with applicable idling regulations. Certain vehicle types, such as concrete mixer trucks are exempt from these idling restriction regulations. These vehicle types are exempt since idling would be necessary to complete the vehicle function.
Use of Low Carbon or Alternative Fuels	Not directly applicable to the proposed Project, as construction and operation & maintenance vehicles are not expected or required to immediately utilize biodiesel or other <u>renewable fuels</u> or alternative fuels. The proposed Project will use California fuels that are subject to the Low Carbon Fuel Standard regulations; while these regulations are new and have not yet caused a large penetration of low carbon/renewable fuels the availability and use of low carbon fuels should increase during the life of Project operation. <u>While the current facility, and the proposed Project description, does not include the storage of</u>

<b>Table 4.8-2. Applicable GHG Emissions Reduction Strategies</b>	
<b>Strategy</b>	<b>Compliance with Strategy</b>
	<u>renewable fuels: such storage is likely in the future as the production and use of renewable fuels increases to comply with State regulations. The proposed Project's increase in the number of available storage tanks can help in the transition from petroleum-based fuels to renewable fuels during the period of time when both fuel types are in high demand.</u>
Waste Reduction/Increase Recycling (including construction and demolition waste reduction)	Solid waste generated during construction of the proposed Project would be disposed of in accordance with the City of Long Beach Construction and Demolition Recycling Program (Municipal Code Chapter 18.67), which requires at least 65 percent of all Project-related construction and demolition material waste diverted from landfills (see discussion below).
Increase Water Use Efficiency	Not directly applicable to the proposed Project's construction, as the majority of the water used by the Project during construction is required by regulation for fugitive dust control, for concrete production, or for tank hydrotesting during Project construction and commissioning. There would be a small increase in operation water use related to tank clean outs, which occur once every 10 years. These tank clean outs would be completed as efficiently as possible to save costs on waste water transportation and disposal.
<b>Port of Long Beach and City of Long Beach Strategies</b>	
City of Long Beach General Plan – Mobility Element, The Mobility of Goods (October 15, 2013)	The City of Long Beach General Plan, Mobility Element was developed to improve the way people, goods, and resources are moved in Long Beach. The proposed Project would be consistent with the Mobility Element.
City of Long Beach, Sustainable City Action Plan (February 2010)	The City of Long Beach, Sustainable City Action Plan is intended to guide operational, policy, and financial decisions to create a more sustainable Long Beach. Although the Plan is mostly focused on city property, buildings, and public transportation, some elements refer to port-activities. The Transportation section defers to the Port's Clean Air Action Plan (CAAP) for criteria pollutant emission reductions; GHG emission reductions are not explicitly addressed, but their reduction would be a co-benefit of CAAP compliance. CAAP Compliance will be addressed as requirements in the Project's Harbor Development Permit.
City of Long Beach Construction and Demolition Recycling Program (Municipal Code Chapter 18.67)	This municipal code regulation requires covered projects to divert at least 65 percent of all project-related construction and demolition material waste. There are exceptions for materials with low recyclability, which would likely include exported excavated soil waste. The applicant intends to reuse as much of the construction waste as possible, including use in the Geopier and compacted soil foundations. Compliance with this regulation would ensure conformance with other construction waste recycling GHG emissions reduction policies.
Port of Long Beach Green Port Policy (2005)	The Port of Long Beach Green Port Policy serves as a guide for decision making and established a framework for environmentally friendly Port operations. One of the policy's guiding principles is to promote sustainability. The Sustainability Element and related Sustainable Business Practices Administrative Directive identifies GHG-reducing measures such as recycling programs. Compliance with the City of Long Beach Construction and Demolition Recycling Program and implementation of air quality best management practices for construction activities through the Harbor Development Permit would ensure conformance with the Green Port Policy.

Source: CARB, 2017.

In summary, the proposed Project would conform to state and local GHG emissions/climate change regulations, policies, and strategies; therefore, the proposed Project would have less-than-significant GHG impacts.

**Mitigation Measures:** No mitigation is required.

## 4.9 Hazards and Hazardous Materials

### HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### Discussion

**a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

*LESS THAN SIGNIFICANT.* Construction activities associated with the proposed Project would use hazardous materials such as gasoline, diesel fuel, oil, and lubricants associated with construction equipment and other vehicles and would use and store hazardous materials such as mineral oil, cleaning solvents, paints, adhesives, vehicle fuels, oil, hydraulic fluid, and other vehicle and equipment maintenance fluids in construction yards or in the onsite staging area. These hazardous materials would be transported, used, and disposed of in accordance with applicable rules, regulations, and local standard protocols designed to protect the environment, workers, and the public.

Minor spills or releases of hazardous materials could occur due to improper handling and/or storage practices during construction activities. Improperly maintained equipment could leak fluids during construction and while parked. Spills and leaks of hazardous materials during construction activities could potentially result in soil or groundwater contamination.

The majority of the 6-acre site including the construction and staging areas are unpaved and covered with sand and gravel, whereas 0.83 acre is paved with asphalt. An accidental release of a potentially harmful or hazardous material onto asphalt or pavement covered roads and surfaces would not directly affect soil



or water quality. However, accidental spills or releases of hazardous materials on unpaved surfaces would directly affect soil or water quality. Because the Project site and staging area is completely unpaved, a release of a hazardous material has the potential to infiltrate the soil. Additionally, accidental spills or releases of hazardous materials near the banks of Channel 2, could indirectly adversely affect water quality through runoff during a subsequent storm event, when the spilled material could be washed into the nearby channel. Accidental spills or releases of hazardous materials could also indirectly affect the soil and/or groundwater through leaching. Hazardous material spills that are left on the ground surface for an extended period or that are followed quickly by a storm event could leach through the soil and into the groundwater, thereby resulting in the degradation of groundwater quality.

Normal maintenance and refueling of construction equipment would be conducted both off-site and at the onsite staging yard. Various waste materials would be removed as part of the proposed Project, including any concrete and abandoned underground components, and the existing out-of-service oil/water concrete separator sump at the Project site. All construction debris such as trash, scrap metal, abrasive blasting material, paint, pallets, concrete, and general construction scrap would be disposed of or recycled according to the California Green Building Standards Code and the City of Long Beach Construction and Demolition Debris Recycling Program (City of Long Beach, 2007).

During Project construction, potential impacts would be avoided through implementation of a Storm Water Pollution Prevention Plan (SWPPP) and training construction personnel in the handling and storage of hazardous materials. The Construction SWPPP prepared for the proposed Project would provide the locations for storage of hazardous materials during construction, as well as protective measures including secondary containment, notifications, and cleanup requirements for any incidental spills or other potential releases of hazardous materials. All refueling, maintenance, and storage of fuels and other hazardous materials would be in accordance with the Construction SWPPP. In addition, safety data sheets for any hazardous material to be used for the proposed Project would be made available to all crew workers at the construction site.

Following construction, the operation of the new tanks would be in accordance with the existing facility SWPPP. During operation, it is estimated that approximately 1,500 bbls of sludge would be generated from cleaning a tank every 10 years. Sludge tank bottoms ~~are~~ would be transported offsite as hazardous waste and received and disposed of at ~~by~~ a permitted treatment, storage, and disposal facility such as a U.S. Ecology waste facility. This waste is regulated by the State of California (non-Resource Conservation and Recovery Act [RCRA]) hazardous waste. The closest U.S. Ecology waste facility is located in Vernon, California, approximately 17 miles from the Project site. This facility is capable of handling a high volume of waste, with a tank capacity of one million gallons with an additional 400,000-gallon equivalent of container storage (U.S. Ecology Vernon, 2021). The proposed Project's sludge tank bottom quantities are estimated to be approximately 1,500 bbl (63,000 gallons) every ten years. Over the approximate 50-year service life of the proposed Project, the sludge tank bottom quantities would be equal to 15,000 bbl. This amount accounts for a small portion of the overall capacity of the U.S. Ecology Vernon facility, thus, the Project's contribution to the facility would not generate excessive amounts of hazardous waste.

Additionally, tank dewatering generates approximately 300 gallons of water from each tank per day as estimated from current wastewater discharge flow meter readings for the existing tanks. Water generated during tank dewatering for the new tanks would be initially treated at the onsite wastewater treatment plant and then discharged into the sanitary sewer in compliance with the facility's Los Angeles County Sanitation District (LACSD) permit.

Engineering controls on the Project site serve to prevent hazardous conditions such as a fire. The Project site contains fire extinguishing equipment and a deluge fire suppression system. The existing tanks are equipped with a foam fire suppression system, and the new tanks would be equipped with a foam fire suppression system. In the event of a large fire, the operator is trained to stop ongoing operations, close all safety isolation valves, and report the fire to the Long Beach Fire Department. The foam fire suppression system allows first responders to pump aqueous film forming foam both into and onto a tank. The estimated response time of the Long Beach Fire Department is less than ten minutes.

Compliance with risk reduction requirements is achieved through implementation of existing emergency contingency plans, which include precautions to minimize potential hazards and actions to take during an emergency. Existing emergency contingency plans include the Emergency Response Action Plan, Facility Response Plan, Illness and Injury Prevention Plan, and Spill Prevention Control and Countermeasure Plan. The proposed Project requires all plans to be updated to reflect the new tanks. World Oil is not required to comply with California Accidental Release Prevention or any related risk reduction regulations. World Oil would continue to conduct annual trainings and quarterly/annual emergency drills, have evacuation plans, and shutdown procedures.

Implementation of a Construction SWPPP and the existing facility SWPPP for operations would reduce the potential impact from spills of hazardous materials to soil, groundwater, and to Channel 2 to less than significant. The proper disposal of tank sludge bottoms and implementation of fire safety procedures would prevent the release of hazardous materials to the public. Impacts would be less than significant.

**Mitigation Measures:** No mitigation is required.

***b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?***

LESS THAN SIGNIFICANT. Spills of hazardous materials could occur due to improper handling and/or storage practices during construction or operation activities ~~and could~~ potentially cause soil or groundwater contamination, or contamination of the adjacent Channel 2. Implementation of a Construction SWPPP, ~~and~~ the existing facility SWPPP, and existing emergency contingency plans would reduce the potential impact from spills of hazardous materials to soil and groundwater and to Channel 2 to less than significant. Furthermore, the POLB performed a hazard assessment for the existing facility as part of the *POLB RMP Guideline Analysis World Oil's Ribost Terminal*. The assessment assumed the hazard footprint or vulnerability zone based on the release of the most volatile material stored at the terminal (marine diesel) into the largest impoundment basin (containment wall) and complete failure of a loading hose at the truck unloading rack, including a consequence analysis under POLB-prescribed weather conditions (Quest, 2018). The assessment determined that the hazard footprint of the facility would not change with the addition of the proposed new tanks because they would be smaller than the existing tanks at the facility, would store the same or similar types of fuel, and are located within the containment wall (POLB, 2021). Therefore, hazards to the public or the environment from an accidental release of hazardous materials would be less than significant.

**Mitigation Measures:** No mitigation is required.



**c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

*NO IMPACT.* The proposed Project would not use or handle acutely hazardous materials. There are no schools within 0.25 miles of the proposed Project. The closest school to the Project site is the Edison Elementary School, located approximately 0.5 mile east of the proposed Project site and staging area. The second closest school is Cesar Chavez Elementary school, which is located approximately 0.6 mile east of the proposed Project site and staging area. No impact would occur.

**Mitigation Measures:** No mitigation is required.

**d. Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

*LESS THAN SIGNIFICANT.* Pursuant to Government Code Section 65962.5, the proposed Project is not listed on the Department of Toxic Substances Control (DTSC) Hazardous Waste and Substances Site (Cortese) List (DTSC, 2020). There are two former or active cleanup sites less than 0.14 mile from the Project site. One leaking underground storage tank (LUST) cleanup site is located approximately 0.14 mile northeast of the proposed Project site at the Proctor & Gamble Manufacturing Company (SWRCB, 2020). The LUST cleanup at Proctor & Gamble Manufacturing Company has been completed and the case was closed November 1996 (SWRCB, 2020). A spill was reported in June 1988 at Proctor & Gamble Manufacturing Company, and potential contaminants of concern included gasoline (SWRCB, 2020). One open Regional Water Quality Control Board (RWQCB) cleanup program site, Arco Marine Terminal – T3, is located approximately 0.11 mile southeast of the proposed Project site (SWRCB, 2020). Arco Marine Terminal – T3 includes six above-ground heavy petroleum storage tanks located within containment walls. A groundwater sampling and analysis plan was approved in 1995 by the Los Angeles Regional Water Quality Control Board (LARWQCB) (SWRCB, 2020). The LARWQCB approved a light non-aqueous phase liquid (LNAPL) recovery optimization work plan in 2002 (SWRCB, 2020). This work plan includes site modifications to optimize LNAPL recovery at the site, as well as quarterly monitoring reports (SWRCB, 2020). Implementation of the proposed Project would not interfere with the ongoing cleanup of the Arco Marine Terminal – T3 site. Thus, impacts would be less than significant.

**Mitigation Measures:** No mitigation is required.

**e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?**

*NO IMPACT.* The Project site is not located within 2 miles of a public airport. The Long Beach Municipal Airport is located over 4 miles northeast of the site at its closest point. Implementation of the proposed Project would not result in an airport-related safety hazard or excessive noise for people residing or working in the Project area (see also Section 4.13(c)).

**Mitigation Measures:** No mitigation is required.

**f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

*NO IMPACT.* The proposed Project is contained entirely within the Long Beach Harbor District POLB, and is serviced by the Long Beach Fire Department, the Long Beach Police Department, and the Port Harbor

Patrol for fire protection, police protection, and emergency services. Construction and operation of the proposed Project is subject to existing emergency response protocols and evacuation systems adopted by World Oil in their Emergency Response Action Plan. The proposed Project is not expected to substantially affect traffic circulation (see Section 4.17, Transportation) or increase demand on existing emergency response services during construction (see Section 4.15, Public Services). All construction activities would take place outside of main public roadways and thoroughfares and would not result in temporary blockage or closure of local access routes within the POLB. The proposed Project would not impair or interfere with emergency response or evacuation plans. No impact would occur.

**Mitigation Measures:** No mitigation is required.

***g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?***

*NO IMPACT.* The World Oil facility POLB is not located in a wildland fire hazard area. The POLB and Project area are listed as “not burnable” on the U.S. Forest Service Wildfire Hazard Potential website (USFS, 2020). Additionally, according to the California Department of Forestry and Fire Protection (CAL FIRE) map of High Fire Hazard Severity Zones in Local Responsibility Area for the State of California, the proposed Project is not within a High Fire Risk Area (CAL FIRE, 2007). Implementation of the proposed Project would not result in significant risk of loss, injury, or death involving wildland fires. No impact would occur.

**Mitigation Measures:** No mitigation is required.

## 4.10 Hydrology and Water Quality

### HYDROLOGY AND WATER QUALITY

Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(i) result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### Discussion

**a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?**

*LESS THAN SIGNIFICANT IMPACT.* The Clean Water Act (CWA; 33 U.S.C. Section 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point source discharges to surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). NPDES permitting authority is delegated to, and administered by, California's nine Regional Water Quality Control Boards (RWQCB). In addition, the State Water Resources Control Board (SWRCB) regulates the NPDES stormwater program. The proposed Project is under the jurisdiction of the Los Angeles RWQCB and the SWRCB.

The proposed Project would disturb more than one acre as part of grading and excavation activities for the foundations of the new tanks, and as such, is required to obtain NPDES coverage under the California General Permit for Discharges of Storm Water Associated with Construction Activity. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). As such, the applicant would prepare a Construction SWPPP, which would include Best Management Practices (BMPs) to reduce or avoid effects associated with erosion. These BMPs would

include measures to contain runoff from vehicle washing at the construction site, prevent sediment from disturbed areas from entering the POLB receiving waters using perimeter BMPs (i.e., straw wattles, silt fences, sandbags, fiber rolls, or a gravel bag berm), and cover and contain stockpiled materials to prevent sediment and pollutant transport. Construction activities would follow the Construction SWPPP prepared by the applicant. Additionally, the NPDES permit obtained for the proposed Project would also require BMP measures to control erosion during construction.

Construction of the proposed Project would not directly require the use of groundwater but would include excavation activities that may require dewatering due to the presence of shallow groundwater on-site. The updated geotechnical report states that groundwater was encountered at depths ranging from 5 to 6 feet below the existing ground surface (Albus-Keefe, 2018). Temporary dewatering during construction would generate small volumes of water that would be contained in on-site water tanks and tested for contamination in order to determine the appropriate method of disposal. Any discharges of dewatering fluids to the harbor would be required to comply with the NPDES General Permit for Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties. ~~Additionally, the water test results would be sent to the POLB as proof of meeting NPDES permit requirements prior to discharge into the harbor.~~ Groundwater would be disposed of in accordance with applicable regional, State, and federal regulatory requirements. Groundwater would not be discharged to open waters. The two new tanks would also undergo an NPDES permitted hydrotest to check for leaks and structural integrity. Approximately 50,000 bbl of water sourced from the Long Beach Water Department would be used for the hydrotest. Once conducted, the hydrotest discharge would be tested for any contaminants and then dechlorinated. The water test results would be sent to the POLB as proof of meeting NPDES permit requirements prior to discharge into the harbor.

Implementation of all BMPs would ensure runoff and discharges during the Project construction would not violate any water quality standards. Compliance with NPDES requirements would reduce short-term construction-related impacts to water quality to a less-than-significant level.

Upon Project completion, operation of the terminal would be similar to existing conditions. Water generated during tank dewatering for the new tanks as part of normal tank operations would be initially treated at the on-site wastewater treatment storage tanks and then discharged to the Los Angeles County Sanitation District (LACSD) sanitary sewer system in compliance with the facility's LACSD permit. The proposed Project would remain in compliance with existing water quality standards. Operational activities would not substantially change such that discharged water or waste would degrade groundwater quality. Impacts would be less than significant.

**Mitigation Measures:** No mitigation is required.

***b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?***

*NO IMPACT.* Temporary dewatering during construction would generate small volumes of effectively seawater and would not substantially deplete fresh groundwater supplies or interfere with existing groundwater recharge. The Project site is not currently used for groundwater recharge. Additionally, the

proposed Project would not affect any fresh groundwater supplies, drinking water supplies, or aquifers. No impact would occur.

**Mitigation Measures:** No mitigation is required.

**c. *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:***

***(i) result in substantial erosion or siltation on- or off-site?***

*LESS THAN SIGNIFICANT IMPACT.* Soil disturbance would temporarily occur during Project construction due to excavation for the tank foundations. Disturbed soils may be susceptible to erosion from wind and rain, but construction would occur within the existing containment walls, which would prevent stormwater from transporting loose sediment off site.

The proposed Project would be subject to compliance with the requirements outlined in the NPDES Stormwater Construction General Permit for construction activities; refer to Section 4.10(a) for permit requirements and BMPs. Compliance with the NPDES requirements, including preparation of a Construction SWPPP, would reduce the volume of sediment in discharged runoff from the site during construction. Implementation of BMPs, such as using perimeter BMPs, would reduce the potential for sediment and stormwater runoff containing pollutants from entering the harbor. Therefore, the proposed Project would not substantially alter the on-site existing drainage pattern through erosion or siltation.

The operation of the proposed Project would not have the potential to result in substantial erosion or siltation on- or off-site. Upon completion of construction activities, the terminal would continue to operate similar to existing conditions. The proposed tank construction and installation would not substantially alter the existing topography or drainage patterns on-site. The ground surface would remain covered in pervious gravel to prevent pooling and flooding of water. Therefore, impacts would be less than significant.

**Mitigation Measures:** No mitigation is required.

***(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?***

*LESS THAN SIGNIFICANT IMPACT.* The proposed Project would not substantially alter the existing topography or drainage patterns on- or off-site. The storage tank area, which encompasses the majority of the Project site, is generally flat and would remain unpaved and covered with gravel that is underlain by riprap and manmade fill. Stormwater would continue to infiltrate the unpaved area and flooding would not occur due to the pervious nature of the gravel. The proposed Project would not alter the site in a way that would substantially increase the amount of surface runoff that could result in flooding on- or off-site. Impacts would be less than significant.

**Mitigation Measures:** No mitigation is required.

***(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?***

*LESS THAN SIGNIFICANT IMPACT.* As discussed in Section 4.10(c)(i) and 4.10 (c)(ii), proposed construction and operation would not substantially alter the drainage pattern of the Project site. The pervious gravel

surface of the Project site would remain after completion of construction activities and would prevent flooding. The on-site drainage patterns would remain similar to existing conditions, and impacts would be less than significant.

**Mitigation Measures:** No mitigation is required.

***(iv) impede or redirect flood flows?***

*LESS THAN SIGNIFICANT IMPACT.* According to the Federal Emergency Management Flood Insurance Rate Maps for the Project area, the entire Project site is located within Special Flood Hazard Area Zone AE, which presents a one percent annual chance of flooding (i.e., 100-year flood zone) (FEMA, 2008). The tank storage area is surrounded by a containment wall that varies between approximately 12.5 to 13 feet in height. The wall thickness tapers from approximately 1.5 feet wide at the base to 1 foot wide at the top. The wall includes a 12- to 12.5-foot-wide footing that is buried to a depth that runs from 1.5 feet below-grade at the outer edges of the wall to a depth of approximately 3 feet towards the center of the facility. The wall and its footing make a large “L” shape that is continuous around the site which prevents the wall from falling over in the event of a spill.~~approximately 8-foot wide, 6-foot deep containment walls that are supported by 180-50-foot deep foundations that extend underground.~~ The containment walls are designed to withstand a 100-year storm event. The two proposed tanks would be installed within these containment walls, which would provide the same level of protection against floods as they do under existing conditions. The Project site does not have a flood control system in place; however, air driven pumps may be used to divert water over the containment wall during a flood event. Therefore, although the proposed Project would place structures within a 100-year flood hazard area, the proposed tanks would not alter the existing drainage pattern on-site and flood flows would not be impeded or redirected because they would be installed within the existing containment walls. As such, impacts would be less than significant.

**Mitigation Measures:** No mitigation is required.

***d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?***

*LESS THAN SIGNIFICANT IMPACT.* As stated above in Section 4.10(c)(iv), the Project site is located within the 100-year flood hazard area. To consider the effects of future sea level rise in combination with a 100-year storm event, the POLB completed a Climate Adaptation and Coastal Resiliency Plan (CRP) in 2016. According to the CRP, the Project site may experience temporary inundation under a scenario of 36-inch sea level rise plus a 100-year storm surge (POLB, 2016). This 36-inch sea level rise scenario was identified in the CRP as a suitable scenario for future planning as it would be representative of a high-end sea level rise projection for the year 2070, and the most likely sea level rise projection for the year 2100. According to the CRP’s Port Coastal Vulnerability Zone Map (CRP Figure ES-5), the Project site would not be subject to permanent inundation from projected sea level rise and would only be subject to temporary inundation of up to two feet with the combination of sea level rise and a 100-year storm surge. ~~the proposed tanks would be constructed and installed within existing containment walls that are designed to withstand a 100-year storm event. The containment walls would continue to offer the same level of adequate protection for the proposed tanks as they do for the existing tanks. As stated above~~ Although a flood control system is not in place at the Project site; however, air driven pumps ~~would~~ may be used to divert water over the containment wall during a flood event. Impacts would be less than significant in regard to flood hazards.



A tsunami is a large wave produced by an undersea disturbance such as an earthquake or landslide. The Project site is adjacent to Channel 2 of the Cerritos Channel to the north. According to the California Geological Survey's *Tsunami Inundation Map for Emergency Planning, Long Beach Quadrangle*, the Project site is located within a tsunami inundation area (CGS, 2009). Due to the Project's location adjacent to the ocean, the Project site is vulnerable to tsunamis generated off the coast of California. A-In 2007, Moffatt & Nichol prepared the *Tsunami Hazard Assessment for the Ports of Los Angeles and Long Beach Final Report* was conducted in 2007 by Moffatt and Nichol which analyzes such hazards using a tsunami hazard assessment model developed specifically for the POLB and Port of Long Beach area.

~~to assess the potential local sources of tsunamis and their potential impacts to the Ports of Long Beach and Los Angeles. This study evaluated several tsunami scenarios and concluded~~ determined that impacts from a tsunami would be equal to or more severe than those from a seiche (Moffatt & Nichol, 2007), ~~and that. The tsunami maximum water levels did not exceed deck elevations in berths in the POLB including Pier C (Moffatt & Nichol, 2007). The Report concluded that large earthquakes (e.g., magnitude ~7.5) are very infrequent and have not occurred in the offshore area of California within historical times and~~ The report determined that a large and locally generated tsunami would not likely occur more than once every 10,000 years, resulting in limited inundation (Moffatt & Nichol, 2007). Furthermore, not every large earthquake is expected to generate a tsunami based on historical occurrences of tsunami and seismic activity worldwide (Moffatt & Nichol, 2007).

The Joint Institute for the Study of the Atmosphere and National Oceanic and Atmospheric Administration/Pacific Marine Environmental Laboratory modeled 322 possible earthquake scenarios. The report determined that a magnitude 9.3 earthquake could generate a tsunami with potentially substantial impact on the POLB (i.e., worst case scenario tsunami) (Uslu et al., 2010). Large tsunamis have historically caused heavy damage to waterfronts, vessels, moorings, piers, and docks (Uslu et al., 2010). No vessels or water-side activities are associated with existing or proposed operation of the World Oil Terminal, nor would they be associated with construction of the proposed Project. Additionally, the proposed Project is located within an inner channel that is considerably more inland than the southern portions of the Port. If a tsunami were to occur, the outermost portions of the coast and Port would be impacted first. Waves generated by a tsunami are likely to dissipate and weaken as they travel inland through the Port's channels.

The new tanks would be on stable foundations and would not be subject to substantial damage from inundation. The proposed Project would not change any land uses, and Project operations would be similar to existing operations. The existing 12.5- to 13-foot-high containment walls, behind which the new tanks would be placed, would provide the same level of protection to the new tanks as they do for the existing tanks in the event of a tsunami. Thus, construction and installation of the new tanks would not exacerbate existing potential for inundation by tsunami beyond existing conditions nor would it risk release of pollutants should inundation occur. Impacts in this regard would be less than significant.

A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, or lake. The Project site is adjacent to Channel 2, which is semi-enclosed to the east. As discussed previously, the proposed tanks would be constructed within protective 12.5- to 13-foot-high containment walls. During a seiche event, the containment walls would provide the same level of protection to the new tanks as they do for the existing tanks. Additionally, measures to minimize impacts from seiches or



tsunamis are currently in place at the POLB. Project construction would not increase the risk of a release of pollutants due to project inundation; therefore, impacts would be less than significant.

**Mitigation Measures:** No mitigation is required.

***e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?***

*LESS THAN SIGNIFICANT IMPACT.* The *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan) establishes water quality standards for ground and surface waters within the Los Angeles region, which includes the City of Long Beach, and is the basis for the Los Angeles RWQCB's regulatory programs.

The 2014 Sustainable Groundwater Management Act requires local public agencies and groundwater sustainability agencies in high- and medium-priority basins to develop and implement groundwater sustainability plans or prepare an alternative to a groundwater sustainability plan (DWR, 2014). The City is located within the Coastal Plain of Los Angeles – West Coast groundwater basin, which is designated as a Very Low priority basin (DWR, 2020). Therefore, no groundwater sustainability plan has been established for this basin. However, the Water Replenishment District of Southern California developed the Groundwater Basins Master Plan, which identifies projects and programs to enhance basin replenishment, increase reliability of groundwater resources, and improve and protect groundwater quality in the Los Angeles West Coast and Central groundwater basins (WRD, 2016).

The proposed Project would construct and install two new storage tanks. No new land uses are proposed that would involve increased demand for groundwater supplies. Project construction and operation would comply with NPDES program requirements established by the Los Angeles RWQCB. As such, the proposed Project would be completed in accordance with a Construction SWPPP and would not conflict with or obstruct implementation of the Los Angeles RWQCB's Basin Plan or Water Replenishment District of Southern California's Groundwater Basins Master Plan. Impacts would be less than significant.

**Mitigation Measures:** No mitigation is required.

## 4.11 Land Use and Planning

### LAND USE PLANNING

Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### Discussion

#### **a. Would the project physically divide an established community?**

*NO IMPACT.* The Project site is in POLB’s Northeast Harbor Planning District (District 2) in a predominantly industrial area and is designated as a Regional-Serving Facility (POLB, 1990). The Project area is bounded by the Long Beach Harbor Channel 2 and Pier B to the north, the Matson Auto and Oversized Cargo Yard and Long Beach Freeway (I-710) to the east, Pier C Street to the south, and SSA/Matson Container Yard to the west. Other industrial and commercial uses exist in the vicinity. The proposed construction and operation activities would occur within the existing terminal and would not interfere with surrounding uses. All surrounding land and water-based uses would continue operations. There are no residential areas, uses, or communities within the Project site or in the POLB; therefore, the proposed Project would not physically divide any established community. No impact would occur as a result of the proposed Project.

**Mitigation Measures:** No mitigation is required.

#### **b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?**

*NO IMPACT.* The Long Beach General Plan designates the PlaceType of the Project site and its surrounding areas as RSF, Regional Serving Facility (City of Long Beach, 2019). The Long Beach General Plan Land Use Element defines the Regional Serving Facility PlaceType as a flexible zoning type that includes “facilities, businesses, and operations that not only serve the City of Long Beach, but also the region and parts of the nation.” According to Table LU-6: PlaceTypes and Zoning Districts Consistency Matrix in the City of Long Beach General Plan Land Use Element, this PlaceType is consistent with Light, Medium, General, and Port-related Industrial Zoning Districts (City of Long Beach, 2019). The proposed Project is considered to be a Regional Serving Facility because operations would support regional and national transport and energy needs through distribution of petroleum products. No amendment to the General Plan would be required as part of the proposed Project; thus, the Project would be consistent with the General Plan PlaceType zoning designation and no conflict would occur.

The City of Long Beach Zoning and Land Use Map shows the Project site located within the IP, Port-Related Industrial District zone (City of Long Beach, 2020a). Land uses designated as IP are established to preserve and enhance areas for maritime industry and marine resources. Uses in this district are primarily port-related or water dependent but may include water-oriented commercial and recreational facilities (City of Long Beach, 1995). Although the Project is not water dependent, it is consistent with the industrial

nature of surrounding activities in the same land use designation and would be consistent with the existing operations at the existing World Oil Terminal.

The Port Master Plan further identifies land uses specific to the POLB. The Port Master Plan is also a requirement of the California Coastal Act (CCA), to which POLB is subject (Chapter 8, Section 30711(a)). The Project site is located within District 2 and zoned “MP – Port Manufacturing.” Permitted uses within District 2 and MP zones include primary port facilities, port-related uses, hazardous cargo facilities, ancillary port facilities, oil production, and navigation (POLB, 1990). The proposed Project would not conflict with the site’s Port Master Plan zoning. Two new storage tanks, which would provide additional storage of crude oil for transport and refining, would be added to an existing site that contains existing tanks with similar uses. Operation of the proposed storage tanks would be a permitted use according to the Port Master Plan. Furthermore, the proposed Project would increase the efficiency of terminal operations by allowing World Oil to lease existing tanks to third-party vendors. As such, the proposed Project would be consistent with the applicable land use and zoning and would be consistent with one of the POLB’s goals of maximizing the efficiency of POLB activities.

The Project site is located within the Coastal Zone, which requires compliance with the CCA as administered by the California Coastal Commission (CCC). The CCC certified the Port Master Plan, as amended in 1990, which ensures that activities guided by the Port Master Plan would also be consistent with the policies of the CCA. As such, the proposed Project would not conflict with the CCA, as the new tanks are consistent with the existing World Oil Terminal and future operation would remain similar to current operations.

The proposed Project would comply with all existing land use plans, policies, and regulations and would not cause any significant impact on the environment due to any conflicts. No impact would occur.

**Mitigation Measures:** No mitigation is required.

## 4.12 Mineral Resources

### MINERAL RESOURCES

Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### Discussion

**a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?**

*NO IMPACT.* The Project site is in a highly urbanized and industrial area and is surrounded predominantly by industrial land uses. According to the California Geological Survey *San Gabriel Valley P-C Region Showing MRZ-2 Areas and Active Mine Operations* map, the Project site is not within a Mineral Resource Zone where geologic data indicate the presence of significant mineral resources (CGS, 2010). Additionally, the existing Project site is not utilized for mineral resource extraction. Therefore, the proposed Project would have no impact on the availability of a known mineral resource that would be of value to the region and the residents of the State.

**Mitigation Measures:** No mitigation is required.

**b. Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?**

*NO IMPACT.* According to the California Department of Conservation Geologic Energy Management Division Well Finder map, the Project site is within the Wilmington Oil Field and contains several oil wells. However, all on-site oil wells are plugged and inactive (DOC, 2020). The proposed Project would not increase the rates of existing oil extraction or affect production and abandonment plans for any oil wells within the Project area. As such, the proposed Project would neither result in a land use conflict with the existing oil extraction nor would it preclude future oil extraction on underlying deposits. No impact on the availability of a locally important mineral resources would occur.

**Mitigation Measures:** No mitigation is required.

## 4.13 Noise

### NOISE

Would the project result in:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### Discussion

#### Existing Conditions

**Community Noise.** To describe environmental noise and to assess project impacts on areas that are sensitive to community noise, a measurement scale that simulates human perception is used. The A-weighted scale of frequency sensitivity accounts for the sensitivity of the human ear, which is less sensitive to low frequencies, and correlates well with human perceptions of the annoying aspects of noise. The A-weighted decibel scale (dBA) is cited in most noise criteria. Decibels are logarithmic units that can be used to conveniently compare wide ranges of sound intensities. Therefore, the cumulative noise level from two or more sources will combine logarithmically, rather than linearly (i.e., simple addition). For example, if two identical noise sources produce a noise level of 50 dBA each, the combined noise level would be 53 dBA, not 100 dBA.

Community noise levels can be highly variable from day to day as well as between day and night. For simplicity, sound levels are usually best represented by an equivalent level over a given time period (Leq) or by an average level occurring over a 24-hour day-night period (Ldn). The Leq, or equivalent sound level, is a single value (in dBA) for any desired duration, which includes all of the time-varying sound energy in the measurement period, usually one hour. The Ldn, or day-night average sound level, is equal to the 24-hour A-weighted equivalent sound level with a 10-decibel penalty applied to nighttime sounds occurring between 10:00 p.m. and 7:00 a.m. Community Noise Equivalent Level is another metric that is the average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and after addition of 10 decibels to sound levels in the night from 10:00 p.m. to 7:00 a.m. To easily estimate the day-night level caused by any noise source emitting steadily and continuously over 24-hours, the Ldn is 6.4 dBA higher than the source's Leq. For example, if the expected continuous noise level from equipment is 50.0 dBA Leq for every hour, the day-night noise level would be 56.4 dBA Ldn.

Community noise levels are usually closely related to the intensity of human activity. Noise levels are generally considered low when below 45 dBA, moderate in the 45 to 60 dBA range, and high above 60 dBA. In wilderness areas, the Ldn noise levels can be below 35 dBA. In small towns or wooded and lightly used residential areas, the Ldn is more likely to be around 50 or 60 dBA. Levels around 75 dBA are more

common in busy urban areas, and levels up to 85 dBA occur near major freeways and airports. Although people often accept the higher levels associated with very noisy urban residential and residential-commercial zones, they nevertheless are considered adverse to public health.

Surrounding land uses dictate what noise levels would be considered acceptable or unacceptable. Lower levels are expected in rural or suburban areas than what would be expected for commercial or industrial zones. Nighttime ambient levels in urban environments are about seven decibels lower than the corresponding daytime levels. In rural areas away from roads and other human activity, the day-to-night difference can be considerably less. Areas with full-time human occupation and residency are often considered incompatible with substantial nighttime noise because of the likelihood of disrupting sleep. Noise levels above 45 dBA at night can result in the onset of sleep interference. At 70 dBA, sleep interference effects become considerable (USEPA, 1974).

It is widely accepted that a difference of more than 3 dBA is a perceptible change in environmental noise, while a 5 dBA difference is readily perceptible. An increase of 10 dBA is perceived as being twice as loud and a decrease of 10 dBA is perceived as being half as loud. (Caltrans, 2013a – Table 2-10)

**Geometric Spreading.** Sound from a single source (i.e., a “point” source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates (or drops off) at a rate of 6 dBA for each doubling of distance (Caltrans, 2013a). Highway noise is not a single stationary point source of sound. The movement of vehicles on a highway makes the source of the sound appear to emanate from a line (i.e., a “line” source) rather than from a point. This results in cylindrical spreading rather than the spherical spreading resulting from a point source. The attenuation from a line source is 3 dBA per doubling of distance (Caltrans, 2013a).

**Shielding by Natural or Human-made Features.** A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by this shielding depends on the size of the object, proximity to the noise source and receiver, surface weight, solidity, and the frequency content of the noise source. Natural terrain features (such as hills and dense woods) and human-made features (such as buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dB of noise reduction. A higher barrier may provide as much as 20 dB of noise reduction.

**Noise Environment in the Project Area.** The proposed Project would be located inside World Oil Corporation’s existing petroleum bulk station and terminal on Pier C within POLB Planning District 2 (Northeast Harbor). This is an industrial area bounded by Cerritos Channel and Pier B to the north, the Long Beach Freeway (I-710) to the east, Inner Harbor Channel to the south, and SSA/Matson Container Terminal to the west. It is not located directly adjacent to noise-sensitive receptors, such as residential areas or schools.

Existing noise sources in the Project area include traffic along the I-710, Pier C Street, Pico Avenue, and Pier B Street, as well as noise associated with POLB operations, including container loading and operations at the adjacent SSA/Matson Container Terminal.

**Noise Sensitive Areas.** For the purposes of noise impact analysis, the area of influence includes sensitive noise receptors closest to the Project site. These include two schools, Edison Elementary School (approximately just over 0.5 mile or approximately 2,890 feet east of the Project site/staging area) and Cesar Chavez Elementary School (approximately 0.6 mile or 3,250 feet east of the Project site/staging



area), and the closest resident on Chester Place (approximately 0.5 mile or 2,610 feet east of Project site/staging area).

A noise survey was conducted on March 3, 2020 to quantify ambient noise levels at the proposed Project site, as well as at the closest sensitive receptors to the site, as described in Table 4.13-1 and illustrated in Figure 4.13-1. These short-term measurements were taken with a 3M Sound Examiner SE-402 Sound Level Meter (Type 2). The meter was calibrated with a Quest Technologies Model QC-10 Calibrator immediately prior to conducting the noise survey.

**Table 4.13-1. Ambient Noise Levels Representative of the Project Area**

ID	Location	Time & Duration	Leq	Lmax	Lmin	Noted Sources
1	World Oil Tank Farm immediately west of existing skimmer	2:10 pm 15 minutes	65.6	83.6	49.9	Matson operations, birds, trucks, metal clanking, wind
2	Cesar Chavez Elementary School (730 W 3rd Street, Long Beach)	3:17 pm 14 minutes 34 seconds	60.5	77.8	54.2	710 Freeway, vehicles, children playing, radio music from vehicles
3	Edison Elementary School (625 Maine Avenue, Long Beach). At property line near footbridge adjacent to W 6th Street.	3:50 pm 15 minutes	72.8	85.4	49.8	Vehicles and motorcycle from W 6th Street
4	911 W Chester Place	4:22 pm 15 minutes	52.7	64.0	47.2	Birds, freeway, vehicles, distant train

Source: Measurements performed by Stephanie Tang of Aspen Environmental Group on March 3, 2020.

Notes:

1 – Weather conditions were clear, sunny (79°F), 6% humidity, with light 7 mile per hour northerly winds (wunderground.com).





**Fundamentals of Vibration.** Vibration is a phenomenon related to noise, with common man-made sources being trains, large vehicles on rough roads, and construction activities such as blasting, pile-driving, and operating heavy earth-moving equipment. Vibration is defined as the mechanical motion of earth or ground, building, or other type of structure, induced by the operation of any mechanical device or equipment located upon or affixed thereto. Vibration generally results in an oscillatory motion in terms of the displacement, velocity, or acceleration of the ground or structure(s) that causes a normal person to be aware of the vibration by means such as, but not limited to, sensation by touch or visual observation of moving objects.

The ground-borne energy of vibration has the potential to cause structural damage and annoyance. Vibration can be felt outdoors, but the perceived intensity of vibration effects is much greater indoors due to the shaking of structures. Several land uses are considered sensitive to vibrations, and include hospitals, libraries, residential areas, schools, and churches. Additionally, land uses such as research and manufacturing where vibration-sensitive equipment is used (e.g., electron microscopes and high-resolution lithographic equipment), cultural and historic resources, and concert halls are sensitive to vibration.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal and is most frequently used to describe vibration impacts to buildings. The PPV velocity is normally described in inches per second (in/sec). California Department of Transportation (Caltrans) guidance states that for continuous/ frequent vibration sources the vibration damage potential threshold is 0.1 in/sec PPV for fragile buildings, 0.25 in/sec PPV for historic and some old buildings, 0.3 in/sec PPV for older residential structures, and 0.5 in/sec for new residential structures and modern industrial/commercial buildings (Caltrans, 2013b – Table 19). Human response/annoyance potential is barely perceptible at 0.01 in/sec PPV, distinctly perceptible at 0.04 in/sec PPV, strongly perceptible at 0.10 in/sec PPV, and severe at 0.4 in/sec PPV (Caltrans, 2013b – Table 20).

***a. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?***

*LESS THAN SIGNIFICANT IMPACT.* Long Beach Municipal Code (LBMC) Title 8 (Health and Safety), Section 8.80 (Noise) prescribes exterior noise level limits by land use district, as shown in Table 4.13-2. The noise limits specified in Table 4.13-2 apply to noise sources that persist for a cumulative total of more than 30 minutes in any hour. The noise level limit is to be applied at the property line of the receiving property. The proposed Project would be located in Land Use District Four; the sensitive receptors are located in Land Use District One. In the event that the noise source contains a steady audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering or riveting, Chapter 8.80.160 of the LBMC requires that the exterior noise limits presented in Table 4.13-2 be reduced (made more stringent) by 5 dB. This 5-dB penalty for tonal/impulsive noise would apply to many construction activities, such as vibratory hammering.

**Table 4.13-2. Long Beach Municipal Code Exterior Noise Limits**

Receiving Land Use District	Time Period	Noise Level (dBA) <sup>1,2</sup>
District One – Predominately residential with other land use types also present	10:00 pm – 7:00 am	45
	7:00 am – 10:00 pm	50
District Two – Predominately commercial with other land use types also present	10:00 pm – 7:00 am	55
	7:00 am – 10:00 pm	60
District Three – Predominately industrial with other land use types also present	Anytime	65
District Four – Predominately industrial with other land use types also present	Anytime	70
District Five – Airport, freeways, and waterways regulated by other agencies	Regulated by other agencies and laws	
Source: LBMC, 2020b – Chapter 8.80.160 – Exterior noise limits, Table A.		
Notes:		
1 – Districts Three and Four limits are intended primarily for use at their boundaries rather than for noise control within those districts.		
2 – In the event that alleged offensive noise contains a steady audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering or riveting or contains music or speech conveying informational content, the standard limits set forth shall be reduced by 5 decibels.		

Section 8.80.150 (Exterior noise limits – Sound levels by receiving land use district), Part B, further states that the following limits shall not be exceeded:

- (1) The noise standard for the various land use districts identified in Table 4.13-2 for a cumulative period of more than 30 minutes in any hour; or
- (2) The noise standard plus 5 dB for a cumulative period of more than 15 minutes in any hour; or
- (3) The noise standard plus 10 dB for a cumulative period of more than 5 minutes in any hour; or
- (4) The noise standard plus 15 dB for a cumulative period of more than 1 minute in any hour; or
- (5) The noise standard plus 20 dB or the maximum measured ambient, for any period of time.

In addition, the City’s noise ordinance states that in receptor locations where the existing ambient noise level exceeds the permissible noise limit within any of the first four noise limit categories (above), the LBMC allows the noise exposure standard to be increased in 5 dB increments as necessary to encompass or reflect the ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level shall be increased to reflect the maximum ambient noise level.

The LBMC imposes additional regulations on construction activity noise in Section 8.80.202, which limit construction hours to 7:00 am to 7:00 pm weekdays, 9:00 am to 6:00 pm Saturdays, and no work on Sundays except for emergency work or with a Sunday work permit. These additional regulations do not strictly apply to construction activities within the Long Beach Harbor District. Construction of the proposed Project is anticipated to occur Monday through Friday (5-day work weeks) between 7:00 am and 5:00 pm (one 10-hour shift per day).

Noise associated with the proposed Project would occur during construction, which is estimated to last approximately 10 months. Equipment utilized during construction would vary by construction phase as shown in Table 2-2. As shown in Table 4.12-3, typical maximum noise levels (L<sub>max</sub>) generated by the types of construction equipment expected to be utilized range from approximately 73 to 101 dBA (e.g. generator, vibratory pile driver) at a distance of 50 feet. These represent actual measured instantaneous maximum noise levels.

**Table 4.13-3. Noise Levels and Use Factors for Construction Equipment**

Equipment List	Equivalent Federal Highway Administration Classification	Acoustical Use Factor (Percent)	Measured Lmax (at 50 feet)
Air Compressor	Compressor (air)	40	78
Bobcat	Backhoe	40	78
Concrete	Concrete Mixer Truck	40	79
Crane	Crane	16	81
Dump Truck	Dump Truck	50	80
Excavator	Excavator	40	81
Flat Bed Truck, Dump Truck	Flat Bed Truck	40	84 <sup>1</sup>
Generator	Generator (<25 KVA)	50	73
Skip Loader	Front End Loader	40	79
Man-Lift	Man Lift	20	75
Pile Driver <sup>2</sup>	Mounted Impact Hammer (hoe ram)	20	90
Pick-up Truck	Pick-up Truck	40	75

Source: FWHA, 2006.  
Notes:  
1 – Due to the limited number of actual data samples, the Spec. 721.560 Lmax at 50 feet is used.  
2 – Piles to be vibro piles or rammed aggregate piers (RAPs), which would utilize a down-hole vibrator suspended from a crane or specialty rig, or may involve a hydraulic break hammer and rammer, or mounted impact hammer (hoe ram). The latter is assumed for this analysis.

The construction site is limited by the existing containment wall, tanks, and pipes, such that no more than two to three pieces of equipment would be in operation at any given time. Assuming worst-case operation of a pile driver (mounted impact hammer/hoe ram), crane, and bobcat during the foundation installation phase, maximum noise levels at the nearest sensitive receptor (residence) would be approximately 40 dBA taking into account distance, location, and intervene structures (see Appendix C). This residence is located within District 1, where the exterior noise limit during daytime is 50 dBA (see Table 4.13-2). However, ambient noise measured at this location ranged from 47 dBA (minimum) to 64 dBA (maximum) with an average of 53 dBA Leq. Per LBMC Chapter 8.80.160, the exterior noise limit threshold would thereby increase to 55 dBA but would then be reduced to 50 dBA due to tonal/impulsive noise associated with pile driving (per LBMC Chapter 8.80.160). As such, construction activities would not result in temporary increases in ambient noise levels in excess of the established LBMC exterior noise limits at the closest residence. Construction noise levels at the elementary schools (Edison and Cesar Chavez) would be lower than the estimated 40 dBA as they are located farther from the Project site. As such, temporary construction noise levels at the schools would also be below the District 1 exterior noise limit threshold of 45 dBA (This is conservative since the limit would also increase due to higher ambient noise levels). Therefore, temporary noise levels from construction of the proposed Project would not result in a substantial increase in ambient noise levels in excess of established standards. Impacts would be less than significant.

Operational activities associated with the proposed Project would be similar to existing operations. The new tanks would supplant the terminal's existing crude tanks, such that additional existing tanks would then be available for third-party lease, as is currently done for several existing tanks. This would result in additional fuel oil transfers via existing piping, as well as up to a 10 percent increase in use of the truck loading rack, which equates to approximately three additional trucks entering and leaving the facility per

day. This limited increase in operational truck traffic would not increase ambient noise levels. No impact would occur.

**Mitigation Measures:** No mitigation is required.

**b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?**

*LESS THAN SIGNIFICANT IMPACT.* Vibration-sensitive land uses include high-precision manufacturing facilities or research facilities with optical and electron microscopes. None of these occur in the Project area. Therefore, the significance threshold for “excessive ground-borne vibration” depends on whether a nuisance, annoyance, or physical damage to any buildings could occur. As there are no sensitive receptors nearby, this assessment will focus on physical damage to any buildings, specifically the control building and nearby tanks on the site.

As described in the Project Description, equipment used during construction would include trucks, cranes, excavator, skip loader, bobcat, pile driver (e.g., vibro pier or RAPs utilize a down-hole vibrator suspended from a crane or mounted impact hammer/hoe ram), manlift, air compressor, and generator. Operation of large trucks, specifically flatbed truck and dump trucks, could result in ground-borne vibration not only due to general operations but also due to travel on cracked/potholes or faulting roadway surfaces (Caltrans, 2013b). Truck traveling over pavement discontinuities often rattle and make noise, which tend to make the event more noticeable when the ground vibration generated may only be barely noticeable. Vehicles traveling on a smooth roadway are rarely, if ever, the source of perceptible ground vibration (Caltrans, 2013b). Paved roads in the Project area are maintained and relatively smooth, such that ground-borne vibration is not anticipated to occur from the use of haul or material delivery trucks or trucks during operations.

Loaded trucks would result in vibration levels of 0.076 in/sec PPV at 25 feet (FTA, 2018 – Table 7-4). Vibro piers or RAPs would utilize a down-hole vibrator, mounted impact hammer (hoe ram), or equivalent (referred to as “pile driver” in the equipment list). Operation of a hoe ram would typically result in vibration levels of 0.089 in/sec PPV at 25 feet, or a sonic pile driver would result in vibration levels of 0.17 in/sec PPV at 25 feet (FTA, 2018 – Table 7-4). These vibration levels would attenuate rapidly (i.e., 200 feet or less) from the source and would not be perceptible outside of the construction areas and immediately adjacent to the haul routes, which are not located in proximity to vibration-sensitive land uses. However, with the existing World Oil tanks and control building located immediately adjacent to the construction area, these vibrations may result in building damage. As discussed above, the vibration damage potential threshold is 0.3 in/sec PPV for older residential structures (e.g., control building) and 0.5 in/sec for new residential structures and modern industrial/commercial buildings (e.g., existing tanks) (Caltrans, 2013b – Table 19). Based on the Project’s specified equipment, the vibration levels generated (maximum of 0.17 in/sec PPV at 25 feet) would not result in damage to the control building and nearby tanks. No traditional impact pile driving would occur. Vibrations would not be enough to annoy people outside of the World Oil Terminal. Therefore, impacts from groundborne noise and vibration would be less than significant.

**Mitigation Measures:** No mitigation is required.

- c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?***

*NO IMPACT.* The Project site is not located within 2 miles of a public airport or private airstrip. The Long Beach Municipal Airport is located approximately 4 miles to the northeast and the Torrance Municipal Airport is over 14 miles to the northwest. As such, the proposed Project would not expose construction workers to excessive noise levels associated with airport operations. No impact would occur.

**Mitigation Measures:** No mitigation is required.

## 4.14 Population and Housing

### POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### Discussion

**a. *Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?***

*NO IMPACT.* A project could induce population growth in an area, either directly (e.g., by proposing new homes and/or business) or indirectly (e.g., through extension of roads or other infrastructure). No residential uses, major businesses, offices, or infrastructure expansions would be developed as part of the proposed Project. Therefore, the proposed Project would not induce unplanned direct population growth in the area and no impact would occur.

**Mitigation Measures:** No mitigation is required.

**b. *Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?***

*NO IMPACT.* The Project site is located within an existing terminal at the POLB. No housing or residential uses occur within the Project site or POLB. Project implementation would not displace any existing housing or residents. Therefore, the proposed Project would not necessitate the construction of replacement housing elsewhere and no impact would occur.

**Mitigation Measures:** No mitigation is required.

## 4.15 Public Services

### PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### Discussion

***Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:***

#### ***a) Fire protection?***

***LESS THAN SIGNIFICANT IMPACT.*** The Project site is currently served by the Long Beach Fire Department (LBFD) Fire Station No. 20 located at 331 Pier D Avenue in Long Beach, approximately one mile southwest of the Project site (LBFD, 2020).

Construction and operations of the proposed Project would not result in the need for a new fire station or expansion of an existing facility to maintain LBFD's existing level of service. Construction activities would occur on site, and no street closures are anticipated that would potentially impact service ratios, response times, or other fire department performance objectives. Given the presence of flammable materials such as crude oil, diesel, and other petroleum products, the proposed Project would follow existing safety protocols and risk management procedures (e.g., the American Petroleum Institute 653 Standard inspection, daily operator inspections, and annual cathodic protection surveys) and thus would not substantially exacerbate the potential for fire hazards. Further, the terminal would maintain on-site fire lane access during construction and operation. Operations of the terminal would be similar to existing conditions, and thus, would not increase demand for fire services.

As discussed in Section 4.14(a), the proposed Project would not induce population growth in the area or establish any new businesses and, therefore, would not result in a substantial increase in the demand for fire protection services. The proposed Project would have a less than significant impact.

**Mitigation Measures:** No mitigation is required.



**b) Police Protection?**

*NO IMPACT.* The Long Beach Police Department provides police services to the Project site. The closest police station is the West Patrol Division located at 1835 West Santa Fe Avenue, approximately 1.3 miles north of the site (LBPD, 2020). Other agencies responsible for security at the POLB include the U.S. Coast Guard, Customs and Border Protection, and Homeland Security.

The proposed Project would add two new crude oil storage tanks to improve the efficiency of terminal operations by allowing World Oil to lease existing tanks to third-party vendors. As discussed in Section 4.14(a), the Project would not induce population growth and, therefore, would not result in a substantial increase in the demand for police protection services. Construction activities and staging would occur on-site, and no street closures are anticipated that may potentially affect service ratios, response times, or other police department performance objectives. Therefore, the proposed Project would not require new or expanded police facilities that would cause significant environmental impacts. No impacts related to police services would occur.

**Mitigation Measures:** No mitigation is required.

**c) Schools?**

*NO IMPACT.* The Long Beach Unified School District (LBUSD) serves over 72,000 students from preschool to high school in 85 public schools located in the cities of Long Beach, Lakewood, Signal Hill, and Avalon on Catalina Island (LBUSD, 2020). The proposed Project does not propose any residential development that may introduce new permanent student residents in the LBUSD. Throughout the two construction phases, approximately eight workers per day would be present for approximately 10 months. It is anticipated that this nominal amount of construction workers would come from the local labor force. No increase in staff during operations is anticipated that could potentially introduce new families with school-aged children into the LBUSD. Construction and operation of the proposed Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities. No impacts related to existing or planned schools would occur.

**Mitigation Measures:** No mitigation is required.

**d) Parks?**

*NO IMPACT.* Construction and operation of the proposed Project would not induce population growth in the area that could cause an increase in the use of existing parks or recreational facilities provided by the Long Beach Department of Parks, Recreation and Marine. As discussed in Section 4.15(c), approximately eight workers per day would be on-site for approximately 10 months during construction. This nominal amount would occur temporarily, and it is anticipated that these workers would come from the local labor force. No increase in permanent staff would occur that would introduce new permanent residents to the City of Long Beach. Therefore, the proposed Project would not require the construction of new or expanded park facilities. No impact related to existing or planned parks in the region would occur.

**Mitigation Measures:** No mitigation is required.

**e) Other Public Facilities?**

*NO IMPACT.* Construction and operations of the proposed Project would not generate additional permanent residents. Therefore, the proposed Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered public facilities (e.g., hospitals, libraries,

and post offices), the construction of which would cause significant environmental impacts. No impact related to other government services or public facilities would occur.

**Mitigation Measures:** No mitigation is required.

## 4.16 Recreation

### RECREATION

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### Discussion

**a. *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?***

*NO IMPACT.* The nearest recreational facility to the proposed Project is Cesar E. Chavez Park (401 Golden Avenue), located approximately 2,700 feet east across the Los Angeles River. As discussed in Section 4.14(a), the proposed Project would not substantially induce population growth in the area, and therefore, would not cause an increase in the use of existing parks or recreational facilities. Approximately eight workers would work on-site during construction, which is expected to occur over a 10-month period. This minimal quantity of workers would likely come from the local labor force and no additional employees would be hired for Project operations that could potentially introduce permanent residents to the City of Long Beach. Therefore, construction and operation of the proposed Project would not increase the use of existing neighborhood and regional parks or other recreational facilities. No impact on existing parks or recreational facilities would occur.

**Mitigation Measures:** No mitigation is required.

**b. *Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?***

*NO IMPACT.* The proposed Project would not include construction of recreational facilities. Furthermore, the proposed Project is not expected to induce substantial population growth that would result in increased demand for or use of existing recreational facilities. As discussed above in Section 4.16(a), construction workers would likely come from the local labor force and no additional employees would be hired for Project operation. No increase in permanent residents would occur; therefore, construction or expansion of recreational facilities would not be needed. Therefore, no impact on recreational facilities would occur.

**Mitigation Measures:** No mitigation is required.

## 4.17 Transportation

### TRANSPORTATION

Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### Discussion

**a. Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?**

*LESS THAN SIGNIFICANT IMPACT.* The proposed Project would result in temporary vehicle trips during construction. Construction worker trips would occur in the morning and early evening hours. Truck trips associated with materials and equipment deliveries to the Project site would likely be distributed throughout the workday, with more frequent trips in the early stages of construction when the site is prepared, foundations are poured, and the tank components are delivered. Given the temporary period of construction (10 months), trips would be for a limited time along roadways accessing the Project site. Temporary construction trips are assumed to come from the local area or from the greater Los Angeles County area. While construction-related trips would utilize regional freeways (likely converging onto the I-710 freeway) to access Ocean Boulevard/Pico Avenue and the site, these temporary trips would not be in numbers that could substantially diminish the performance of the circulation system. As shown in Appendix A, construction would generate a maximum of 116 daily total trips (64 worker commute trips, 44 haul related trips, and 8 vendor/delivery trips). It is assumed that haul and vendor trips would be spread throughout the day. Therefore, worst-case temporary peak hour trips (between 7:00 a.m. and 9:00 a.m. and between 4:00 p.m. and 6:00 p.m.) would be 32. These peak hour trips would result from construction worker commutes to and from the Project site. Please note, these represent peak daily trips during construction. Average daily trips during construction would be less. All construction-related trips would only occur temporarily during construction. While these trips would occur on regional and local roadways that connect to the Project site, they would be temporary and the Project would not impact any City of Long Beach or Los Angeles County program, plan, ordinance, or policy related to transit, bicycle, or pedestrian facilities in the vicinity of the site or along local roadways (not including programs or plans that pertain to vehicle miles travelled, which is addressed under checklist question 4.17(b)). There would be a less-than-significant impact to such facilities.

Baseline maximum truck count at the loading rack is 28 per day. As discussed in Section 2.11, Operations and Maintenance, ~~once constructed, as a worst-case under atypical operations, a maximum increase in truck trips would increase by~~ 10 percent has been assumed. This would result in a project increase of three truck trips per day (a new maximum of 31 trucks per day at the loading rack). The number of truck trips (approximately one truck per month) associated with crude oil balancing is not anticipated to

increase during operations as a result of the proposed Project. An increase of three trips per day associated with the proposed project would not conflict with any program pertaining to performance of the circulation system and less than significant impacts would occur.

**Mitigation Measures:** No mitigation is required.

**b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?**

*LESS THAN SIGNIFICANT IMPACT.* Per State CEQA Guidelines Section 15064.3(b)(3) and the City of Long Beach SB 743 Implementation Plan (City of Long Beach, 2020b), a qualitative analysis of construction traffic vehicle miles travelled (VMT) may be appropriate. As discussed under Section 4.17(a), temporary construction-related trips are assumed to come from the local area or from the greater Los Angeles County area. A worst-case average would assume that each construction worker commute may generate up to 29.4 VMT, material delivery trips may generate up to 13.8 VMT, and haul trips would be variable (see Appendix A). This VMT is generally consistent with typical employee VMT in the City of Long Beach (City of Long Beach, 2020).

While construction would result in additional trips and VMT, these trips would be temporary and only in volumes necessary for the delivery of equipment and materials to the site, hauling away debris, and constructing the proposed Project. These construction-related trips are not considered to be transit-friendly trips. Equipment and material deliveries, as well as haul trips, cannot utilize public transportation in efforts to reduce overall VMT of the Project. Additionally, most construction workers trips are also not considered transit-friendly, as many workers are required to bring their own tools and protective equipment, making it essential they utilize personal vehicles. Therefore, while the proposed Project would generate temporary construction trips and VMT, they would be temporary and cease upon completion of construction.

Baseline maximum truck count at the loading rack is 28 per day. As discussed in Section 2.11, Operations and Maintenance, as a worst-case under atypical operations, a ~~once-constructed~~ maximum increase in truck trips would increase by of 10 percent has been assumed. This would result in a Project increase of 3 truck trips per day (a new maximum of 31 trucks per day at the loading rack). With respect to permanent "operations" trips, absent substantial evidence indicating that a project would generate a potentially significant level of VMT, projects that generate or attract fewer than 110 permanent trips per day generally may be assumed to cause a less-than-significant transportation impact (OPR, 2018; City of Long Beach, 2020). The proposed Project increase of 3 trips per day is well below this threshold. Therefore, the proposed Project would have no permanent effect on existing VMT of the area. For these reasons, the proposed Project is found to not affect existing transit uses or corridors and is recognized to cause a less-than-significant transportation impact with respect to State CEQA Guidelines Section 15064.3(b)(3).

**Mitigation Measures:** No mitigation is required.

**c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

*LESS THAN SIGNIFICANT IMPACT.* All construction disturbance would occur within the existing World Oil Terminal facility. The proposed Project does not require the realignment of existing internal access roads and the main public entrance to World Oil Terminal on Pico Avenue would be unaffected by the proposed Project. The proposed Project does not include the modifications to any public roadways or driveways. During construction, oversized truck trips could be required to deliver large pieces of construction equipment and materials to the site. If needed, any necessary oversized truck trips would obtain all

required permits from Caltrans and local jurisdictions. The construction contractor would follow the rules and requirements of such permits, which would ensure no hazards to motorists or others utilizing the public roadway system occur. Impacts would be less than significant.

**Mitigation Measures:** No mitigation is required.

***d. Would the project result in inadequate emergency access?***

*LESS THAN SIGNIFICANT IMPACT.* Project construction would not encroach upon or cause any temporary disruptions to public roadways. As discussed under Section 4.17(c), in the event any oversized truck trips are necessary during construction, the construction contractor would follow all rules and requirements of any required permits which typically include assurances for emergency vehicle movements. Once operational, the proposed Project would have no impact on access or movement to emergency service providers. Impacts would be less than significant.

**Mitigation Measures:** No mitigation is required.

## 4.18 Tribal Cultural Resources

### TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code §21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
(i) listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code §5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(ii) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code §5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### Discussion

**a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:**

**(i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?**

**NO IMPACT.** As discussed in Section 4.5, Cultural Resources, there is no potential to discover an unknown tribal cultural resource within the Project site as part of the proposed Project's construction, since the site is previously disturbed and underlain by hydraulic and imported fill (Albus-Keefe, 2018). The record search and literature information obtained from South Central Coastal Information Center did not indicate the presence of any eligible or listed historic resources within the Project area (see Appendix B – Confidential). Since there are no significant historical resources located within the Project area, and ground disturbance is planned within hydraulic and imported fills only, the proposed Project would not have an impact on tribal cultural resources.

**Mitigation Measures:** No mitigation is required.



***(ii) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?***

*NO IMPACT.* As discussed previously, the proposed Project would not have the potential to encounter an unknown or buried tribal cultural resource because the Project area is previously disturbed and is located on hydraulic and imported fill. Furthermore, there are no known tribal cultural resources within the Project area. Therefore, the proposed Project would not have an impact on such resources.

**Mitigation Measures:** No mitigation is required.

## 4.19 Utilities and Service Systems

### UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### Discussion

**a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?**

*LESS THAN SIGNIFICANT IMPACT.* The proposed Project would not require any new or expanded wastewater treatment, stormwater drainage, electrical power, natural gas, or telecommunications facilities. The proposed Project is located in a developed area that is served by existing utilities. The two new tanks would be connected to the existing site pipe system through the addition of approximately 40 linear feet of piping, and a short electrical conduit connection would link the new tanks to the existing subpanel located just outside the containment wall to the north. These connections would not require expansion or construction of new utility facilities.

Sanitation Districts of Los Angeles County (LACSD) oversees wastewater treatment facilities that serve the City. The LACSD constructs, operates, and maintains facilities to collect, treat, recycle, and dispose of sewage and industrial wastes. Wastewater generated on site would be delivered to either the Joint Water Pollution Control Plant (JWPCP) of LACSD or the Long Beach Water Reclamation Plant for wastewater treatment (LACSD, 2020). The proposed Project is not expected to generate wastewater that exceeds LACSD's wastewater treatment capacity. The proposed Project would result in a slight increase in wastewater production with the addition of eight workers on site during construction activities. Wastewater generated by construction workers is expected to be nominal due to the minimal number of workers present. Approximately 50,000 bbl of water sourced from the Long Beach Water Department (LBWD) would be used to hydrotest the two new tanks. The wastewater produced from the hydrotest would be tested for any contaminants in compliance with the National Pollutant Discharge Elimination System (NPDES) requirements before being discharged into the harbor. As such, the wastewater would

not be transported to the LACSD treatment facility and would not exceed its wastewater treatment capacity.

During operations, the two new tanks are anticipated to generate less than 300 gallons of dewatered wastewater per tank per day. The dewatered wastewater would be transferred through existing pipes into the existing three 10,000-gallon wastewater treatment storage tanks and then discharged to the LACSD treatment facility in compliance with World Oil's discharge permit, as is currently done for the existing tanks. No additional staffing is anticipated under the proposed Project, and therefore, the proposed Project would not generate a substantial amount of additional wastewater compared with existing conditions. Impacts to utilities facilities would be less than significant.

**Mitigation Measures:** No mitigation is required.

***b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?***

*LESS THAN SIGNIFICANT IMPACT.* The proposed Project would not generate a substantial increase in demand for water. The proposed Project would not introduce a new land use that could increase demand for water services. During construction, a small amount of water may be used during excavation for tank foundations to maintain optimum moisture content of soil layers for compaction. This water use would be temporary and occur over a short duration (approximately three months). Additionally, as discussed in Section 4.19(a), approximately 50,000 bbl of water sourced from the LBWD would be used for the NPDES permitted hydrotest. This activity would only occur once during construction to test the tanks for leaks and structural integrity.

Upon completion, future Project operation would remain similar to existing operations. Approximately 300 gallons of water per day are currently dewatered from the existing tanks. A smaller amount would be dewatered from the smaller 25,000-bbl tanks per day. As such, the proposed Project would marginally increase the facility's total amount of dewatered wastewater to be piped to the 10,000-gallon wastewater treatment storage tanks and LACSD treatment facility. No additional water is anticipated to be used during operation, as the number of staff is expected to remain the same. The proposed Project would continue to be adequately served by the LBWD's existing water entitlements and facilities. Therefore, the LBWD's ability to serve the proposed Project and reasonably foreseeable future development would not be adversely impacted. Impacts would be less than significant.

**Mitigation Measures:** No mitigation is required.

***c. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?***

*LESS THAN SIGNIFICANT IMPACT.* As discussed in Section 4.19(a), approximately 50,000 bbl of water would be used to hydrotest the two new tanks during construction. The hydrotest wastewater would not be sent to the LACSD treatment facility, and thus, would not reduce the capacity of the treatment facility. During operation, the two new tanks would be regularly dewatered. The dewatered wastewater would be transferred through existing pipes into the existing three 10,000-gallon wastewater treatment storage tanks and then discharged to the LACSD treatment facility in compliance with World Oil's discharge permit, as is currently done for the existing tanks. The proposed Project would not exceed the wastewater

treatment capacity of the JWPCP or Long Beach Water Reclamation Plant, and impacts would be less than significant.

**Mitigation Measures:** No mitigation is required.

***d. Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?***

*LESS THAN SIGNIFICANT IMPACT.* The proposed Project would temporarily generate waste associated with construction activities. All construction waste and debris such as trash, scrap metal, abrasive blasting material, paint, pallets, concrete, and general construction scrap would be disposed of or recycled according to the California Green Building Standards Code and the City of Long Beach Construction and Demolition Debris Recycling Program (City of Long Beach, 2007). Solid waste generated during Project operation is expected to be approximately the same as that of current operations, as operations would remain similar and no increase in staff is anticipated. Approximately every 10 years, the tanks would be cleaned of sludge, repaired, and/or hydrotested. Sludge tank bottom quantities are estimated to be approximately 1,500 bbl every 10 years and are disposed of at permitted treatment, storage, and disposal facilities. The addition of two new storage tanks would slightly increase the total amount of solid waste generated by the facility, but disposal would occur infrequently. The Project would be served by a landfill with sufficient permitted capacity to accommodate the Project's waste during construction and operation. Impacts relating to local waste infrastructure and solid waste reduction goals would be less than significant.

**Mitigation Measures:** No mitigation is required.

***e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?***

*LESS THAN SIGNIFICANT IMPACT.* The proposed Project is subject to federal, State, and local regulations and codes relating to solid waste disposal. Specifically, construction activities of the proposed Project would be required to comply with all applicable regulations pertaining to solid waste disposal. These regulations include but are not limited to Assembly Bill (AB) 939, *California Waste Management Act*, which requires each city in the state to divert at least 50 percent of their solid waste from landfill disposal through source reduction, recycling and composting (CalRecycle, 2018); LBMC Chapter 8.6, *Solid Waste, Recycling, and Litter Prevention*; California Health and Safety Code Part 13 Title 42, *Public Health and Welfare*; and U.S. Code Chapter 39, *Solid Waste Disposal*. In addition, waste would be disposed of or recycled according to the California Green Building Standards Code and the City of Long Beach Construction and Demolition Debris Recycling Program (City of Long Beach, 2007). Solid waste generated during operational activities is expected to remain similar to existing conditions and would be hauled away by the current waste service provider. Therefore, construction and operation of the proposed Project would comply with federal, State, and local statutes and regulations related to solid waste. Impacts regarding compliance with federal, state, and local solid waste regulations would be less than significant.

**Mitigation Measures:** No mitigation is required.

## 4.20 Wildfire

### WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, **would the project:**

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### Discussion

**a. Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?**

*NO IMPACT.* According to the California Department of Forestry and Fire, the project site and entire City of Long Beach is not located within a High Fire Risk Area (CAL FIRE, 2007). Furthermore, the project site and overall POLB are listed as “not burnable” on the U.S. Forest Service Wildfire Hazard Potential website (USFS, 2020). Therefore, wildfire impacts would not occur.

There are no wildfire response plans applicable to the Project site. No impact would occur.

**Mitigation Measures:** No mitigation is required.

**b. Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?**

*NO IMPACT.* Refer to Section 4.20(a).

**Mitigation Measures:** No mitigation is required.

**c. Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?**

*NO IMPACT.* Refer to Section 4.20(a).

**Mitigation Measures:** No mitigation is required.

- d. Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

*NO IMPACT.* Refer to Section 4.20(a).

**Mitigation Measures:** No mitigation is required.

## 4.21 Mandatory Findings of Significance

MANDATORY FINDINGS OF SIGNIFICANCE				
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### Discussion

- a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?**

**LESS THAN SIGNIFICANT IMPACT.** As discussed in Section 4.4, Biological Resources, the proposed Project would not substantially adversely impact candidate, sensitive, or special-status species. The Project site is completely developed and does not contain suitable habitat for wildlife species. No special-status wildlife or plant species occur within the Project site, and thus, would not be impacted by Project construction or operation activities. Several non-native grasses and herbaceous weedy species, as well as common bird species were observed on-site during the site visit conducted on March 3, 2020. To comply with the federal MBTA, the Applicant will be required to follow the requirements of the MBTA as specified in Special Condition BIO-1 (see Section 4.4[a]). Compliance with the Special Condition BIO-1 would protect any nesting migratory bird on-site during construction. No sensitive riparian habitats or protected wetlands are located within or near the Project site; as such, the proposed Project would not impact sensitive habitat for fish or wildlife. Project construction would be confined to the Project site and would not affect the movement of or restrict the range of any native resident or migratory fish or wildlife species.

Additionally, as discussed in Section 4.5, Cultural Resources, the proposed Project would not impact the significance of a historical or archaeological resource. The Project site is in District 2 of the POLB, which is an artificial landform composed of hydraulic fill. There are no records of any eligible or listed California historic properties or archaeological resources within the Project area. Therefore, the proposed Project would not eliminate any important examples of the major periods of California history or prehistory. Overall, the proposed Project would not substantially degrade the quality of the environment and suitable



habitat, adversely impact wildlife and fish species, or eliminate important examples of a major period of California history or prehistory. Impacts would be less than significant.

***b. Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, effects of other current projects, and the effects of probable future projects.)***

*LESS THAN SIGNIFICANT IMPACT.* The proposed Project involves the construction and installation of two new storage tanks to the existing World Oil Terminal. Although the proposed Project has impacts that were determined to be less than significant that may incrementally affect other resources, they are not considered cumulatively considerable due to the relatively nominal level and area of impact, highly developed industrial surroundings, and temporary nature of the proposed Project. For example, a cumulatively considerable impact may occur if the Project generates sludge tank bottoms at substantial quantities compared with the capacity of a TSD. As described in Section 4.9 (Hazards and Hazardous Materials), the proposed Project would generate approximately 15,000 bbls of sludge tank bottoms over its 50-year service life, which is a small portion compared with the overall capacity (1 million gallons with an additional 400,000-gallon equivalent of container storage) at the nearest U.S. Ecology waste facility in Vernon, California. As such, the proposed Project would not result in cumulatively considerable hazardous waste impacts.

Generally, contributions to air quality and greenhouse gas emissions impacts are cumulative due to the regional and global nature of air pollution and climate change, respectively. As discussed in Section 4.3, Air Quality, and Section 4.8, Greenhouse Gas Emissions, the proposed Project’s impacts would be less than significant with regards to these environmental factors. The proposed Project, as well as all other current projects (e.g., similar ongoing or reasonably foreseeable future construction projects) in the region, would comply with applicable SCAQMD standards, recommendations, and regulations, which are designed to limit air quality impacts within its jurisdiction, as well as State laws. As such, all potential cumulative impacts regarding air quality and greenhouse gas emissions would be limited and minimized.

The construction activities are minor and would be completed within approximately 10 months. Operational activities would not substantially change. As such, the proposed Project’s cumulative impacts are considered less than significant.

***c. Does the project have environmental effects, which would cause substantial adverse effects on human beings, either directly or indirectly?***

*LESS THAN SIGNIFICANT IMPACT.* As discussed in the analysis above, implementation of the proposed Project would result in no impacts or less than significant impacts to all environmental issues areas, including those which may cause adverse effects on humans. No potentially significant impacts were found, and impacts were determined not to be cumulatively considerable. Therefore, implementation of the proposed Project would not have a significant environmental effect that could cause substantial adverse effects on human beings, either directly or indirectly.

## 5. Application Summary Report

This chapter, in conjunction with the Initial Study/Negative Declaration, constitutes an Application Summary Report prepared in accordance with the certified 1990 Port of Long Beach Port Master Plan (PMP), as amended, and the California Coastal Act of 1976 (CCA). In the consistency analysis discussed below, the proposed Project is in conformance with the stated policies of the PMP and the CCA.

### 5.1 California Coastal Act Consistency Analysis

In accordance with the CCA, the Coastal Zone includes all areas within 3 miles seaward and approximately 1,000 yards inland, depending upon the level of existing inland development. Chapter 3 of the CCA provides the standards by which the adequacy of local coastal programs is determined, while Chapter 8 of the CCA governs California ports, including the POLB, and recognizes these ports as primary economic and coastal resources that are essential elements of the national maritime industry (Section 30701[a]).

The following is a discussion of applicable CCA sections and appropriate project-related information.

#### 5.1.1 Chapter 3 of CCA

The specific policies of Chapter 3 of the CCA would not apply to the proposed Project because the proposed improvements at the existing World Oil Terminal Facility at Pier C is not among the appealable project categories in Section 30715 of Chapter 8 of the CCA, as further discussed in Section 5.1.2.

#### 5.1.2 Chapter 8 of CCA

Chapter 8 of the CCA recognizes California ports, including the Port of Long Beach, as primary economic and coastal resources that are essential elements of the national maritime industry (Section 30701[a]). Relevant Chapter 8 sections of the CCA are listed below and their relationship to the proposed Project is discussed below.

#### Section 30708: Location, Design and Construction of Port-related Developments

*All port-related developments shall be located, designed, and constructed so as to:*

~~*(a) Minimize substantial adverse environmental impacts.*~~

~~*(b) Minimize potential traffic conflicts between vessels.*~~

~~*(c) Give highest priority to the use of existing land space within harbors for port purposes, including, but not limited to, navigational facilities, shipping industries, and necessary support and access facilities.*~~

~~*(d) Provide for other beneficial uses consistent with the public trust, including, but not limited to, recreation and wildlife habitat uses, to the extent feasible.*~~

~~*(e) Encourage rail service to port areas and multicompany use of facilities.*~~

***(a) Minimize substantial adverse environmental impacts.***

This Initial Study/Negative Declaration prepared pursuant to CEQA finds that the proposed Project would result in less than significant impacts to the environmental factors listed in Section 3.1. As designed, the proposed Project would avoid substantial adverse effects on the environment and would be consistent with CCA Section 30708(a).

***(b) Minimize potential traffic conflicts between vessels.***

~~Vessel trips are not associated with existing or proposed operations of the World Oil Terminal, nor would they be associated with construction of the proposed Project. No vessel trips are associated with operations of the World Oil Terminal. The proposed Project would expand storage capacity at the World Oil Terminal but would not increase current or future vessel traffic within the Port. Construction materials would be transported via regional and local roadways and, as discussed in IS/ND Section 2.11 (Operations and Maintenance), no vessel transport would occur terminal operations would remain similar once the proposed Project is implemented. During operations, World Oil Terminal would not require an increase in staff. Crude oil and fuel oils would continue to be shipped through pipeline and/or truck loading racks to and from onsite tanks. Third party vendors who import/export petroleum from the Project site would generally utilize existing pipelines. Existing operations of the truck loading racks are also anticipated to increase 10 percent, but n~~ No marine transport would be needed. As such, operational activities would have no effect on marine transport. The proposed Project would be consistent with CCA Section 30708(b).

***(c) Give highest priority to the use of existing land space within harbors for port purposes.***

The proposed Project would be developed at ~~an~~ World Oil's existing petroleum bulk station and terminal at Pier C, which would serve to expand-realign World Oil's storage capacity and improve the efficiency of terminal operations by allowing more tanks to be available for lease by third-party vendors. As the proposed Project would improve existing Port operations, it would be consistent with CCA Section 30708(c).

***(d) Provide for other beneficial uses consistent with the public trust, including, but not limited to, recreation and wildlife habitat uses, to the extent feasible.***

The Project site is located within Harbor Planning District 2 (Northeast Harbor). As described in the PMP, the primary goals for Planning District 2 are to improve efficiency in cargo movements and provide better allocation of available primary Port facilities by expansion through acquiring privately held property (POLB, 1990). Recreational uses are considered inconsistent with the primary Port development goals of Planning District 2 and therefore are not encouraged in this district (POLB, 1990). Currently the Project site consists of a gravel area within an existing petroleum bulk station and terminal and does not contain any riparian habitat or other sensitive natural communities. As the proposed Project would not affect an area that could provide beneficial uses for the public or suitable wildlife habitat, the proposed Project would be consistent with CCA Section 30708(d).

***(e) Encourage rail service to port areas and multicompany use of facilities.***

~~None of the proposed Project activities would affect r~~ Rail service is not associated with existing or proposed operations of the World Oil Terminal, nor would they be associated with construction of the proposed Project. The proposed Project would increase multi-company use of the World Oil Terminal by enabling third-party vendors to import/export petroleum from the Project site via existing pipelines-and truck loading racks. The proposed Project would be consistent with CCA Section 30708(e).

**Section 30715(a)(1): Permit Authority; Appealable Approvals**

As stated in Chapter 8, Section 30715(a) of the CCA, certification of the PMP allows the Board of Harbor Commissioners to exercise permit authority over any new development contained in the certified PMP, except for categories of development that are appealable to the California Coastal Commission (CCC). The proposed Project would not be appealable under the CCA.

(a) Until such time as a port master plan or any portion thereof has been certified, the commission shall permit developments within ports as provided for in Chapter 7 (commencing with Section 30600). After a port master plan or any portion thereof has been certified, the permit authority of the commission provided in Chapter 7 (commencing with Section 30600) shall no longer be exercised by the commission over any new development contained in the certified plan or any portion thereof and shall at that time be delegated to the appropriate port governing body, except that approvals of any of the following categories of development by the port governing body may be appealed to the commission:

(1) Developments for the storage, transmission, and processing of liquefied natural gas and crude oil in such quantities as would have a significant impact upon the oil and gas supply of the state or nation or both the state and nation. A development which has a significant impact shall be defined in the master plans.

Under the authority delegated by the CCA, the POLB issues consolidated coastal development permits under the certified 1990 PMP and construction permits under the Long Beach City Charter Section 1215 termed a "Harbor Development Permit". The proposed Project would construct two new petroleum storage tanks to support existing operations at the World Oil Terminal. The relatively small size of the proposed storage tanks (i.e., 25,000 bbl) would not have a significant impact on State or national oil and gas supply. The U.S. produced around 10-12 million bbl per day of crude oil and 80-100 billion cubic feet per day of natural gas between 2018 and 2020 (EIA, 2021a). California produced 10-14 million bbl per month of crude oil (EIA, 2021b) and 10-17 million cubic feet per month of natural gas between 2018 and 2020 (EIA, 2021c). In addition, World Oil Corporation is primarily a recycler of oil-based waste. Used motor oil, antifreeze, and oily wastewater is collected and then recycled into marine diesel fuel, paving and roofing asphalt blending components, and new anti-freeze at the World Oil Refinery in Southgate, CA. As such, World Oil is providing a service to the oil and gas industry as opposed to being a producer or refiner of crude oil or natural gas.

The proposed Project would provide additional petroleum storage capacity but that would not affect local refinery operations. Refinery processing capacities are constrained by many factors including equipment design capacity, permit conditions, firing rates for combustion sources, and maintenance schedules of the various operating units within a refinery. Refinery processes are not influenced by storage capacity. In addition, the proposed Project would not debottleneck the facility to allow for greater actual crude throughput beyond the permitted limits through the existing pipelines, tanks, or loading racks. As such, the proposed Project would have little to no impact on the oil and gas supply of the state or nation and is not appealable under Coastal Act Section 30715(a)(1).

## **5.2 Consistency with the Port Master Plan**

This ASR has been prepared to evaluate the proposed Project for consistency with the certified 1990 PMP, as amended.

### 5.2.1 **Overview** 1990 Certified PMP

The PMP was first certified by the ~~California Coastal Commission (CCC)~~ in 1978 as being in conformance with the policies of Chapter 8 (Ports) of the CCA. The PMP was updated and certified in 1983 and again in 1990. Since 1990, numerous plan amendments have been adopted by the POLB and certified by the CCC. ~~Currently, the POLB is reviewing Amendment #20, which would serve as an independent PMP Update document that incorporates all certified amendments since 1990 and addresses current economic trends and foreseeable projects (POLB, 2019). Because PMP Amendment #20 has not been adopted or certified, it is only referenced in the following section to highlight possible changes to PMP goals or implementation recommendations that may be relevant to the proposed Project.~~

The Project site is located within Harbor Planning District 2 (Northeast Harbor), which is designated for primary Port facilities, Port related uses, hazardous cargo facilities, ancillary Port facilities, oil production, and navigation (POLB, 1990). The proposed construction and operation of two petroleum storage tanks at the existing World Oil Terminal at Pier C would be consistent with the Northeast Harbor's allowable and permitted designated use of hazardous cargo facilities.

### 5.2.2 **Port Development Goals**

The 1990 Certified PMP identifies six long-range planning goals and objectives for developing Port policies involving future Port development and expansion. Among the goals for Port development in Chapter IV of the PMP, Port-wide development and expansion goals cited in the PMP, the proposed Project would support the following:

#### **Goal 2: Encourage maximum use of facilities**

~~The proposed Project would serve to maximize uses at the World Oil Terminal by expanding realigning their storage capacity and improving to increase the efficiency of terminal operations. However, the proposed Project would not debottleneck the facility to allow for greater actual crude oil throughput beyond the permitted limits through the pipelines, tanks, or truck loading racks. Furthermore, the proposed Project would be consistent with t~~The objectives of Port Development Goal 2 to rehabilitate under-utilized terminal facilities and to improve the efficiency of cargo handling facilities would be met by the proposed Project.

#### **Goal 5: Develop land for primary port facilities and port-related uses**

The proposed Project would be constructed at World Oil's an existing petroleum bulk station and terminal at Pier C. By ~~expanding the realigning World Oil's storage capacity of this at the terminal,~~ the proposed Project would be consistent with the objectives of Port Goal 5 to intensify existing development and to redevelop existing land within the Harbor District.

### 5.2.3 **Plan Elements**

The PMP provides guidance and direction for policy and business decisions affecting the future growth and development of the POLB. The six plan elements of the certified PMP include Public Access, Visual Quality, and Recreation/Tourist; Navigation; Environmental; Transportation/Circulation; Intermodal Rail Facilities; and Oil Production and Operations. Each plan element outlines specific planning goals and issues, and provides a list of recommendations and/or an implementation program. ~~The proposed PMP~~

~~Amendment #20 would add two additional plan elements: Climate Change Adaptation and Terminal Operations (POLB, 2019).~~

~~The goals and implementation recommendations from the Environmental Element and Transportation/Circulation Element relevant to the proposed Project, the proposed Climate Change Adaptation Element, and the proposed Terminal Operations Element would be relevant to the proposed tank installation project. These elements are discussed below.~~

## **Environmental Element**

The Environmental Element identifies specific issues of concern regarding Port development and operations, which include air quality, habitat preservation/marine mitigation, hazardous waste, and permit processing. The following goals and implementation recommendations from the Environmental Element would be applicable to the proposed Project:

- **Goal 1:** Minimize pollutant levels from existing and future sources.
- **Air Quality Recommendations:**
  - Limit idling of construction equipment and vehicles.
  - Implement a watering program to minimize fugitive dust.
  - Use low sulfur fuel.

As discussed in Initial Study/Negative Declaration Section 4.3 (Air Quality), the proposed Project would be required to comply with applicable Clean Air Action Plan construction best management practices and South Coast Air Quality Management District Rule 403 (Fugitive Dust) control measures. The proposed Project would also comply with Special Condition AQ-1 in the Harbor Development Permit (see Section 5.3 [Special Conditions]). ~~These condition requirements~~ would minimize daily construction emissions, which would ensure that emissions remain below significance thresholds.

The proposed Project would avoid substantial adverse effects on the environment, and any short-term construction impacts would be less than significant. The proposed Project would not conflict with the planning goals or implementation recommendations of this element.

## **Transportation/Circulation Element**

The purpose of the Transportation/Circulation Element is to: (1) identify existing transportation/circulation problems; (2) identify future transportation needs of the Port; and (3) present current plans and recommendations to address the POLB's transportation demands. Goal 1 from the Transportation/Circulation Element would be applicable to the proposed Project:

- **Goal 1:** Provide for efficient circulation of vehicular and rail traffic within the Port (with minimum disruption to Port activities).

The proposed construction and operation of two petroleum storage tanks at the existing World Oil Terminal would not require the realignment of existing internal access roads, and the main public entrance to World Oil Terminal on Pico Avenue would be unaffected by the proposed Project. Furthermore, the proposed Project does not include the modifications to any public roadways or driveways. Temporary construction-related vehicle trips over the 10-month construction period would not be in numbers that could substantially diminish the performance of the circulation system. As a worst-case assumption, such as an atypical condition involving a pipe being serviced, truck trips are estimated



to increase 10 percent (three daily trucks) during proposed Project operations. ~~case assumption, Project operation would result in a 10 percent increase in use of the truck loading racks, resulting in an estimated increase of three daily truck trips.~~ These additional trips are sufficiently limited such that they would have negligible effects on transportation within the POLB. The proposed Project would not conflict with the planning goals or implementation recommendations of the Transportation/Circulation Element.

### **Terminal Operations Element (Proposed)**

~~The Terminal Operations Element is a new plan element that would be added with certification of PMP Amendment #20. The purpose of this element is to ensure that the POLB meets the challenges of changing vessel sizes, terminal capacities, the intermodal supply chain, and advances in technology by modernizing and expanding Port facilities in ways that are consistent with the CCA (POLB, 2019). The element includes goals to increase the POLB's marine terminal capacity to accommodate future demand.~~

~~The proposed project would be compatible with the Terminal Operations Element, as it would maximize current land uses at the World Oil Terminal by expanding storage capacity and improving the efficiency of terminal operations.~~

### **5.2.4 District Goals**

The certified 1990 PMP identifies the following goal for ~~the District 2, Northeast Harbor Planning District:~~

- ~~Goal 1: Acquire private property and increase primary Port use.~~

The proposed tank construction would serve to ~~expand~~ realign World Oil's storage capacity and improve the efficiency of terminal operations, and therefore would be consistent with this District goal. None of the proposed Project activities would impede or conflict with POLB goals of acquiring non-Port property. The proposed Project would be consistent with the certified PMP's goal for the Northeast Harbor.

~~Proposed PMP Amendment #20 includes four planning goals for the Northeast Harbor Planning District (POLB, 2019). Of these four goals, the following would be applicable to the Project:~~

- ~~Goal 4: Incorporate environmentally sustainable operations.~~

~~The proposed Project has been designed to avoid substantial adverse effects on the environment, and any short term construction impacts would be less than significant. No adverse impacts to the environment would occur during operation. The proposed Project would be consistent with the proposed goals from PMP Amendment #20.~~

### **5.2.5 Risk Management Plan**

In 1981, the California Coastal Commission certified the Port's Risk Management Plan (RMP) as Amendment No. 1 to the 1978 certified PMP, which provided the Long Beach Board of Harbor Commissioners the ability to issue coastal development permits for hazardous liquid bulk cargo facilities, as well as other developments in the Port that are in conformance with the Certified Port Master Plan (POLB, 1981). The RMP contains policies for the Port to apply in the permitting of new hazardous liquid bulk cargo developments or in the permitting of modifications or expansions to existing facilities involved with the transfer, handling, storage, and transport of hazardous liquid bulk cargoes. The approach taken is to define the casualties or accidents possible at the hazardous facility, in this case a spill from the largest container, and then calculate or derive from actual case data the extent of the hazard area produced, referred to as the "hazard footprint". The RMP states that if a development involves the storage or



transfer in liquid bulk form of any hazardous material, or if the development may place a vulnerable resource within an existing hazard footprint as described in the RMP, then a risk analysis is required (POLB, 1981). The RMP defines vulnerable resources as residential populations, recreational and visitor serving areas, high density working populations, and facilities with high total value, including cargo and equipment (POLB, 1983). The RMP mandates that the resulting hazard footprint of a development must not overlap any vulnerable resources. The boundary of a hazard footprint represents the distance at which the impacts of the worst probable events will be reduced to levels which are not likely to cause injury or property damage, as calculated and mapped by the Port.

In 2018, the POLB conducted a risk assessment of the World Oil Terminal, per the guidelines of the 2009 Application Document for Conducting Hazard Impact Assessments in Support of the Risk Management Plans of the Ports of Los Angeles and the Port of Long Beach (Risk Assessment Report). The Risk Assessment Report concluded that the largest hazard footprints and subsequent vulnerability zone can be defined by releasing the most volatile material stored in the World Oil Terminal (marine diesel) into the largest impoundment basin and performing the consequence analysis calculations under the POLB-prescribed weather conditions. The Risk Assessment Report determined the potential hazard zones by considering wind directions during a fire event from both within the containment wall and at the truck loading rack. When all combinations of wind directions are considered, the distance away from the containment wall and truck loading rack is referred to as a vulnerability zone. The vulnerability zone simply identifies the area that could be affected by a specific radiant flux level, but does not identify what area could be affected at one time. The vulnerability zone approach is used to identify the area that could affect a vulnerable resource. The Project site is not adjacent to a hazardous facility or vulnerable resources. The two additional 25,000 bbl storage tanks would be installed in the vacant northwest corner within an ~~terminal's~~ existing 12-foot containment wall. After the implementation of the proposed Project, marine diesel oil would remain the most volatile material stored/handled at the terminal therefore the largest hazard footprint and subsequent vulnerability zone remains the same and would remain in conformance with the RMP.

### **5.3 Draft PMP Update**

An update to the certified 1990 PMP Update (PMPU) is currently underway. In July 2019, the POLB released the Draft PMPU for public review. The PMPU would serve as an independent PMPU document that incorporates all certified amendments since 1990 and addresses current economic trends and foreseeable projects (POLB, 2019). Because the Draft PMPU has not yet been adopted by the Long Beach Board of Harbor Commissioners or certified by the CCC, it is only referenced in the following sections to highlight potential changes to PMPU goals or implementation recommendations that may be relevant to the proposed Project.

Under the Draft PMPU, the proposed Project site would be within the Northeast Harbor Planning District (District 2).

#### **5.3.1 Draft PMP Update Port Development Goals**

The Draft PMPU currently identifies four long-range planning goals and corresponding objectives for Port development that are designed to maintain flexibility, respond to Port tenant needs, and allow the Port to respond effectively to requirements dictated by national and international economic trends. Among the proposed goals for Port development in the Draft PMPU, the proposed Project would support the following:

## **Goal 2: Develop Modern Terminal Facilities with Efficient Operations**

The proposed Project would construct two additional tanks in the generally vacant northwest corner of the existing terminal providing additional storage capacity to increase the efficiency of terminal operations. The new tanks would supplant the terminal's existing tanks that provide crude oil storage to the World Oil Refinery in South Gate. The existing tanks would then be removed from dedicated refinery service and become available for lease to third-party vendors. Objectives under Goal 2 would be met by the proposed Project.

### **5.3.2 Draft PMP Update Plan Elements**

In addition to the long-range planning goals addressed above, the Draft PMPU currently also includes plan elements, which provide the policy framework for future POLB development and Port-wide guidance on major operational/functional areas and policy areas. The eight plan elements of the proposed Draft PMPU include Public Access and Recreation; Environment and Sustainability; Climate Change Adaptation; Visual Quality; Transportation and Circulation; Navigation; Terminal Operations; Rail Operations; and Oil Operations. Each of these plan elements consist of planning goals and issues and recommended actions. Of the eight plan elements currently listed in the Draft PMPU, Environment and Sustainability, Climate Change Adaptation, and Terminal Operations are discussed below.

#### **Environment and Sustainability Element**

The Environmental and Sustainability Element embodies the POLB's ongoing efforts to preserve and enhance the environment through its leadership in innovative goods movement, natural resources stewardship, and sustainability. The Environment and Sustainability Element reflects the Green Port Policy, which was adopted by the Board of Harbor Commissioners in January 2005.

Of the six goals currently identified for the Environment and Sustainability Element, the proposed Project would support the following planning goal:

**Goal 1:** Reduce environmental and health impacts from Port operations sources.

As discussed in Initial Study/Negative Declaration Section 4.3 (Air Quality), the proposed Project would be required to comply with applicable Clean Air Action Plan construction best management practices and South Coast Air Quality Management District Rule 403 (Fugitive Dust) control measures. The proposed Project would also comply with Special Condition AQ-1 in the Harbor Development Permit (see Section 5.3 [Special Conditions]). This condition would minimize daily construction emissions, which would ensure that emissions remain below significance thresholds.

The proposed Project would avoid substantial adverse effects on the environment, and any short-term construction impacts would be less than significant. The proposed Project would not conflict with the planning goals of this element.

#### **Climate Change Adaptation Element**

The Climate Change Adaptation Element would be a new plan element which outlines the Port's goals for climate change adaptation and coastal resiliency. The element incorporates the strategies identified in the POLB's 2016 Climate Adaptation and Coastal Resiliency Plan (CRP) that address climate change impacts through existing POLB policies, plans, and guidelines, including incorporating climate change analysis and considerations to the POLB's development permitting process. Of the three goals identified

for the Climate Change Adaptation Element, the proposed Project would support the following planning goal:

- **Goal 2:** Safeguard vulnerable assets to minimize impact of damage or loss.

As discussed in Initial Study Section 4.10 (Hydrology and Water Quality), the proposed petroleum storage tanks would be constructed and operated within the existing 12.5 to 13-foot high containment wall that is designed to hold the largest tanks capacity (90,000 barrels) plus a 100-year storm event. The containment wall would continue to offer the same level of adequate protection for the proposed tanks as they do for the existing tanks. Although a flood control system is not in place at the Project site, air driven pumps may be used to divert water over the containment wall during a flood event. According to the 2016 CRP, the project site would not be subject to permanent inundation from projected sea level rise, and would only be subject to temporary inundation of up to four feet with the combination of sea level rise and a 100-year storm event. With the infrastructure protection provided by the existing containment wall and air driven pumps, the proposed Project would be compatible with the Climate Change Adaptation Element.

### **Terminal Operations Element**

The Terminal Operations Element would be a new plan element that details the POLB's need to accommodate forecast demand for containerized and non-containerized cargo. This element would ensure that the POLB meets the challenges of changing vessel sizes, terminal capacities, the intermodal supply chain, and advances in technology by modernizing and expanding Port facilities in ways that are consistent with the CCA (POLB, 2019). The element currently includes goals to increase the POLB's marine terminal capacity to accommodate future demand. Of the five goals currently identified for the Terminal Operations Element, the proposed Project would support the following planning goal:

- **Goal 4:** Modernize container terminals to improve operational efficiency.

The proposed Project would be compatible with the Terminal Operations Element, as it would maximize current land uses at the World Oil Terminal by providing additional storage capacity and improving the efficiency of terminal operations.

### **5.3.3 Draft PMP Update District Goals**

Under the Draft PMPU, the proposed Project would be located within the Northeast Planning District (District 2). The Draft PMPU currently includes four planning goals for the Northeast Harbor Planning District. Of the four goals, Goal 4 would be applicable to the Project:

- **Goal 4:** Incorporate environmentally sustainable operations.

The proposed Project has been designed to avoid substantial adverse effects on the environment, and any short-term construction impacts would be less than significant. No adverse impacts to the environment would occur during operation. The proposed Project would be consistent with Goal 4.

### **5.3.4 Draft PMP Update Permitted Land and Water Uses**

The permitted uses for the Northeast Planning District would include the following permitted land uses: primary port facilities, port-related facilities, maritime support facilities, hazardous cargo facilities, oil and gas production facilities, utilities, visitor-serving commercial facilities, and institutional.

The proposed Project would continue to be consistent with the Northeast Harbor's allowable and permitted use of hazardous cargo facilities.

## 5.43 Special Conditions

In instances where the proposed Project presents no significant impact and no mitigation is required, there may be additional 'Special Conditions' imposed on the project by the POLB that would further lessen a 'no significant impact' below a significance threshold or potentially eliminate an impact. These Special Conditions would be implemented as required in the Harbor Development Permit (HDP), project specifications, or other applicable documents governing site use and or facility operations. Special Conditions are consistent with the Green Port Policy, Clean Air Action Plan, and the Water Resources Action Plan.

~~Special Conditions are the federal, State, and local regulations and permit requirements, environmental measures, and/or assumptions that are applied to proposed projects in the POLB on a typical basis and are, therefore, considered to be part of project descriptions. All applicable Special Conditions proposed by the Port or regulatory agencies would be implemented as required in tenant lease agreements, project specifications, or other applicable documents governing site use and or facility operations. Special Conditions are consistent with the Green Port Policy, the San Pedro Bay Ports Clean Air Action Plan, and the Water Resources Action Plan.~~

~~Special Conditions are assumed to be part of the proposed project for analysis purposes, as opposed to mitigation measures, which are added to lessen a significant impact after analyses have been completed.~~

The following Special Conditions for Air Quality, Biological Resources, and Geology and Soils would be incorporated as part of the proposed Project to ensure that Project construction further reduces construction emissions and complies with the requirements of the Migratory Bird Treaty Act and the design recommendations of the geotechnical investigation performed at the site (Albus-Keefe & Associates Geotechnical Update Report, 2018). Included below are the various means used to implement the Special Conditions as well as the timing for implementation.

**Special Condition AQ-1. Non-Road Engine Emission Standards.** Permittee shall ensure that all construction equipment meet the United States Environmental Protection Agency Tier 4 non-road engine standards. Prior to construction, Permittee shall instruct construction crews on the implementation of Special Conditions.

**Special Condition BIO-1. Nesting Bird Surveys.** To prevent taking active bird nests during the nesting season (approximately February 1 through August 31), the following measures shall be implemented by the Applicant as appropriate:

- Prior to the onset of construction activities (i.e., mobilization, staging, demolition, or heavy plant trimming) during the nesting season, the Applicant shall retain a qualified avian biologist to conduct pre-construction surveys in all areas located within 300 feet of the Project area. The required survey dates may be modified based on local conditions, as determined by the qualified avian biologist.
- If breeding birds with active nests are found prior to or during construction, the qualified avian biologist will establish a species-appropriate non-disturbance buffer and will periodically monitor the nest during construction activity.
- During construction within the nesting season, activities will be periodically monitored to ensure that no new nest building occurs within work areas.

- ~~The Applicant shall provide weekly reports describing monitoring actions, relevant observations, and any protective actions taken to the POLB Director of Environmental Planning.~~

**Special Condition GEO-1. Geotechnical Recommendations.** To ensure impacts from ground shaking, liquefaction, unstable soils, and expansive soils would be reduced to the extent feasible, the final Project design shall implement the geotechnical recommendations provided in the Albus-Keefe & Associates Geotechnical Update Report, 2018. The final Project design shall be reviewed for consistency by a qualified geotechnical engineer prior to Project implementation and provide a letter stating that the plans correctly incorporate the geotechnical recommendations.



## 6. Report Preparation

A consultant team headed by Aspen Environmental Group prepared this document under the direction of the Port of Long Beach. The preparers and technical reviewers of this document are presented below.

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## 8. Responses to Comments

The public review period for a draft environmental document is a critical part of the CEQA public participation process. It provides the opportunity for other responsible agencies and interested parties to analyze the proposed project and provide any comments they might have on the adequacy of the environmental document. The prepared responses to comments are intended to provide complete explanations to the commenters and to improve the overall understanding of the project. POLB originally circulated a Draft IS/ND for the proposed project for a 30-day public review period from October 7, 2020 through November 5, 2020, but extended the public review period to 45 days, ending on November 20, 2020. During the 45-day public review period, POLB received 20 comment letters from a total of 8 agencies, groups/organizations, and individuals. This section provides responses to the comments received and has been organized by assigning each commenter a letter code based on the name of commenter or affiliation (e.g., California Department of Transportation, District 7 is given the letter code “CADOT”). An abbreviation for the name of the organization is used if the commenter is represented by a law firm. Comments received are bracketed and numbered and are referred to by the Commenter Letter Code and Response Number. Each comment letter is followed by POLB’s written responses to the comments in that letter. Due to the size of the attachments referenced and submitted in the Comment Letters from Earthjustice (EJ) and Safe Fuel and Energy Resources California (SAFERCA), the attachments are not included in this section, however, are available online on the POLB website at <https://www.polb.com/ceqa>. The comments received did not result in any substantive modifications to the analyses in the IS/ND. The following table lists commenters that submitted written comments on the IS/ND.

Commenter	Letter Code	Comment Codes	Date
<b>Agencies</b>			
California Coastal Commission	CCC	CCC-1 to CCC-2	November 20, 2020
California Department of Transportation, District 7	CADOT	CADOT-1 to CADOT-3	October 22, 2020
City of Paramount	CP	CP-1	October 27, 2020
<b>Organizations</b>			
Citizens Coalition for a Safe Community	CCSC	CCSC-1 to CCSC-15	October 11, 2020 (3) October 15, 2020 (2) October 28, 2020 October 29, 2020
Earthjustice, et al.	EJ	EJ-1 to EJ-51	October 20, 2020 November 20, 2020 March 16, 2021
Gabrieleno Band of Mission Indians – Kizh Nation	GBKN	GBKN-1	October 28, 2020
Safe Fuel and Energy Resources California	SFERCA	SFERCA-1 to SFERCA-43	October 8, 2020 October 9, 2020 (2) October 29, 2020 November 20, 2020
<b>Individuals</b>			
Dianne Flowers	DF	DF-1 to DF-2	November 20, 2020

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## CCC – California Coastal Commission

**From:** Ziff, Dani@Coastal <[dani.ziff@coastal.ca.gov](mailto:dani.ziff@coastal.ca.gov)>  
**Sent:** Friday, November 20, 2020 1:18 PM  
**To:** Port of Long Beach Environmental Planning <[CEQA@polb.com](mailto:CEQA@polb.com)>  
**Cc:** Arms, Matthew <[matthew.arms@polb.com](mailto:matthew.arms@polb.com)>; Blanchard, Jennifer <[jennifer.blanchard@polb.com](mailto:jennifer.blanchard@polb.com)>; Rehm, Zach@Coastal <[Zach.Rehm@coastal.ca.gov](mailto:Zach.Rehm@coastal.ca.gov)>  
**Subject:** World Oil Tank Installation Project

---

Hello Mr. Arms,

We have received the notice of preparation of the IS/ND for the proposed World Oil Tank Installation Project involving the construction and operation of two new 25,000-barrel petroleum storage tanks at the Ribost Terminal in the Port of Long Beach.

CCC-1

Pursuant to Coastal Act Section 30715(1)(a), the harbor/coastal development permit for the proposed project may be appealable to the Coastal Commission. In addition, because this development is not currently contemplated in the certified Port Master Plan, a PMP amendment would be required pursuant to Coastal Act Section 30711.

Furthermore, while it appears the project is designed to withstand a 100-year storm event under current conditions, the IS/ND does not address the potential for flooding impacts to be exacerbated by sea level rise in the future. The development should be designed to avoid or minimize risks to life and property from coastal hazards and avoid or minimize environmental impacts for the life of the development. Thus, the project should be assessed using the best available science for a medium-high/extreme sea level rise scenario.

CCC-2

Thank you for the opportunity to comment and please notify CCC staff of any updates to the project description or status. Please also notify our staff of any local hearings or actions on the HDP application.

Sincerely,  
dani ziff

Please note that public counter hours for all Commission offices are currently suspended in light of the coronavirus. However, in order to provide the public with continuity of service while protecting both you and our employees, the Commission remains open for business, and you can continue to contact Commission staff. To avoid delays in response time, **please contact me via email**. More information on the Commission's response to the COVID-19 virus can be found on our website at [www.coastal.ca.gov](http://www.coastal.ca.gov).

	<p><b>Dani Ziff</b>   Coastal Planner <b>CALIFORNIA COASTAL COMMISSION</b></p> <p>South Coast District Office</p> <p>301 E. Ocean Blvd, Suite 300</p> <p>Long Beach, CA 90802</p> <p><a href="tel:5625905071">(562) 590-5071</a></p>	
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## Response to Comments – CCC

California Coastal Commission

Dani Ziff, Coastal Planner

November 20, 2020

### Response to Comment CCC-1

The comment provides introductory text to describe the California Coastal Commission’s understanding of the project, and states that pursuant to Coastal Act Section 30715(a)(1), the proposed Project’s harbor/coastal development permit may be appealable to the Coastal Commission. The comment also states that a Port Master Plan (PMP) amendment would be required if the proposed development is not currently contemplated in the certified PMP pursuant to Coastal Act Section 30711.

California Coastal Act (CCA) Section 30715(a)(1) is specific to “developments for the storage, transmission, and processing of liquefied natural gas and crude oil in such quantities as would have a significant impact upon the oil and gas supply of the state or nation or both the state and nation.” The proposed Project would construct two new petroleum storage tanks to support existing operations at the World Oil Terminal by increasing the efficiency of terminal operations and allowing more tanks to be available for lease by third-party vendors. As described in Section 5.1.2 (Chapter 8 of CCA), the relatively small size of the proposed storage tanks (i.e., 25,000 bbl) would not have a significant impact on State or national oil and gas supply. The U.S. produced around 10-12 million bbl per day of crude oil and 80-100 billion cubic feet per day of natural gas between 2018 and 2020 (EIA, 2021a). California produced 10-14 million bbl per month of crude oil (EIA, 2021b) and 10-17 million cubic feet per month of natural gas between 2018 and 2020 (EIA, 2021c). In addition, World Oil Corporation primarily recycles oil-based waste including used motor oil, antifreeze, and oily wastewater. The waste is then recycled into motor oil, marine diesel fuel, new antifreeze, and paving and roofing asphalt blending components. The asphalt blending components are used at the World Oil Refinery in South Gate, California. As such, World Oil is providing a service to the oil and gas industry as opposed to being a producer or refiner of crude oil or natural gas.

As described in IS/ND Section 2.11 (Operations and Maintenance), the proposed Project would not debottleneck the facility to allow for greater actual crude throughput beyond the permitted limits through the existing pipelines, tanks, or loading racks. The proposed Project would provide additional petroleum storage capacity, but that would not affect local refinery operations. Refinery processing capacities are constrained by many factors including equipment design capacity, permit conditions, firing rates for combustion sources, and maintenance schedules of the various operating units within a refinery. Refinery processes are not influenced by storage capacity. As such, the proposed Project would have little to no impact on the oil and gas supply of the state or nation and is not appealable under CCA Section 30715(a)(1).

The World Oil Terminal is a privately-owned terminal which was built in 1964, prior to the establishment of the CCA and the adoption and certification of the POLB’s initial PMP. The PMP was first adopted and certified in 1978. It was under this PMP that the Project area was termed the Northeast Harbor District and its permitted uses were designated to Primary Port, Petroleum Import/Export, Port-related, and Oil Production. Petroleum Import/Export was defined as “operations and terminals engaged in the loading/unloading, storage and transfer of crude, and bulk refined petroleum products”. The 1983 certified PMPU replaced the term “Petroleum Import/Export” with “Hazardous Cargo Facility,” but the definition remains similar. “Hazardous Cargo Facility” continues to be a permitted use in the current certified 1990 PMPU. Therefore, the proposed Project would not require an amendment to the certified

1990 PMPU as it would be located within an area of the Port (i.e., Northeast Harbor) that allows hazardous cargo facilities and oil production as permitted uses (see IS/ND Section 5.2.1, Consistency with the Port Master Plan). As described in IS/ND Section 2.9 (Project Overview), the proposed Project would be constructed entirely within the existing World Oil Terminal and would serve to realign storage capacity and improve efficiency of the terminal's current operations. The proposed Project would be compatible with the site's existing land use and would be allowable under the Northeast Harbor's permitted uses identified in the 1990 certified PMPU. A PMP amendment would not be required for the proposed Project.

### **Response to Comment CCC-2**

This comment requests that the IS/ND address the potential for flooding impacts to be exacerbated by future sea level rise (SLR). This comment also suggests that the proposed Project be assessed using best available science for a medium-high/extreme sea level rise scenario.

In 2016, the POLB completed a Port-wide *Climate Adaptation and Coastal Resiliency Plan (CRP)* which draws on the best available data on climate science and the potential effects in California (data as of April 2016). The CRP relied heavily on California Climate Change Center, a division of the California Energy Commission's Third Assessment on the science of climate change, the California Natural Resource Agency's 2009 California Adaptation Strategy, peer-reviewed publications from the U.S. Global Change Research Program, and other research organizations. Based on the findings of the reports and publications, the POLB selected a 16-inch, 36-inch, and 55-inch SLR inundation scenarios – including each under daily high tide and extreme tide and 100-year storm event to analyze potential future impacts. The 36-inch sea level rise scenario plus 100-year storm surge was selected as the most appropriate scenario (medium-high) to analyze for developments with an expected life ending in year 2070 (50-year lifespan) and the most-likely projection for the year 2100. A discussion of the CRP has been added to the IS/ND Section 4.10(d) (Hydrology and Water Quality).

Under the medium-high SLR scenario the proposed Project's site could experience temporary inundation of zero to 4 feet by year 2070 (2016 CRP). The CRP's SLR medium-high estimation aligns with the Ocean Protection Council's 2018 *State of California's Sea-Level Rise Guidance (OPC Guidance)* medium-high risk SLR estimations for projects with an expected life ending in year 2070 (OPC, 2018). The OPC Guidance states that in the medium-high risk scenario, there is a 1-in-200 chance, or 0.5% probability, that SLR meets or exceeds an estimated inundation of approximately 2.9 to 3.3 feet by year 2070 (OPC, 2018). Under the most extreme SLR projection (55-inch plus 100-year storm surge) the proposed Project could experience zero to 6 feet of temporary inundation by 2070 (POLB, 2016a).

As stated in IS/ND Section 2.9 (Project Description), the proposed tanks would be constructed and installed within the existing reinforced concrete containment wall that varies between approximately 12.5 to 13-feet in height and wall thickness tapering from approximately 1.5 feet wide at the base to 1 foot wide at the top. Although the facility may experience temporary inundation under a medium-high/extreme SLR scenario, the potential for flooding impacts to be exacerbated by sea level rise in the future is less than significant due to the size of the existing containment wall. Also, as noted in IS/ND Section 4.10(d) (Hydrology and Water Quality), air driven pumps may be used to divert water over the containment wall during a flood event. With the infrastructure protection provided by the existing containment wall and air driven pumps, the proposed Project would not create a new significant impact from sea level rise.



## CADOT – California Department of Transportation, District 7

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

GAVIN NEWSOM, Governor

### DEPARTMENT OF TRANSPORTATION

DISTRICT 7  
100 S. MAIN STREET, MS 16  
LOS ANGELES, CA 90012  
PHONE (213) 897-8391  
FAX (213) 897-1337  
TTY 711  
www.dot.ca.gov



*Serious Drought.  
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a California Way of Life.*

October 22, 2020

Mr. Matthew Arms  
Directors of Environmental Planning  
Port of Long Beach  
415 W. Ocean Blvd.  
Long Beach, CA 90802

RE: World Oil Tank Installation Project  
Vic. LA-710 PM 5.88  
SCH # 20200100119  
GTS # LA-2020-03391AL-ND

Dear Mr. Arms:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. The Project proposes to construct and operate two new 25,000-barrel petroleum storage tanks within the existing World Oil Terminal. The proposed project would provide additional storage capacity to increase the efficiency of terminal operations. The new tanks would supplant the terminal's existing tanks that provide crude oil to the World Oil Refinery in South Gate through the truck loading racks. The existing tanks would then be removed from dedicated refinery service and become available for lease to third-party vendors.

CADOT-1

The mission of Caltrans is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. Senate Bill 743 (2013) has been codified into CEQA law. It mandates that CEQA review of transportation impacts of proposed developments be modified by using Vehicle Miles Traveled (VMT) as the primary metric in identifying transportation impacts. You may reference The Governor's Office of Planning and Research (OPR) website for more information.

CADOT-2

<http://opr.ca.gov/ceqa/updates/guidelines/>

As a reminder for all new projects in the future, Vehicle Miles Traveled (VMT) will be the standard transportation analysis metric in CEQA for land use projects after the July 1, 2020 statewide implementation date.

*"Provide a safe, sustainable, integrated and efficient transportation system  
to enhance California's economy and livability"*



Mr. Matthew Arms  
October 22, 2020  
Page 2 of 2

Also, Caltrans has published the VMT-focused Transportation Impact Study Guide (TISG), dated May 20, 2020 and Caltrans Interim Land Development and Intergovernmental Review (LD-IGR) Safety Review Practitioners Guidance, prepared in July 2020.

CADOT-2,  
cont.

<https://dot.ca.gov/programs/transportation-planning/office-of-smart-mobility-climate-change/sb-743>

Baseline maximum truck count at the loading rack is 28 per day. This new project will generate additional 3 trucks trips per day. Therefore, the proposed project would have no permanent effect on the existing VMT of the area.

For this project, transportation of heavy construction equipment and/or materials, which requires the use of oversized-transport vehicles on State highways, will require a transportation permit from Caltrans. It is recommended that large size truck trips be limited to off-peak commute periods and idle time not to exceed 10 minutes.

CADOT-3

If you have any questions, please feel free to contact Mr. Alan Lin the project coordinator at (213) 897-8391 and refer to GTS # LA-2020-03391AL-ND.

Sincerely,

*Miya Edmonson*

MIYA EDMONSON  
IGR/CEQA Branch Chief

email: State Clearinghouse

*"Provide a safe, sustainable, integrated and efficient transportation system  
to enhance California's economy and livability"*

## Responses to Comments – CADOT

California Department of Transportation, District 7

Miya Edmonson, IGR/CEQA Branch Chief

October 22, 2020

### Response to Comment CADOT-1

The comment includes introductory remarks and summarizes Caltrans' understanding of the proposed Project. No further response is required.

### Response to Comment CADOT-2

The comment provides Caltrans' mission statement and references Senate Bill 743 which mandates use of Vehicle Miles Traveled (VMT) as the primary metric in identifying transportation impacts from automobiles under CEQA. The comment also refers to the Governor's Office of Planning and Research for CEQA updates, the Caltrans VMT-focused Transportation Impact Study Guide (TISG), dated May 20, 2020, and the Caltrans Interim Land Development and Intergovernmental Review Safety Review Practitioners Guidance, prepared in July 2020, for traffic impact analysis guidance and information. As described in Section 4.17(b) Transportation) the proposed Project's potential transportation impacts were reviewed per State CEQA Guidelines Section 15064.3(b)(3) and the City of Long Beach SB 743 Implementation Plan, and is recognized to cause a less than significant impact. The comment confirms that the proposed Project would have no permanent effect on the existing VMT in the Project area. The POLB will continue to refer to the State CEQA Guidelines and Caltrans' TISG for the use of VMT as the metric for analysis of automobile traffic for future projects.

### Response to Comment CADOT-3

The comment states that if the proposed Project requires the use of oversized-transport vehicles on State highways, then a Caltrans transportation permit would be required. As described in Section 4.17 (Transportation), the proposed Project may require oversized truck trips to deliver large construction equipment and materials to the site. If needed, all required permits would be obtained by the Applicant and/or their contractor from Caltrans and local jurisdictions. Construction-related trips may occur during peak commute periods, but on average, trips would avoid peak commute periods to the maximum extent feasible and would occur temporarily during construction.

## CP – City of Paramount



PEGGY LEMONS  
Mayor

BRENDA OLMOS  
Vice Mayor

ISABEL AGUAYO  
Councilmember

LAURIE GUILLEN  
Councilmember

VILMA CUELLAR STALLINGS  
Councilmember

October 27, 2020

Matthew Arms  
Director of Environmental Planning  
Port of Long Beach  
415 W. Ocean Blvd  
Long Beach, CA 90802

Subject: World Oil Tank Project

Dear Mr. Arms:

Thank you for the opportunity to comment on the World Oil Tank project. Although there are surely benefits to the local economy, I am writing to you with our concern over the increased trucking to the World Oil Refinery in South Gate. According to the published Negative Declaration, trucking will increase by 10% in order for the company to increase its capacity.

The City of Paramount considers itself a stakeholder in the discussion of regional air quality issues in an effort to ensure the long-term health of our community. As a city that shares boundaries with the 710 (Long Beach) Freeway and adjoins the City of South Gate, we are concerned that increased truck traffic will mean more air pollution in our already impacted City.

We recognize that the California Air Resource Board (CARB) has a goal for clean air trucks by 2035, but we are inquiring to see what plans the Port of Long Beach has to require alternatives to diesel trucks as part of this project, and to encourage trucking companies to expedite this process in order to alleviate future impacts of increased truck traffic. Additionally, will funding opportunities from the Port of Long Beach be offered to 710-adjacent cities in order to educate residents of 710-related impacts and mitigation?

We thank you for the opportunity to comment on this project, and look forward to partnering with you to achieve a healthier and cleaner region.

CITY OF PARAMOUNT

John Carver  
Planning Director

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CP-1

## Response to Comments – CP

City of Paramount  
John Carver  
Planning Director  
October 27, 2020

### Response to Comment CP-1

The comment expresses concern regarding increased trucking to the World Oil Refinery in South Gate, specifically the resulting increases in air quality emission in the region. The comment also inquires about plans the POLB has to require alternatives to diesel trucks as part of this project and funding opportunities to 710-adjacent cities for resident education regarding Port impacts and mitigation.

The proposed Project adds two additional petroleum storage tanks within the existing World Oil Terminal at the POLB. As described in the Section 2.11 (Operations and Maintenance), truck trips are not anticipated to increase as a result of the proposed Project, however, as a conservative, worst-case assumption to account for atypical operations such as when a pipeline is out of service, a 10 percent increase (or three additional trucks) in truck trips is assumed. Diesel-fueled trucks were assumed in the analysis, and as shown in the air quality emissions estimate in IS/ND Appendix A and the results in Table 4.3-2, the emissions from on-road heavy-duty trucks and overall emissions from the proposed Project are well below the South Coast Air Quality Management District's regional significance thresholds, nor would the proposed Project result in impact to traffic. As such, mitigation measures are not required or proposed for the proposed Project. Also, please see Response to Comment DF-3 regarding general air quality in the Port area and how it has improved over the past few decades.

The POLB, recognizing that its environmental impacts have had years to accumulate, and even the POLB's strategic and aggressive mitigation efforts do not fully address the cumulative effects of Port operations on neighboring communities, established the Community Grants Program in March 2017, allocating an initial \$46.4 million funding amount for an implementation period of 12 to 15 years for three specific programs for community-based mitigation projects that alleviate or reduce impacts from port-related activities: Community Health, Facility Improvements and Community Infrastructure. The Facility Improvements and Community Infrastructure categories provide funding for capital projects to reduce impacts from air pollution. The Community Health category provides funding to support health projects and services designed to reduce the risks associated with asthma and other respiratory and/or cardiopulmonary ailments. These services may include screening and diagnosis, case management, education, training community health workers or medical personnel, and outreach.

The POLB is limited by the public trust doctrine on how and where its public trust revenues are spent. Within the confines of these limitations, the California State Lands Commission advised the Port that trust revenues can only be used to mitigate Port impacts to the surrounding communities, over and above mitigation required by law, such as CEQA, if certain conditions are met. In 2016, the POLB completed a Community Impact Study in the areas of air quality, traffic noise, and water quality through a CEQA-like analysis that used quantitative and qualitative, industry-accepted technical methodologies to demonstrate a connection between Port operations, impacts to local communities, and possible way to mitigate those impacts. (POLB, 2016b).

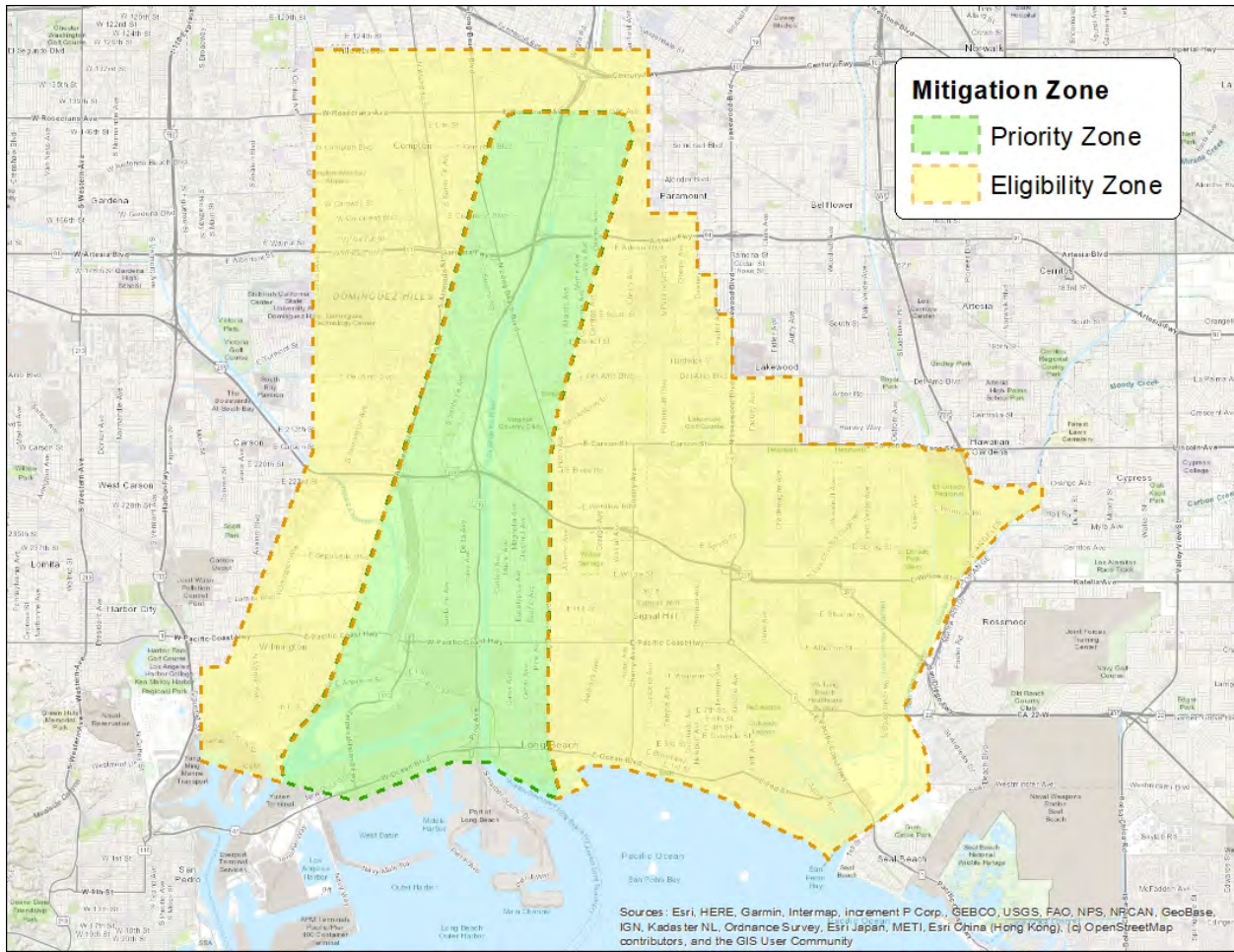
Based on the Community Impact Study, the Community Grants Program and Investment Plan identified the geographic areas most affected by Port-related operations and in which to direct Community Grants Program investments. These geographical areas, which include the entire City of Long Beach, are divided



into two zones for grant funding: the “Priority Zone” and the “Eligibility Zone”. The entire City of Long Beach and communities in parts of Wilmington in the City of Los Angeles, Carson, Compton, and Paramount fall within these two zones. The Eligibility Zone extends from the POLB along the I-710 north to portions of Paramount and Compton. The Eligibility Zone is the area in which significant Port impacts have been identified, and at minimum, mitigation projects must take place within. The Priority Zone is a subset of the Eligibility Zone and experiences the highest community impact from Port-related operations. The POLB intends to invest the majority of mitigation dollars in the Priority Zone, which includes portions of Long Beach, Wilmington in the City of Los Angeles, Carson, Compton, and Paramount; as such, projects in this zone will receive the highest consideration during the evaluation process. Funding is also prioritized for mitigation projects that benefit sensitive populations, which include children, pregnant women, the elderly, the chronically ill, and those with respiratory or other cardiopulmonary conditions (POLB, 2016b). Figure 8-1. shows the current delineation of the Priority and Eligibility Zones for the Community Grants Program.

Through the Community Grants Program, the POLB coordinates with local residents and communities to foster communication and collaboration to address community needs. Within this program, community groups, government agencies, and non-profit organizations are encouraged to submit applications for grant funding. Public workshops and focus groups are regularly conducted to define long-range funding priorities and provide input to annual Community Grants Program budgets. Briefings on the status of the Community Grants Program are presented at the POLB’s public board meetings. Community leaders and citizens are invited to attend these meetings and provide input on the program. To date, through the Community Grants Program the POLB has provided \$31.1 million in funding for the development of public parks, water quality improvements, LED lighting, healthcare programs, facility-based energy efficiency projects, trees and landscaping, solar panels, electric vehicles, air filtration, and noise abatement measures.

The City of Paramount is encouraged to learn more about the Community Grants Program by going to [www.polb.com/grants](http://www.polb.com/grants) for more information on applicant workshops, applications, and deadlines; or contact the POLB by e-mail ([grants@polb.com](mailto:grants@polb.com)) or by telephone at (562) 283-7133.



**Figure 8-1. Community Grants Program Priority and Eligibility Zones**

## CCSC – Citizens Coalition for a Safe Community

**Lisa Blewitt**

---

**From:** Tom Williams <ctwilliams2012@yahoo.com>  
**Sent:** Sunday, October 11, 2020 9:04 PM  
**To:** Blanchard, Jennifer; Port of Long Beach Environmental Planning  
**Subject:** World Oil Tank - SCH# 2020100119 NPI ND Request for Additional Information

DATE: 10/11//20

TO: Matthew Arms Via email: ceqa@polb.com Director of Environmental Planning  
Project Mgr. Jennifer Blanchard, Env.Splt. Assoc., jennifer.blanchard@polb.com or (562) 283-7100.

FROM: Dr Tom Williams, Snr.Techn. Adviser, Citizens Coalition for A Safe Community, 323-528-9682

Subject: World Oil Tank Installation Project SCH No. 2020100119 NOI/IS/ND  
RE: Request for Access to all references mentioned in IS/ND and Sec. 7

We have completed an initial review of the circulated IS/ND - 2020100119 and request the revision of the IS to support an MND with appropriate extensions for preparation and review of a complete and adequate MND if not DEIR/DEIS.

CCSC-1

Based on documents currently available on the NOTICE OF INTENT TO ADOPT AND AVAILABILITY OF AN INITIAL STUDY/NEGATIVE DECLARATION  
Date: October 7, 2020 Lead Agency: City of Long Beach Harbor Department Port of Long Beach  
Project Title: World Oil Tank Installation Project SCH No. 2020100119.

CCSC-2

If you require additional information, please contact the project manager Jennifer Blanchard, Environmental Specialist Associate, at jennifer.blanchard@polb.com or (562) 283-7100

We require additional information for example the access to the complete Albus-Keefe & Associates Geotechnical Update Report, 2018 and any preceding report for which this is an update and any other geotechnical review, reports, and/or statements.

CCSC-3

Dr Tom Williams



**Lisa Blewitt**

---

**From:** Tom Williams <ctwilliams2012@yahoo.com>  
**Sent:** Sunday, October 11, 2020 9:52 PM  
**To:** Blanchard, Jennifer; Port of Long Beach Environmental Planning  
**Subject:** Re: World Oil Tank - SCH# 2020100119 NPI ND Request for Additional Information #2

DATE: 10/11//20

TO: Matthew Arms Via email: ceqa@polb.com Director of Environmental Planning  
Project Mgr. Jennifer Blanchard, Env.Splt. Assoc., jennifer.blanchard@polb.com or (562) 283-7100.

FROM: Dr Tom Williams, Snr.Techn. Adviser, Citizens Coalition for A Safe Community, 323-528-9682

Subject: World Oil Tank Installation Project SCH No. 2020100119 NOI/IS/ND  
RE: Request for Access to all references mentioned in IS/ND and Sec. 7  
p.7-3 Matrix (Matrix PDM Engineering). 2019. API 650 Foundation Design Drawings. Sheet 3 of 3: Foundation Notes. World Oil. January 18.

CCSC-4

I have completed an initial review of the circulated IS/ND - 2020100119 and request the revision of the IS to support an MND with appropriate extensions for preparation and review of a complete and adequate MND if not DEIR/DEIS.

CCSC-5

Based on documents currently available on the NOTICE OF INTENT TO ADOPT AND AVAILABILITY OF AN INITIAL STUDY/NEGATIVE DECLARATION  
Date: October 7, 2020 Lead Agency: City of Long Beach Harbor Department Port of Long Beach  
Project Title: World Oil Tank Installation Project SCH No. 2020100119.

CCSC-6

I require additional information for example the access to the complete: p.7-3 Matrix (Matrix PDM Engineering). 2019. API 650 Foundation Design Drawings. Sheet 3 of 3: Foundation Notes. World Oil. January 18.

CCSC-7

Dr. Tom Williams

**Lisa Blewitt**

---

**From:** Tom Williams <ctwilliams2012@yahoo.com>  
**Sent:** Sunday, October 11, 2020 10:56 PM  
**To:** Blanchard, Jennifer; Port of Long Beach Environmental Planning  
**Subject:** Re: World Oil Tank - SCH# 2020100119 NPI ND Request for Additional Information #3

DATE: 10/11//20

TO: Matthew Arms Via email: ceqa@polb.com Director of Environmental Planning  
Project Mgr. Jennifer Blanchard, Env.Splt. Assoc., jennifer.blanchard@polb.com or (562) 283-7100.

FROM: Dr Tom Williams, Snr.Techn. Adviser, Citizens Coalition for A Safe Community, 323-528-9682

Subject: World Oil Tank Installation Project SCH No. 2020100119 NOI/IS/ND  
RE: Request for Access to all references mentioned in IS/ND and Sec. 7 including  
#3 p.7-2 Environmental Data Resources (EDR). 2020. EDR Radius Map Report with  
Geocheck - World Oil Terminals Long Beach. March

CCSC-8

I have completed an initial review of the circulated IS/ND - 2020100119 and request the revision of the IS to support an MND with appropriate extensions for preparation and review of a complete and adequate MND if not DEIR/DEIS.

CCSC-9

Based on documents currently available on the NOTICE OF INTENT TO ADOPT AND AVAILABILITY OF AN INITIAL STUDY/NEGATIVE DECLARATION  
Date: October 7, 2020 Lead Agency: City of Long Beach Harbor Department Port of Long Beach  
Project Title: World Oil Tank Installation Project SCH No. 2020100119.

CCSC-10

I require additional information for access to the complete: p.7-2 Environmental Data Resources (EDR). 2020. EDR Radius Map Report with Geocheck - World Oil Terminals Long Beach. March.

CCSC-11

Dr. Tom Williams



**From:** [Tom Williams](#)  
**To:** [Blanchard, Jennifer](#)  
**Subject:** Re: New Package Is Waiting  
**Date:** Thursday, October 15, 2020 3:11:11 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)

Then happy to have done this today....the site in 1923 Fairchild Aerial Photos



CCSC-12

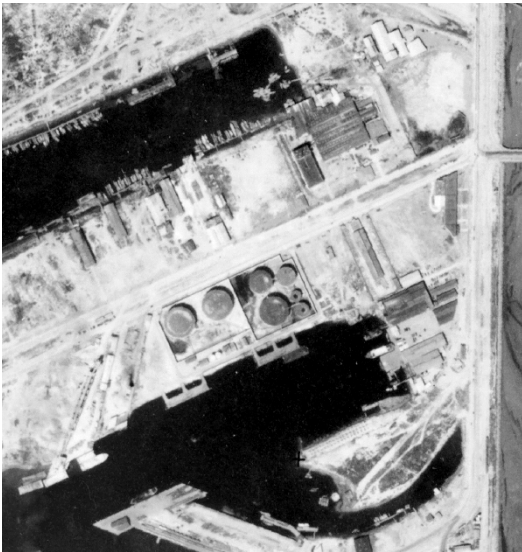
Have a good weekend

Tom

**From:** [Tom Williams](#)  
**To:** [Blanchard, Jennifer](#)  
**Subject:** Re: New Package Is Waiting  
**Date:** Thursday, October 15, 2020 3:25:44 PM  
**Attachments:** 1947 crpd.tif  
1928 crpd.tif  
image001.png  
image002.png

Also 1928 and 1947

Attachment 1: 1928 crpd.tif



Attachment 2: 1947 crpd.tif



**From:** Tom Williams <ctwilliams2012@yahoo.com>  
**Sent:** Wednesday, October 28, 2020 1:30 PM  
**To:** Blanchard, Jennifer <jennifer.blanchard@polb.com>  
**Cc:** Teramoto, Allyson <allyson.teramoto@polb.com>  
**Subject:** Re: World Oil Tank Install Project - Notice of Extension of the Public Review and Comment Period

Thanks for the notice, I saw it from other sources. Since you use Mr. - use Dr. PhD, UC Berkeley 1976

Basic problem Public accessibility to referenced/cited documents within the document and webpages 7. References

7-1 Albus-Keefe (Albus-Keefe & Associates, Inc.). 2018. Geotechnical Update Report, Proposed Tanks, 1405 Pier "C" Street, Long Beach, California. May 2. **Not available**

7-1 **CALFIRE** .... 2007. Draft Fire Hazard Severity Zones in Local Responsibility Area – State of California. [Online]: [https://osfm.fire.ca.gov/media/6827/fhszl06\\_1\\_map.pdf](https://osfm.fire.ca.gov/media/6827/fhszl06_1_map.pdf). **Accessed May 1, 2020.**  
4-32/2 California...(**CAL FIRE**) map of High Fire Hazard Severity Zones in Local Responsibility Area...(**CAL FIRE**, 2007). **Need editing**

7-1 CGS (California Geological Survey). 1999a. Fault Rupture Hazard Zones in California, CGS Special Publication #42.

**No source available**

7-1 \_\_\_\_\_. 1999b. Seismic Hazard Zone Map, Long Beach Quadrangle. March 25. [Online]: [http://gmw.consrv.ca.gov/shmp/download/quad/LONG\\_BEACH/maps/ozn\\_longb.pdf](http://gmw.consrv.ca.gov/shmp/download/quad/LONG_BEACH/maps/ozn_longb.pdf). **Accessed May 4, 2020.**

7-1 \_\_\_\_\_. 2020. Probabilistic Seismic Hazards Ground Motion Interpolator (2008). [Online]: <https://www.conservation.ca.gov/cgs/ground-motion-Interpolator-for-embedding.htm>. Accessed May 4, 2020.

**Some citations are bolded others not. What is the difference?**

7-1 City of Long Beach. 1995. Chapter 21.33 Industrial Districts. [Online]: [https://library.municode.com/ca/long\\_beach/codes/municipal\\_code?nodeld=TIT21ZO\\_CH21.33IN](https://library.municode.com/ca/long_beach/codes/municipal_code?nodeld=TIT21ZO_CH21.33IN) DI. Accessed April 28, 2020.

7-2 \_\_\_\_\_. **2020b**. SB 743 Implementation for the City of Long Beach. May 6.

4-55/2 LESS THAN SIGNIFICANT IMPACT. Per State CEQA Guidelines Section 15064.3(b)(3) and the City of Long Beach SB 743 Implementation Plan (**City of Long Beach, 2020**),...greater Los Angeles County area. **Editing required.**

7-2 Dougherty, John. 2020. Personnel Communication between John Dougherty, World Oil Terminal Manager and Aspen Environmental Group during the site visit conducted March 3, 2020. **4-15/2 single reference to bird life**

DTSC (Department of Toxic Substances Control). 2020. DTSC Envirostor Hazardous Waste and Substances Site List. [Online]: [https://www.envirostor.dtsc.ca.gov/public/search.asp?cmd=search&reporttype=CORTESE&site\\_type=CSITES,OPEN,FUDS,CLOSE&status=ACT,BKLG,COM&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST](https://www.envirostor.dtsc.ca.gov/public/search.asp?cmd=search&reporttype=CORTESE&site_type=CSITES,OPEN,FUDS,CLOSE&status=ACT,BKLG,COM&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST). **Accessed June 17, 2020.**

7-2 Environmental Data Resources (EDR). 2020. EDR Radius Map Report with Geotrack - World Oil Terminals Long Beach. March. **Nothing in text**

CCSC-14



7-2 FEMA (Federal Emergency Management Agency). 2008. FEMA Flood Map Service Center: **Search by Address**. September 26. [Online]:  
**No comparison between Accessed and Search??**

7-3 Hayward Baker. 2015. Vibro Piers. June. **PDF file. No reference in text**

7-3 Matrix (Matrix PDM Engineering). 2019. API 650 Foundation Design Drawings. Sheet 3 of 3: Foundation Notes. **World Oil**. January 18. **No specific citation in World Oil journal**.  
4-22/4 The final project design would be reviewed..., as the design implements recommendations of the geotechnical investigation report (**Matrix, 2019**).  
4-24/1+3 The final project design would be reviewed..., as the design implements recommendations of the geotechnical investigation report (**Matrix, 2019**).  
**Citation is unavailable to public.**

7-4 \_\_\_\_\_. 2019b. South Coast AQMD Applications Evaluations and Calculations, Permit to Construct Evaluation, Application 614274. Approved 8/5/19.  
\_\_\_\_\_. 2020a. South Coast AQMD Permit to Construct, Application 614274. Approved 1/2/20.  
\_\_\_\_\_. 2020b. South Coast AQMD Permit to Construct, Application 614275. Approved 1/2/20.  
**No direct site within SCAQMD.**

7-4 SWRCB (State Water Resources Control Board). 2020. GeoTracker Database. [Online]: <http://geotracker.waterboards.ca.gov/>. Accessed June 17, 2020.  
**4-31/3 No direct access to specific relevant files beyond introduction.**

7-5 World Oil **Terminals**. 2019. Application for Harbor Development Permit, Ribost Terminal LLC, DBA World Oil **Terminals**. August 14. **Incorrect citation Terminals and no access to permit/application Need thorough editing**

Thanks  
DR TOM

CCSC-14,  
cont.



**From:** Tom Williams <ctwilliams2012@yahoo.com>  
**Sent:** Thursday, October 29, 2020 1:37 PM  
**To:** Blanchard, Jennifer <jennifer.blanchard@polb.com>  
**Cc:** Teramoto, Allyson <allyson.teramoto@polb.com>  
**Subject:** Re: World Oil Tank Install Project - Notice of Extension of the Public Review and Comment Period Comments #2

Thanks for the Time Extension

Still have basic - related documents issue.

Make any/all documents in the Sec. 7 references section, publicly accessible for downloading and review

**COMMENTS:**

**SUBJECT:** World Oil Tank Installation Project, 1405 Pier C Street, Berth C73, Port of Long Beach  
**RE:** **SCH No. 2020100119** Notice of Intent, Initial Study and Negative Declaration, Comments

The IS/ND evaluates the potential impacts of the proposed Project on the existing environment. Following review of publicly available referenced documents in the Initial Study and review of assessment of potential impacts, I find the Initial Study and assessment of impacts: Negative Declaration, totally inadequate and incomplete and that many referenced documents are not provided to the public for review and study. The IS/ND must be withdrawn, revised, and recirculated as a Mitigated Negative Declaration with all referenced documents in an appendix or at least available/accessible from the internet with searchable and printable documents for public review and considerations.

7. References

7-1 Albus-Keefe (Albus-Keefe & Associates, Inc.). 2018. Geotechnical Update Report, Proposed Tanks, 1405 Pier "C" Street, Long Beach, California. May 2. **Not available**

7-1 **CALFIRE** .... 2007. Draft Fire Hazard Severity Zones in Local Responsibility Area – State of California. [Online]: [https://osfm.fire.ca.gov/media/6827/fhszl06\\_1\\_map.pdf](https://osfm.fire.ca.gov/media/6827/fhszl06_1_map.pdf). **Accessed May 1, 2020.** 4-32/2 California...**(CAL FIRE)** map of High Fire Hazard Severity Zones in Local Responsibility Area...(CAL FIRE, 2007).

**Provide good editing**

7-1 CGS (California Geological Survey). 1999a. Fault Rupture Hazard Zones in California, CGS Special Publication #42.

7-1 \_\_\_\_\_.1999b. Seismic Hazard Zone Map, Long Beach Quadrangle. March 25. [Online]: [http://gmw.consrv.ca.gov/shmp/download/quad/LONG\\_BEACH/maps/ozn\\_longb.pdf](http://gmw.consrv.ca.gov/shmp/download/quad/LONG_BEACH/maps/ozn_longb.pdf). **Accessed May 4, 2020.**

**Provide the accessed information for a 1999 document, as appendix or publicly accessible document.**

7-1 \_\_\_\_\_. 2020. Probabilistic Seismic Hazards Ground Motion Interpolator (2008). [Online]: <https://www.conservation.ca.gov/cgs/ground-motion-Interpolator-for-embedding.htm>. Accessed May 4, 2020.

**Provide the accessed information for document, as appendix or publicly accessible document.**

CCSC-15

7-1 City of Long Beach. 1995. Chapter 21.33 Industrial Districts. [Online]: [https://library.municode.com/ca/long\\_beach/codes/municipal\\_code?nodeId=TIT21ZO\\_CH21.33IN](https://library.municode.com/ca/long_beach/codes/municipal_code?nodeId=TIT21ZO_CH21.33IN) DI. Accessed April 28, 2020.

**Provide the accessed information for a 1995 document, as appendix or publicly accessible document.**

7-2 \_\_\_\_\_. **2020b**. SB 743 Implementation for the City of Long Beach. May 6. 4-55/2 LESS THAN SIGNIFICANT IMPACT. Per State CEQA Guidelines Section 15064.3(b)(3) and the City of Long Beach SB 743 Implementation Plan (**City of Long Beach, 2020**),...greater Los Angeles County area.

**Editing and references - provide appropriate page/paragraph reference.**

7-2 Dougherty, John. 2020. Personnel Communication between John Dougherty, World Oil Terminal Manager and Aspen Environmental Group during the site visit conducted March 3, 2020. **4-15/2 single reference to bird life.**

**Provide editing and the information for all "Personal Communications", as appendix or publicly accessible document.**

DTSC (Department of Toxic Substances Control). 2020. DTSC Envirostor Hazardous Waste and Substances Site List. [Online]: [https://www.envirostor.dtsc.ca.gov/public/search.asp?cmd=search&reporttype=CORTESE&site\\_type=CSITES,OPEN,FUDS,CLOSE&status=ACT,BKLG,COM&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST](https://www.envirostor.dtsc.ca.gov/public/search.asp?cmd=search&reporttype=CORTESE&site_type=CSITES,OPEN,FUDS,CLOSE&status=ACT,BKLG,COM&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST). Accessed June 17, 2020.

**Provide the accessed information for document, as appendix or publicly accessible document.**

7-2 Environmental Data Resources (EDR). 2020. EDR Radius Map Report with Geocheck - World Oil Terminals Long Beach. March. **Nothing in text.**

**Provide the document, as appendix or publicly accessible document.**

**Provide all available historic aerial photos for the Project site also available through EDR as publicly accessible documents.**

7-2 FEMA (Federal Emergency Management Agency). 2008. FEMA Flood Map Service Center: **Search by Address**. September 26. [Online]:

**Provide the 2008 document, as appendix or publicly accessible document and define "Search By Address"??(which address(es)) vs accessed.**

7-3 Hayward Baker. 2015. Vibro Piers. June. **PDF file. No reference in text**

**Provide the document, as appendix or publicly accessible document**

7-3 Matrix (Matrix PDM Engineering). 2019. API 650 Foundation Design Drawings. Sheet 3 of 3: Foundation Notes. **World Oil**. January 18.

**4-22/4 The final project design would be reviewed..., as the design implements recommendations of the geotechnical investigation report (Matrix, 2019).**

**4-24/1+3 The final project design would be reviewed..., as the design implements recommendations of the geotechnical investigation report (Matrix, 2019).**

**No specific citation in World Oil journal.**

**Provide the document, as appendix or publicly accessible document**

CCSC-15,  
cont.

7-4 \_\_\_\_\_. 2019b. South Coast AQMD Applications Evaluations and Calculations, Permit to Construct Evaluation, Application 614274. Approved 8/5/19.

\_\_\_\_\_. 2020a. South Coast AQMD Permit to Construct, Application 614274. Approved 1/2/20.

\_\_\_\_\_. 2020b. South Coast AQMD Permit to Construct, Application 614275. Approved 1/2/20.

**No direct site within SCAQMD.**

**Provide the documents, as appendix or directly publicly accessible document.**

7-4 SWRCB (State Water Resources Control Board). 2020. GeoTracker Database. [Online]: <http://geotracker.waterboards.ca.gov/>. Accessed June 17, 2020.

**4-31/3 No direct access to specific relevant files beyond introduction.**

**Provide the documents, as appendix or directly publicly accessible document.**

7-5 World Oil **Terminals**. 2019. Application for Harbor Development Permit, Ribost Terminal LLC, DBA World Oil **Terminals**. August 14. **Incorrect citation Terminals and no access to permit/application**

**Provide editing. Provide the documents, as appendix or directly publicly accessible document**

**Please retrieve the IS/ND, revise thoroughly and recirculate a fully accessible document.**

Dr Tom Williams, Snr. Techn.Adviser, Citizens Coalition for a Safe Community 323-528-9682 [ctwilliams2012@yahoo.com](mailto:ctwilliams2012@yahoo.com) 4117 Barrett Rd LA, Ca 90032

CCSC-15,  
cont.

## **Response to Comments – CCSC**

Citizens Coalition for a Safe Community  
Dr. Tom Williams, Ph.D., UC Berkeley 1976  
Senior Technical Adviser  
October 11, 15, 28, and 29, 2020

### **Response to Comment CCSC-1**

The comment requests a revision of the Initial Study to support a Mitigated Negative Declaration or Environmental Impact Report/Environmental Impact Statement. The commenter does not provide rationale or basis that would require a revision to the IS/ND. No further response is required. Nevertheless, the Port provides the following response: Per CEQA Guidelines, Article 5, Section 15063(b)(2), an Initial Study was prepared to evaluate the potential effects of the proposed Project and potential growth-inducing or cumulative effects of the proposed Project in combination with other projects. The Initial Study concluded that the proposed Project would not result in any significant effects on the environment and no mitigation measures are required; therefore, a Negative Declaration was prepared.

### **Response to Comment CCSC-2**

The comment refers to information provided in the Notice of Intent issued by the Port on October 7, 2020; no comment or question about the Draft IS/ND is apparent, therefore, no response is necessary.

### **Response to Comment CCSC-3**

The comment requests the complete Albus-Keef & Associates Geotechnical Update Report (2018) referenced in the Draft IS/ND and any preceding or related reports. On October 15, 2020, Jennifer Blanchard, Port Environmental Specialist Associate, provided the requested files via the Port's MOVEit File Transfer Protocol (FTP) site (polbftp@polb.com). Dr. Williams confirmed receipt of the referenced files via email on the same day.

### **Response to Comment CCSC-4**

The comment requests access to all referenced materials in the IS/ND and Sec. 7 p.7-3 Matrix (Matrix PDM Engineering). 2019. API 650 Foundation Design Drawings. Sheet 3 of 3: Foundation Notes. World Oil. January 18. On October 15, 2020, Jennifer Blanchard, Port Environmental Specialist Associate, provided the requested files via the Port's MOVEit FTP site (polbftp@polb.com). Dr. Williams confirmed receipt of the referenced files via email on the same day.

### **Response to Comment CCSC-5**

Please see Response to Comment CCSC-1, as it is a duplicate comment.

### **Response to Comment CCSC-6**

Please see Response to Comment CCSC-2, as it is a duplicate comment.

**Response to Comment CCSC-7**

Please see Response to Comment CCSC-4, as it is a duplicate comment.

**Response to Comment CCSC-8**

The comment requests access to all references mentioned in the IS/ND, specifically requesting the Environmental Data Resources (EDR) Radius Map Report with Geotrack – World Oil Terminals Long Beach dated March 2020. On October 15, 2020, Jennifer Blanchard, Port Environmental Specialist Associate, provided the requested files via the Port’s MOVEit FTP site ([polbftp@polb.com](mailto:polbftp@polb.com)). Dr. Williams confirmed receipt of the referenced files via email on the same day.

**Response to Comment CCSC-9**

Please see Response to Comment CCSC-1, as it is a duplicate comment.

**Response to Comment CCSC-10**

Please see Response to Comment CCSC-2, as it is a duplicate comment.

**Response to Comment CCSC-11**

Please see Response to Comment CCSC-8, as it is a duplicate comment.

**Response to Comment CCSC-12**

In the email message, the commenter states “Then happy to have done this today” and referenced a Fairchild Aerial Photo from 1923, which was also provided as an attachment to the email message. There are no apparent comments on the Draft IS/ND. Therefore, no response is required.

**Response to Comment CCSC-13**

In the email message, the commenter provides the years, 1928 and 1947. Two black and white photos were attached to the email. No further response is required.

**Response to Comment CCSC-14**

The comment requests access to the references in Draft IS/ND Section 7 (References) and identifies clarifications needed for the listed references. On October 15, 2020, Jennifer Blanchard, Port Environmental Specialist Associate, provided the requested references via the Port’s MOVEit FTP site ([polbftp@polb.com](mailto:polbftp@polb.com)). Dr. Williams confirmed receipt of the referenced files via email on the same day. The POLB also reviewed the comment’s regarding references requiring revision and made the requested clarifications to the references in Section 7 (References), where applicable in the Final IS/ND.

**Response to Comment CCSC-15**

The comment includes introductory text and states that the Negative Declaration is inadequate, incomplete, and that many referenced documents are not readily available to the public. The commenter requests revision and recirculation of the document as a Mitigated Negative Declaration with readily accessible references. Please refer to Response to Comment CCSC-14. The commenter does not raise any specific environmental concerns or provide rationale as to why a Mitigated Negative Declaration would

be more appropriate than a Negative Declaration, and as such, no further revisions or recirculation of the IS/ND is necessary. See also Response to Comment CCSC-1.



## EJ – Earthjustice

**From:** [Kartik Raj](#)  
**To:** [Port of Long Beach Environmental Planning](#)  
**Subject:** World Oil Tank Installation Project: Request for Public Comment Extension  
**Date:** Tuesday, October 20, 2020 5:38:54 PM

---

VIA: *ELECTRONIC MAIL ONLY*

RE: Request to Provide an Additional 14 days for Public Comment in Response to the Port of Long Beach's Notice of Intent to Adopt and Initial Study/Negative Declaration for the World Oil Tank Installation Project

Dear Director Matthew Arms:

Earthjustice respectfully requests that the City of Long Beach Harbor Department and the Port of Long Beach extend the public review and comment period for the World Oil Tank Installation Project, currently scheduled to end on November 5, 2020. We request a 14-day extension of the Public Review Period to November 19, 2020.

EJ-1

The World Oil Tank Installation Project would involve the construction of two 25,000-barrel crude oil tanks at the Port of Long Beach. The construction and operation of these tanks at the Port poses multiple, complex environmental issues potentially impacting several nearby communities and implicating air, water, hazardous waste, and other environmental regulations. Additionally, these tanks would be located within half a mile of numerous sensitive receptors, schools, parks, and residents. Given the complexity of the Project's numerous environmental implications, an extension on the Public Review Period for this project would ensure meaningful public input in the environmental review process.

EJ-2

As a nonprofit, public interest environmental law organization, Earthjustice is invested in providing public comments to promote CEQA's fundamental environmental protection purposes. Earthjustice has represented communities adjacent to the Port and have a significant interest in protecting those communities' environmental health. For these reasons, Earthjustice respectfully requests an extension of the public review and comment period to November 19, 2020.

EJ-3

Sincerely,

Kartik Raj (*he/him/his*)  
Community Partnerships Program Fellow  
Earthjustice  
California Regional Office  
707 Wilshire Blvd., Suite 4300  
Los Angeles, CA 90017  
T: (213) 766-1085  
earthjustice.org



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**VIA: ELECTRONIC MAIL ONLY (ceqa@polb.com)**

November 20, 2020

Matthew Arms  
Director of Environmental Planning  
Port of Long Beach  
415 W. Ocean Blvd  
Long Beach, California 90802

**RE: Comments on the Draft Initial Study and Negative Declaration for the World Oil Tank Installation Project (SCH#2020100119)**

Dear Mr. Arms:

The undersigned organizations provide comments on the Initial Study and proposed Negative Declaration (“IS/ND”) for the World Oil Tank Installation Project (“the Project”). Adequate review of the Project under the California Environmental Quality Act (“CEQA”) is crucial to understanding the environmental impacts this Project will have on local communities and climate change. The IS/ND prepared by the Port of Long Beach (“the Port”), however, fails to account for substantial evidence indicating the Project may have significant environmental effects. The IS/ND also reveals multiple significant procedural defects that violate established guidelines for CEQA review. For these reasons, in order to fulfill CEQA’s mandates and to permit a meaningful public review, the Port must prepare an Environmental Impact Report (“EIR”) for the Project.

EJ-4

The potential environmental impacts of the Project must be considered in the context of existing environmental burdens in the region. The adjacent Ports of Los Angeles and Long Beach are the largest fixed sources of pollution in the Greater Los Angeles region.<sup>1</sup> The communities surrounding the Port experience disproportionate

EJ-5

<sup>1</sup> Taylor Thomas, *Port of Long Beach Grant Program – A Lesson in Improving Funding for EJ Projects*, in Environmental Justice Working Group Case Studies: Appendix To The Recommendations For The California State Lands Commission Environmental Justice Policy Update 9 (2018), <https://www.slc.ca.gov/wp-content/uploads/2018/07/EJWG-Case-Studies-FINAL.pdf> (hereinafter “Appendix I”).



exposure to pollution and severe cumulative health impacts.<sup>2</sup> The welfare of these communities has historically been deprioritized in development projects at both ports.<sup>3</sup> In this context, adequate CEQA review is critical to mitigate all foreseeable significant environmental impacts from the Project. We have attached substantial technical analysis and other evidence demonstrating that issuance of a negative declaration for the Project would be scientifically unsupported and in violation of CEQA.<sup>4</sup> The Port must consider the evidence presented and respond to issues raised in this comment letter, including expert comments in Appendix A. We appreciate your consideration of these concerns.

EJ-5  
cont.

## I. THE IS/ND VIOLATES CEQA'S TIMING, CONSULTATION, AND NOTIFICATION REQUIREMENTS

EJ-6

### A. The Port Improperly Relies upon Permits to Construct Granted by SCAQMD Prior to the CEQA Review of the Project.

The Project's IS/ND violates CEQA's procedural requirements because it was prepared months after the Project received permits to construct from the Southcoast Air Quality Management District ("SCAQMD"), and it improperly relied upon those permits in its analysis of air quality impacts. The Port is required to follow all CEQA procedures, which courts will "scrupulously enforce" to ensure adequate environmental review.<sup>5</sup>

Under CEQA, "every lead agency or responsible agency" must consider an EIR or negative declaration "[b]efore granting any approval of a project subject to CEQA."<sup>6</sup> As a responsible agency for this Project, SCAQMD did not wait for the Port to complete and adopt the IS/ND before providing its "approval" and issuing permits to construct for each of the Project's tanks.<sup>7</sup> The SCAQMD's failure to comply with this procedural requirement constrained the Port's environmental review, which undermines CEQA's "basic purpose" to "[p]revent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures" that are feasible.<sup>8</sup> Indeed, the "policy of

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<sup>2</sup> *Id.*

<sup>3</sup> *Id.*

<sup>4</sup> *See generally* Julia May, Communities for a Better Environment, Comments on the Draft Negative Declaration, World Oil Tank Installation Project (Nov. 20, 2020) (hereinafter "Appendix A").

<sup>5</sup> *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova*, 40 Cal. 4th 412, 435 (2007), *as modified* (Apr. 18, 2007).

<sup>6</sup> 414 Cal. Code Regs. § 15004(a) [hereinafter CEQA Guidelines] (emphasis added).

<sup>7</sup> CEQA Guidelines § 15381. (The term "responsible agency" includes "all public agencies other than the lead agency which have discretionary approval power over the project."); CEQA Guidelines § 15352(b) (For "private projects, approval occurs upon the *earliest commitment* to issue... by the public agency of a... *permit*, license, certificate, or other entitlement for use of the project.") (emphasis added).

<sup>8</sup> CEQA Guidelines § 15063(a)(3).



environmental review of feasible alternatives and mitigation measures makes practical sense *only* if that review occurs *before* an agency approves a project.”<sup>9</sup>

The SCAQMD issued permits to construct for the Project’s tanks on January 2, 2020.<sup>10</sup> The Port, however, did not release the IS/ND for the Project for public review until October 7, 2020.<sup>11</sup> Delays in conducting CEQA review allow for “more bureaucratic and financial momentum . . . behind a proposed project, thus providing a strong incentive to ignore environmental concerns that could be dealt with more easily at an early stage of the project.”<sup>12</sup> CEQA review cannot take the form of “*post hoc* rationalizations to support action already taken.”<sup>13</sup> Accordingly, the Port should have conducted its CEQA review “as *early as feasible* in the planning process to enable environmental considerations to influence project program and design and yet late enough to provide meaningful information for environmental assessment.”<sup>14</sup> The SCAQMD should have then followed with its approval of permits to construct.<sup>15</sup>

Premature approval and issuance of permits for a project by a responsible agency before CEQA review creates a strong incentive for a lead agency to dismiss key environmental concerns.<sup>16</sup> By issuing its permits before the Port completed the first stages of CEQA review, SCAQMD created an improper impetus for the Port to avoid any conclusions that would invalidate those permits. In fact, the Port relied upon SCAQMD’s pre-existing permits when evaluating the significance of the Project’s air quality impacts: “[T]he two new tanks would create additional fugitive VOC emissions from tank operations. The new tank VOC emissions were estimated by the Applicant... and *have been approved* by the SCAQMD during their tank permitting process (SCAQMD, 2019b).”<sup>17</sup>

CEQA review involves consideration of numerous potential impacts beyond air quality, and mitigation of those impacts may require project design changes not

<sup>9</sup> *POET, LLC v. State Air Res. Bd.*, 218 Cal. App. 4th 681, 717 (2013), *as modified on denial of reh’g* (Aug. 8, 2013) (emphasis added).

<sup>10</sup> SCAQMD, Permit to Construct, Application No. 614274 at 1 (Jan. 2, 2020) (hereinafter “Appendix B”); SCAQMD Permit to Construct, Application No. 614275, at 1 (Jan. 2, 2020) (hereinafter “Appendix C”).

<sup>11</sup> IS/ND at 3.

<sup>12</sup> *Laurel Heights Improvement Assn. v. Regents of Univ. of California*, 47 Cal. 3d 376, 395 (1988), *as modified on denial of reh’g* (Jan. 26, 1989).

<sup>13</sup> *Save Tara v. City of W. Hollywood*, 45 Cal. 4th 116, 130 (2008), *as modified* (Dec. 10, 2008).

<sup>14</sup> CEQA Guidelines § 15004(b).

<sup>15</sup> CEQA Guidelines § 15004(a) (“Before granting any approval of a project subject to CEQA, every lead agency or responsible agency shall consider a final EIR or negative declaration or another document authorized by these guidelines to be used in the place of an EIR or negative declaration.”).

<sup>16</sup> *Laurel Heights Improvement Assn. v. Regents of Univ. of California*, 47 Cal. 3d 376, 395 (1988), *as modified on denial of reh’g* (Jan. 26, 1989).

<sup>17</sup> IS/ND at 4-9 (emphasis added). (The IS/ND also notes that “the new tank emission were required to be offset,” and that “SCAQMD has approved the transfer” of VOC credits for the Project.)



contemplated during SCAQMD’s permitting process.<sup>18</sup> By producing the IS/ND months after SCAQMD’s permits were issued, and by relying on those pre-existing permits to evaluate the Project’s air impacts, the Port violated CEQA’s procedural requirements. Though the Port cannot require SCAQMD to withdraw improperly granted permits, the Port’s CEQA analysis should not draw upon premature approval of the Project by a responsible agency.

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cont.

**B. The IS/ND Fails to Establish whether the Port Consulted with all Responsible and Trustee Agencies Prior to Producing the IS/ND.**

CEQA requires that “[p]rior to determining whether a negative declaration or environmental impact report is required for a project, the lead agency shall consult with all responsible agencies and trustee agencies” regarding the project.<sup>19</sup> The consultation may be conducted “informally,” but must occur “[a]s soon as a lead agency has determined that an initial study will be required for the project.”<sup>20</sup> The purpose of the consultation is to “obtain the recommendations of those agencies as to whether an EIR or a negative declaration should be prepared.”<sup>21</sup>

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SCAQMD is a “responsible agency” for this Project under CEQA, because it has “approval power over the project.”<sup>22</sup> The IS/ND provides no indication that the Port consulted with SCAQMD prior to determining a negative declaration is appropriate for the Project.<sup>23</sup> Although the IS/ND cites to permits to construct issued by SCAQMD for the Project tanks, the permits themselves do not constitute “recommendations” by SCAQMD regarding “whether an EIR or negative declaration should be prepared” for the purposes of CEQA.<sup>24</sup> Therefore, the IS/ND’s omission of any consultation with responsible agencies indicates the Port failed to consult with SCAQMD and seek its recommendations as required by CEQA.

Initial CEQA review of the Project also required the Port to consult with relevant trustee agencies. A “trustee agency” is “a state agency having jurisdiction by law over natural resources affected by a project which are *held in trust* for the people of the State of California.”<sup>25</sup> The California Department of Fish and Wildlife

<sup>18</sup> Specifically, if the Port’s CEQA review required project changes to mitigate impacts, SCAQMD may be forced to re-evaluate the project design and determine again whether to approve construction permits for the tanks. *See Residents Against Specific Plan 380 v. Cty. of Riverside*, 9 Cal. App. 5th 941, 959 (2017) (It is a basic purpose of CEQA to “prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.”).

<sup>19</sup> Cal. Pub. Res. Code § 21080.3(a).

<sup>20</sup> CEQA Guidelines § 15063(g).

<sup>21</sup> *Id.*

<sup>22</sup> CEQA Guidelines § 15381.

<sup>23</sup> *See, e.g.*, IS/ND at 6-1 (Summarizing parties involved and consulted in the preparation of the negative declaration and omitting responsible and trustee agency contacts from list).

<sup>24</sup> CEQA Guidelines § 15063(g).

<sup>25</sup> CEQA Guidelines § 15386.

“CDFW,” formerly the Department of Fish and Game), is specifically listed as one such trustee agency in CEQA Guidelines.<sup>26</sup> CDFW is a trustee agency “with regard to the fish and wildlife or the state.”<sup>27</sup> The Port was required to consult with CDFW, because the Project would affect the fish and wildlife of the State in several ways. The IS/ND notes that “[t]he open water areas of the Port provide important nursery and foraging habitat for coastal marine fish and nesting and foraging habitat for many resident and migratory birds. The waterways in and around the Port also provide habitat for marine mammals, which are protected under the Marine Mammal Protection Act.”<sup>28</sup> The IS/ND also notes that “[s]pills of hazardous materials could occur due to improper handling and/or storage practices during construction or operation activities could potentially cause soil or groundwater contamination, or contamination of the adjacent Channel 2.”<sup>29</sup> The Project would also involve “[a]pproximately 50,000 bbl of water . . . used for the [facility’s] hydrotest,” which would be “discharge[d] into the harbor” after testing and dichlorination.<sup>30</sup> The IS/ND indicates potential Project impacts on birds, providing several measures to “prevent taking active bird nests during the nesting season.”<sup>31</sup>

The IS/ND claims that the Project will not have significant effects on wildlife resources. However, for the purposes of CEQA’s consultation requirement, “natural resources can be ‘affected by’ a project, and hence the lead agency may have duties toward ‘trustee agencies,’ even if the lead agency believes the project will have no significant effect on the environment.”<sup>32</sup> Because the Port admits a risk of hazardous waste spills that could cause contamination to Port waters that provide “important nursery and foraging habitat” for fish and wildlife, and that measures may be needed to avoid the taking of bird nests, the Port was required to consult with CDFW.<sup>33</sup> Specifically, CEQA Guidelines require the Port consult with CDFW and receive its recommendations before issuing a negative declaration or preparing an EIR.<sup>34</sup>

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<sup>26</sup> CEQA Guidelines § 15386(a).

<sup>27</sup> *Id.*

<sup>28</sup> IS/ND at 4-16.

<sup>29</sup> *Id.* at 4-30, 4-31.

<sup>30</sup> *Id.* at 4-34.

<sup>31</sup> *Id.* at 5-5.

<sup>32</sup> *Gentry v. City of Murrieta*, 36 Cal. App. 4th 1359, 1387 (1995), as modified on denial of reh’g (Aug. 17, 1995).

<sup>33</sup> IS/ND at 4-30, 4-31, 5-5.

<sup>34</sup> CEQA Guidelines § 15063(g).



### C. The IS/ND Fails to Establish that the Port Sent the Notice of Intent to Adopt to all Responsible and Trustee Agencies.

CEQA requires that the lead agency provide a notice of intent to adopt a negative declaration to all responsible agencies and trustee agencies “sufficiently prior to adoption” of the negative declaration with “the review period provided under Section 15015.”<sup>35</sup> As noted in [Section I.B.](#), it is unclear whether the Port properly identified and consulted with all responsible and trustee agencies regarding the Project. The notice of intent to adopt and other documents provided to the public do not list the SCAQMD and CDFW, or any other responsible and trustee agencies, for service. Based on the information available, it appears these agencies did not receive legally sufficient notice of the Project’s IS/ND as required by CEQA. As such, the Port must provide information confirming that all required agencies received adequate notice, and were granted sufficient opportunity to provide comments on the IS/ND.

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## II. THE IS/ND FAILS TO ANALYZE PROPERLY THE PROJECT’S AIR QUALITY IMPACTS

### A. The Estimates of Benzene and Other VOC Emissions in the IS/ND are Unreliable and do not Fully Reflect Potential Significant Air Emissions.

The IS/ND fails to fully account for Project VOC emissions because it uses the U.S. EPA TANKS model,<sup>36</sup> which is known to grossly underestimate VOC emissions from storage tanks. According to a 2017 SCAQMD-sponsored study (the “FluxSense study”) on air emissions from petroleum refineries in the South Coast Air Basin, that model consistently underestimates VOC emissions from storage tanks at startling levels.<sup>37</sup> Excluding a partially shut-down refinery, the *average* VOC emissions were 8.6 times greater than estimated using the U.S. EPA TANKS model.<sup>38</sup> The attached technical comments applied the findings of the FluxSense study, concluding that the Project’s VOC emissions are estimated at “83.4 lbs/day (9.7 x 8.6), which exceeds the District’s 75 lb./day threshold of significance, but which has the potential to go much higher.”<sup>39</sup> Further, based on the greatest

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<sup>35</sup> CEQA Guidelines § 15072(a); CEQA Guidelines § 15105(b) (“The public review period for a proposed negative declaration or mitigated negative declaration shall be not less than 20 days. When a proposed negative declaration or mitigated negative declaration is submitted to the State Clearinghouse for review by state agencies, the public review period shall not be less than 30 days, unless a shorter period, not less than 20 days, is approved by the State Clearinghouse.”).

<sup>36</sup> IS/ND at 4-9.

<sup>37</sup> Johan Mellqvist, et al., FluxSense Inc., Emission Measurements of VOCs, NO<sub>2</sub> and SO<sub>2</sub> from the Refineries in the South Coast Air Basin Using Solar Occultation Flux and Other Optical Remote Sensing Methods 3 (Final Report Apr. 11, 2017), <https://earthjustice.sharefile.com/d-s5312b425ff2c44f2a0c0415cd0f45d4a> (hereinafter “Appendix E”).

<sup>38</sup> *Id.*

<sup>39</sup> Appendix A, Section II.D.

underestimation observed in the FluxSense study, the Project’s “VOC emissions would be 116.4 lbs/day (9.7 x 12).”<sup>40</sup> The Fluxsense study also found that cancer-inducing benzene emissions in particular are underestimated at extremely high rates: observed emissions were, on average, 34 times higher than estimates, and excluding the partially shut-down refinery, 71 times higher.<sup>41</sup>

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cont.

Beyond the FluxSense study, “[s]ystematic underestimation of VOC emissions from the petroleum industry, such as large refineries, has been observed in various areas of the US and around the world during multiple measurement surveys.”<sup>42</sup> For instance, a 2015 study from the Journal of Air & Waste Management found that underestimation levels could be even higher than reported in the FluxSense study, “up to 448 times greater than estimated at a floating roof tanks.”<sup>43</sup> The proposed Project would also use floating roof tanks.<sup>44</sup>

There is substantial evidence from other recent studies and multiple experts demonstrating that the IS/ND’s methodology significantly underestimates the Project’s VOC emissions.<sup>45</sup> On the basis of this evidence and the specific details of the Project, Communities for a Better Environment Senior Scientist Julia May concludes “[t]he Project clearly has the potential for significant VOC emissions.”<sup>46</sup> The IS/ND relies upon flawed methodology for its assessment of VOC emissions, and is otherwise not “supported by substantial evidence in the record” as required by CEQA.<sup>47</sup>

#### **B. The Analysis of Localized VOC Impacts is Flawed and Incomplete.**

The IS/ND did not address properly the Project’s potentially significant impacts from VOC emissions on sensitive receptors near the Project site. The Port noted that there are no SCAQMD localized significance thresholds for VOC emissions, so the Port instead based its analysis on the SCAQMD daily VOC emissions threshold and SCAQMD’s “cancer health risk assessment.”<sup>48</sup> On the basis of that threshold, the Port concluded that “operation emissions would not expose sensitive receptors to substantial pollutant concentrations.”<sup>49</sup>

EJ-10

The Port’s analysis of localized VOC risks is flawed for several reasons. First, a general, daily emissions threshold cannot substitute a localized emissions

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<sup>40</sup> *Id.*

<sup>41</sup> Appendix A, Section II.A.

<sup>42</sup> Appendix E at 3.

<sup>43</sup> Appendix A, Section II.C.iv.

<sup>44</sup> IS/ND at 4-7.

<sup>45</sup> Appendix A, Section II.

<sup>46</sup> Appendix A at 3.

<sup>47</sup> CEQA Guidelines § 15091(b).

<sup>48</sup> IS/ND at 4-12.

<sup>49</sup> *Id.*



threshold when evaluating localized impacts on nearby sensitive receptors; this is especially true in the context of multiple nearby sensitive receptors, including several elementary schools and parks located approximately half a mile of the Project site.<sup>50</sup> Furthermore, SCAQMD’s cancer health risk assessment does not address any of the other significant health risks posed by VOC emissions, including through the formation of ground-level ozone.<sup>51</sup> Finally, the Port’s estimates of the Project’s VOC emissions are based on an unreliable methodology, as discussed in [Section II.A](#). These issues together create an unjustifiable risk that the Project’s VOC impacts on nearby sensitive receptors, including children at elementary schools, were not meaningfully addressed in the IS/ND.

EJ-10  
cont.

**C. The IS/ND Fails to Analyze Potentially Significant Impacts from Hydrogen Sulfide Emissions that are Cumulatively Significant in the Area.**

The IS/ND completely fails to analyze Hydrogen Sulfide (“H<sub>2</sub>S”) emissions from the Project’s tanks, which have potentially significant environmental impacts.<sup>52</sup> While the odor of H<sub>2</sub>S is “extremely strong and foul,” it can also cause adverse health effects, including headaches, nausea, vomiting, and eye irritation.<sup>53</sup> SCAQMD has specifically identified H<sub>2</sub>S emissions as causing substantial impacts in the Port area.<sup>54</sup> The IS/ND failed to provide any analysis of these impacts, despite key studies showing cumulative impacts of H<sub>2</sub>S in communities near refineries and other facilities.<sup>55</sup> By ignoring the potential impacts of H<sub>2</sub>S emissions, the IS/ND fails to meet CEQA’s requirement to provide a “comprehensive cumulative impacts evaluation.”<sup>56</sup>

EJ-11

**D. The IS/ND Fails to Account for the Full Increase of Foreseeable Truck Trips Required to Service the New Tanks and for Crude Balancing.**

The IS/ND estimates that the Project will cause terminal truck trips to increase by 10 percent “to accommodate vendors not connected to the pipeline.”<sup>57</sup> However, the IS/ND also states that “[p]eriodically, crude oil may be returned to the tanks by daily truck trips for refinery crude balancing.”<sup>58</sup> Furthermore, the IS/ND

EJ-12

<sup>50</sup> IS/ND at 4-43.

<sup>51</sup> Junfeng (Jim) Zhang et al., *Ozone Pollution: A Major Health Hazard Worldwide*, *Frontiers in Immunology*, Oct. 31, 2019, at 1, <https://doi.org/10.3389/fimmu.2019.02518> (VOCs react with nitrogen oxides “leading to ozone formation in the troposphere. . . Emerging evidence has shown that both short-term and long-term exposures to ozone, at concentrations below the current regulatory standards, were associated with increased mortality due to respiratory and cardiovascular diseases.”).

<sup>52</sup> Appendix A, Section III.

<sup>53</sup> CARB, *Hydrogen Sulfide & Health*, <https://tinyurl.com/y4nlq8lh>.

<sup>54</sup> Appendix A, Section III.

<sup>55</sup> *Id.*

<sup>56</sup> *Bakersfield Citizens for Local Control v. City of Bakersfield*, 124 Cal. App. 4th 1184, 1214 (2004).

<sup>57</sup> IS/ND at 2-8.

<sup>58</sup> *Id.*

does not account for truck trips to transport maintenance materials required by the Project's tanks, and the waste materials those tanks would generate. It is unclear whether the Port considered all additional truck trips in its estimation of truck trip increases, and the IS/ND does not estimate how often trips for crude balancing would occur. Trucks serving the Port "often travel near and through local neighborhoods to reach their destinations" and "expos[e] residents to harmful air pollutants."<sup>59</sup> Given the existing impacts of truck traffic in the region, the Port must consider the full foreseeable increase of truck trips the Project would cause.

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cont.

#### **E. The IS/ND Fails to Consider that Exposure to Air Pollution Increases Vulnerability to COVID-19.**

The IS-ND completely fails to consider the link between air pollution from the Project's construction and operation, including associated lifecycle emissions, and COVID-19. Studies published since the onset of the COVID-19 pandemic have found that exposure to higher amounts of air pollution also increases a population's vulnerability to this coronavirus. A major study of air pollution and COVID-19 mortality in the U.S., for example, found that exposure to even a small increase in fine particulate matter ("PM<sub>2.5</sub>") was linked to an 8% greater chance of dying from COVID-19.<sup>60</sup>

EJ-13

A second study in Europe found that populations exposed to higher levels of nitrogen dioxide experienced higher rates of mortality during the COVID-19 pandemic and concluded "long-term exposure to this pollutant may be one of the most important contributors to fatality caused by the COVID-19 virus in these regions and maybe across the whole world."<sup>61</sup>

Additionally, a study in England found that higher levels of ozone, nitrogen oxide, and nitrogen dioxide are significantly associated with COVID-19 deaths.<sup>62</sup> Similarly, a study in Italy concluded that air pollution should be considered an additional co-factor in the high level of COVID-19 mortality in Northern Italy, noting that people living in areas with high pollution levels are

<sup>59</sup> SCAQMD, AB 617 Community Emissions Reduction Plan for Wilmington, Carson, West Long Beach 5d-1 (Final Draft, Sept. 2019), <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2019/2019-sep6-025c.pdf?sfvrsn=6>.

<sup>60</sup> Xiao Wu et al., *Exposure to air pollution and COVID-19 mortality in the United States*, medRxiv (Apr. 5, 2020), <https://doi.org/10.1101/2020.04.05.20054502>; see also Lisa Friedman, *New Research Links Air Pollution to Higher Coronavirus Death Rates*, N.Y. Times (Apr. 17, 2020), <https://www.nytimes.com/2020/04/07/climate/air-pollution-coronavirus-covid.html>.

<sup>61</sup> Yaron Ogen, *Assessing Nitrogen Dioxide (NO<sub>2</sub>) Levels as a Contributing Factor to Coronavirus (COVID-19) Fatality*, 726 Science of the Total Environment 138605 (July 15, 2020), <https://doi.org/10.1016/j.scitotenv.2020.138605>.

<sup>62</sup> Marco Travaglio et al., *Links Between Air Pollution and COVID-19 in England*, medRxiv (Jun. 6, 2020), <https://doi.org/10.1101/2020.04.16.20067405>.



more likely to develop chronic respiratory conditions and are more vulnerable to infective agents.<sup>63</sup> Finally, two studies from China found that short-term exposure to higher concentrations of air pollutants—including particulate matter, nitrogen dioxide, carbon monoxide, and ozone—is associated with an increased risk of COVID-19 infection.<sup>64</sup>

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The Port must consider these recent studies that that present significant new information link COVID-19 to pollution sources common throughout all stages of oil and gas development and processing.

**F. The IS/ND Fails to Consider Potentially Significant Emissions from Equipment and Processes to be Used in the Project's Operation.**

The IS/ND does not properly account for the Project's emissions from pipeline pumps, pipeline cleaning, tank water draw, and tank flashing.

EJ-14

The IS/ND states that “a 25-horsepower pump would be installed for each tank to pump crude oil from existing lines to and from the new tanks,” but then fails to analyze the emission impacts from the operation of those pumps.<sup>65</sup> The Port also acknowledges that the Project's implementation would lead to pumping fuel oils at the terminal, which would generate a “minor amount of increased indirect GHG emissions.”<sup>66</sup> Instead of evaluating these emission increases, the Port states “the amount of these increased emissions cannot be estimated as the future use of these two existing tanks is not known.”<sup>67</sup> The Port's contradictory statements are misleading—it cannot simultaneously assess that these emission increases are insignificant, while also stating the amount cannot be estimated. Even assuming the future activity of the Project's existing tanks is unknown, fuel pump emissions are assumedly bound to some range according to factors, such as their energy efficiency, pipeline capacity, and the permit limits. The Port must provide an estimate of the emissions increase from the Project's pipeline fuel pumps before attempting to characterize the Project's air impacts as insignificant.

Additionally, the IS/ND does not consider emissions from cleaning the added terminal pipeline the Project would bring to the terminal. The tanks would each

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<sup>63</sup> Edoardo Conticini et al., *Can Atmospheric Pollution Be Considered a Co-factor in Extremely High Level of SARS-CoV-2 Lethality in Northern Italy?*, 261 *Environmental Pollution* 114465 (June 2020), <https://doi.org/10.1016/j.envpol.2020.114465>.

<sup>64</sup> Huaiyu Tian et al., *Risk of COVID-19 is Associated with Long-term Exposure to Air Pollution*, medRxiv (Aug. 23, 2020) (unpublished), <https://doi.org/10.1101/2020.04.21.20073700>; Yongjian Zhu et al., *Association Between Short-Term Exposure to Air Pollution and COVID-19 Infection: Evidence from China*, 727 *Science of the Total Environment* (July 20, 2020), <https://doi.org/10.1016/j.scitotenv.2020.138704>.

<sup>65</sup> IS/ND at 2-4.

<sup>66</sup> *Id.* at 4-26.

<sup>67</sup> *Id.*

require approximately 40 linear feet of pipeline to connect them to existing pipelines at the terminal.<sup>68</sup> Such pipelines are typically cleaned using a “pig,” a physical device that facilitates transferring and separating products across pipelines.<sup>69</sup> Cleaning pipelines with a “pig” can cause significant air emissions, especially of VOCs.<sup>70</sup> The IS/ND fails to disclose or analyze whether the Project will use a “pig” or similar devices to maintain the additional pipelines, and whether significant emissions may be associated with those cleaning procedures.

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cont.

Finally, the IS/ND does not address the VOC emissions associated with the necessary treatment of wastewater from dewatering the Project’s tanks. The Project would generate wastewater that would be “treated at the onsite wastewater treatment plant.”<sup>71</sup> Treating wastewater from a crude oil storage tank is a process that emits VOCs.<sup>72</sup> The Port must account for those emissions and include them in consideration of the Project’s total emissions.

### III. ANALYSIS OF THE PROJECT’S CUMULATIVE IMPACTS IS INCOMPLETE AND INADEQUATE

#### A. The IS/ND’s Analysis of the Project’s Cumulative Impacts is Improper and Incomplete.

CEQA requires the lead agency to consider whether a project would have significant environmental effects based on its cumulative impacts.<sup>73</sup> The analysis of cumulative impacts must consider the “incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.”<sup>74</sup> CEQA stresses the importance of cumulative impacts in recognition that “the full environmental impact of a proposed project cannot be gauged in a vacuum.”<sup>75</sup> Failure to properly address cumulative impacts would “effectively defeat CEQA’s mandate to review the actual effect of the projects upon the environment.”<sup>76</sup>

EJ-15

<sup>68</sup> IS/ND at 2-6.

<sup>69</sup> Phyllis Fox, Report on Bakersfield Crude Terminal Permits to Operate (Dec. 24, 2014) at 9-10 (hereinafter “Appendix F”).

<sup>70</sup> *Id.* (“As the pig travels through the pipeline, residual vapors are pushed through the line. If the vapors are not routed to a control device, typically a flare or incinerator, they escape through openings on devices such as hatches, doors, or vents. Emissions can be significant, depending on the amount and vapor pressure of the product. Depending on the gas used to push the pig, the bleed-off step can also emit significant amounts of VOC.”).

<sup>71</sup> IS/ND at 4-30.

<sup>72</sup> Appendix F at 9-10.

<sup>73</sup> CEQA Guidelines § 15064(h).

<sup>74</sup> CEQA Guidelines § 15355(b).

<sup>75</sup> *Bakersfield Citizens for Local Control v. City of Bakersfield*, 124 Cal. App. 4th 1184, 1215 (2004).

<sup>76</sup> *Id.*



The IS/ND states the Project's impacts are not cumulatively considerable due to its "relatively nominal level and area of impact" and "temporary nature."<sup>77</sup> However, it is unclear how the Project's impact could be accurately described as "nominal" or "temporary." The Project involves not simply the *construction* of the storage tanks, but also includes their operation over many decades. The cumulative impacts analysis fails to consider the storage tanks' estimated operation lifespan of "greater than 50 years."<sup>78</sup> Moreover, the Project's tanks are expected to collectively generate approximately 15,000 barrels of tank sludge (a form of "hazardous waste") and over 170,000 pounds of VOCs over their operational lifetime of 50 years or longer.<sup>79</sup> In light of these and other expected lifetime impacts, the Port cannot plausibly conclude that the Project's impacts are too "nominal" or "temporary" to be cumulatively considerable.<sup>80</sup>

The Port also claims that the Project's cumulative impacts are insignificant due to the Project's "highly developed industrial surroundings."<sup>81</sup> This statement appears to imply that increased air, water, and other types of pollution, among other environmental impacts, are less harmful when pre-existing pollution levels are already high in the area. This approach contradicts the analysis required by CEQA Guidelines: the Port must consider the "incremental impact of the project *when added* to other closely related past, present, and reasonably foreseeable probable future projects."<sup>82</sup> In spite of that requirement, the IS/ND concludes that *cumulative* impacts of the Project and "other current projects in the region" would be "limited and minimized" because each of those *individual* projects are expected to comply with SCAQMD standards.<sup>83</sup> CEQA Guidelines, however, explicitly envision that impacts may be "*individually limited*, but cumulatively considerable."<sup>84</sup> Indeed, "[o]ne of the most important environmental lessons that has been learned is that environmental damage often occurs incrementally from a variety of small sources."<sup>85</sup> By failing to apply the relevant CEQA standards for assessing the Project's cumulative impacts, the IS/ND failed to provide "a comprehensive cumulative impacts evaluation" as required by CEQA.<sup>86</sup>

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<sup>77</sup> IS/ND at 4-65.

<sup>78</sup> *Id.* at 2-9.

<sup>79</sup> *Id.* at 2-9, 4-10, 4-61 (The IS/ND estimates that the Project's would generate 1,500 barrels of sludge from cleaning each tank every 10 years and 9.81 pounds of VOC emissions each day. Each tanks' lifespan is estimated to be greater than 50 years.).

<sup>80</sup> *Id.* at 4-65.

<sup>81</sup> *Id.*

<sup>82</sup> CEQA Guidelines § 15355(b).

<sup>83</sup> IS/ND at 4-65.

<sup>84</sup> CEQA Guidelines § 15064(h)(1) (emphasis added).

<sup>85</sup> *Bakersfield Citizens for Local Control v. City of Bakersfield*, 124 Cal. App. 4th 1184, 1214 (2004).

<sup>86</sup> *Id.*

## B. The IS/ND Fails to Consider the Project's Cumulative Impacts in the Context of World Oil Terminal Operations.

The Port is required to assess the Project's cumulative impacts in the context of the "closely related past, present, and reasonably foreseeable probable future projects," including the existing facilities at the World Oil Terminal.<sup>87</sup> Whether projects are "closely related" depends on the similarity of the projects' function and type of impact.<sup>88</sup> The World Oil Terminal presently "contains seven existing petroleum tanks... [with] a total storage capacity of 502,000 bbl."<sup>89</sup> Four of those tanks are "leased to Marathon Petroleum and Glencore."<sup>90</sup> The Project proposes two additional tanks to be built at the World Oil Terminal, immediately adjacent to existing tanks, connected to the same pipelines as existing tanks, and providing additional "storage of crude oil and leasing of the existing tanks to third-party vendors."<sup>91</sup> These vendors are Marathon Petroleum and Glencore – the entities already leasing storage at the World Oil Terminal.<sup>92</sup> Viewing the terminal as a whole, the Port claims "the two new tanks would blend in with the existing seven tanks on-site."<sup>93</sup> The Port also describes operation of the Project's tanks as "similar to existing operations."<sup>94</sup> As the Project tanks would simply add to the type of petroleum storage infrastructure that exists at the terminal, and these new tanks would serve a similar function to existing tanks, the Project is closely related to the operations of the terminal as a whole. The Port is therefore required under CEQA to consider the Project's cumulative impacts in the context of existing terminal operations.<sup>95</sup>

The IS/ND fails to consider adequately the "incremental impact of the project when added to" the closely related operations at World Oil Terminal.<sup>96</sup> Although the Port claims that "[o]perational activities would not substantially change," the IS/ND does not actually describe key impacts from operation of the terminal, which already provides 502,000 barrels of storage capacity.<sup>97</sup> For example, the cumulative impacts analysis does not consider the terminal's current hazardous waste generation, GHG emissions, or fugitive VOC emissions. Instead, the Port speculates

<sup>87</sup> CEQA Guidelines § 15355(b).

<sup>88</sup> *Bakersfield Citizens for Local Control v. City of Bakersfield*, 124 Cal. App. 4th 1184, 1215 (2004). (Finding that two shopping centers were closely related projects, because the shopping centers covered the same "shopper catchment area," they provided similar services within a few miles of each other, and they created similar adverse environmental effects.).

<sup>89</sup> IS/ND at 1.

<sup>90</sup> *Id.* at 2-3.

<sup>91</sup> *Id.* at 2-8.

<sup>92</sup> *Id.* at 2-8.

<sup>93</sup> *Id.* at 4-2.

<sup>94</sup> *Id.* at 4-60.

<sup>95</sup> CEQA Guidelines § 15355(b).

<sup>96</sup> *Id.*

<sup>97</sup> IS/ND at 2-3.



that air quality impacts from “all current projects in the region” would be “limited” or “minimized” by virtue of complying with SCAQMD standards, but fails to provide any evidence or analysis relating to the terminal’s existing operations.<sup>98</sup> As noted in Section III.A., CEQA Guidelines explicitly conceive that impacts may be “individually limited, but cumulatively considerable.”<sup>99</sup> The IS/ND lacks key evidence and analysis of the Project’s cumulative impacts “when added to” operations at the World Oil Terminal, and the Port’s finding of no significant cumulative impact violates CEQA’s requirement that such findings “shall be supported by substantial evidence in the record.”<sup>100</sup>

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cont.

### **C. The IS/ND Fails to Consider Cumulative Impacts of Closely Related Refining Operations in the Region.**

The Port is required to consider the Project’s cumulative impacts in the context of closely related projects, including “reasonably foreseeable probable future projects.”<sup>101</sup> World Oil’s plan to lease the additional storage space created by proposed tanks is a fundamental goal of the Project as a whole. The tanks are explicitly planned to allow World Oil to lease additional terminal storage to specific “third party vendors” – the Marathon Petroleum Carson Refinery and the Glencore Long Beach and Carson Marine Terminals.<sup>102</sup> The new tanks are also planned to “provide crude oil to the World Oil Refinery in South Gate.”<sup>103</sup> As the Project is specifically intended to enable particular oil refining activities at these named facilities, those refining activities are “reasonably foreseeable” and “closely related” to the Project.<sup>104</sup> Therefore, the refining activities specifically facilitated by the Project must be considered in the Port’s cumulative impacts analysis.

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The IS/ND’s cumulative impact analysis does not consider any of the Project’s potential cumulative impacts in the context of closely related refining activities. Oil refineries generate multiple pollutants including numerous air emissions such as VOCs, particulate matter (“PM10” and “PM2.5”), nitrogen oxides, and sulfur oxides.<sup>105</sup> Oil refineries are substantial contributors to the high air pollution burden in the region, and the impacts of closely related refineries should not be omitted from the “comprehensive cumulative impacts evaluation” that CEQA requires.<sup>106</sup>

<sup>98</sup> IS/ND at 4-65.

<sup>99</sup> CEQA Guidelines § 15064(h)(1).

<sup>100</sup> CEQA Guidelines § 15091(b).

<sup>101</sup> CEQA Guidelines § 15355(b).

<sup>102</sup> IS/ND at 2-1, 2-8.

<sup>103</sup> *Id.* at 2-1.

<sup>104</sup> CEQA Guidelines § 15355(b).

<sup>105</sup> CalEPA & Office of EnvHealth Hazard Assessment, Analysis of Refinery Chemical Emissions and Health Effects 34 (Mar. 2019), <https://oehha.ca.gov/media/downloads/faqs/refinerychemicalsreport032019.pdf>.

<sup>106</sup> *Bakersfield Citizens for Local Control v. City of Bakersfield*, 124 Cal. App. 4th 1184, 1214 (2004).

The IS/ND claims impacts from “all other current projects in the region” would be “limited and minimized,” but it is unclear whether “current projects” refers only to other storage tanks, or also includes petroleum refinery operations. The IS/ND’s conclusory and vague cumulative impacts analysis fails to inform the public and decisionmakers about impacts from closely related refinery activities and does not meet CEQA’s requirement to consider cumulative impacts “in connection with the effects of . . . probable future projects.”<sup>107</sup>

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cont.

**D. The IS/ND Fails to Consider the Cumulative Impacts from Hundreds of Other Similar Storage Tanks Projects Recently Approved in the Region.**

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The adjacent Ports of Los Angeles and Long Beach “are the single-largest fixed sources of pollution in the Greater Los Angeles region.”<sup>108</sup> The ports are located in the community of Wilmington, Carson, and West Long Beach (collectively referred to as “WCWLB”).<sup>109</sup> SCAQMD’s Community Steering Committee for WCWLB identified “emissions and leaks from refining process equipment and storage tanks” as one of “three main air quality priorities” that must be addressed to protect that community from harmful air pollution.<sup>110</sup> The Committee also “identified the Ports [of Los Angeles and Long Beach] as an air quality priority.”<sup>111</sup> Despite the severe environmental burden created by regional fossil fuel infrastructure, SCAQMD has permitted over *850 storage tanks* in the last 10 years for oil refinery operations and related infrastructure.<sup>112</sup> Over half of these storage tanks are for petrochemicals, and 86 tanks are specifically for crude oil storage.<sup>113</sup> The Project’s proposed crude oil tanks would be an addition to the wave of recently-approved storage tanks in and adjacent to the Port, and is “closely related” to these other tank projects under CEQA.<sup>114</sup>

<sup>107</sup> CEQA Guidelines § 15064(h)(1).

<sup>108</sup> Appendix I at 9.

<sup>109</sup> SCAQMD, AB 617 Community Emissions Reduction Plan for Wilmington, Carson, West Long Beach 5d-1 (Final Draft, Sept. 2019), <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2019/2019-sep6-025c.pdf?sfvrsn=6>.

<sup>110</sup> *Id.* at 5b-3.

<sup>111</sup> *Id.* at 5c-1.

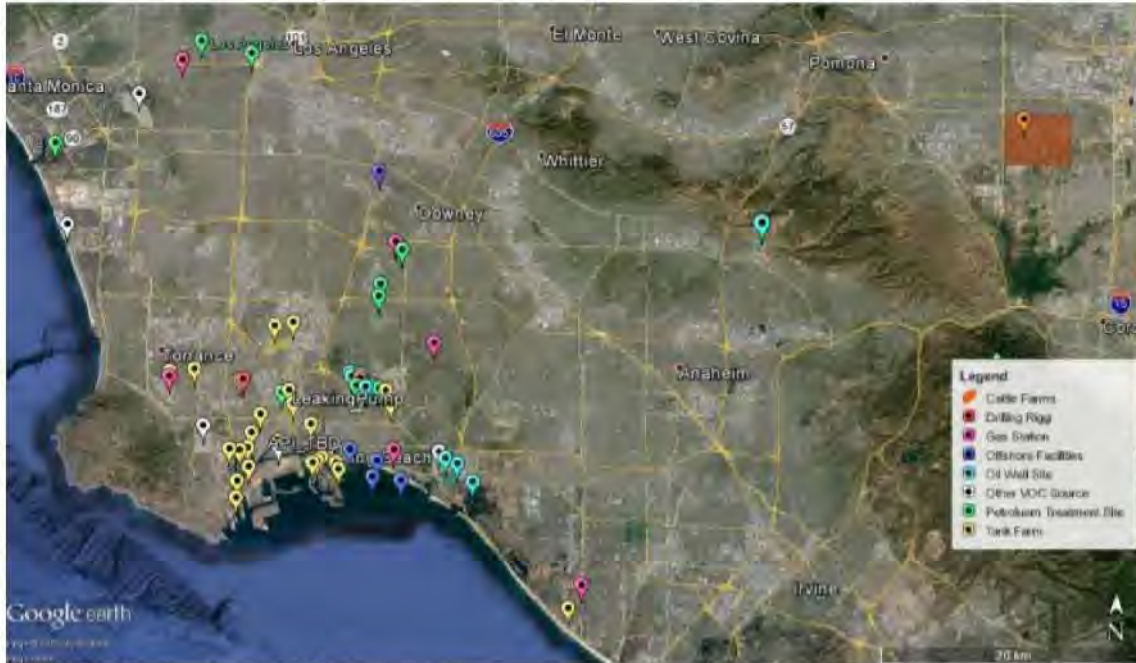
<sup>112</sup> Earthjustice, Spreadsheet Summary of SCAQMD-approved Storage Tanks (hereinafter “Appendix G”).

<sup>113</sup> *Id.*

<sup>114</sup> CEQA Guidelines § 15355(b).



Figure A: Concentration of Storage Tanks around the Los Angeles/Long Beach Port Complex in the Los Angeles Basin<sup>115</sup>



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cont.

The Port acknowledges the Project is located among “highly developed industrial surroundings,” but does not meaningfully consider cumulative impacts of other oil storage tank projects recently approved in the region.<sup>116</sup> As stated in [Section III.A.](#), the Port’s mere insistence that all “current projects in the region” would “comply with applicable SCAQMD standards” falls short of the comprehensive cumulative impacts analysis required by CEQA.<sup>117</sup> In order to meet CEQA’s requirements, the Port must consider the Project’s cumulative impacts in the context of the closely related storage tanks recently permitted in the same region.

#### IV. THE IS/ND’S ANALYSIS IGNORES THE PROJECT’S SIGNIFICANT FORESEEABLE IMPACTS

##### A. The Project Description Fails to Include Foreseeable Oil Refining Operations.

The IS/ND fails to define properly the Project as required by CEQA, by excluding foreseeable impacts that contribute substantially to the scope and ultimate significance of the Project’s environmental harms. CEQA defines a “project” to include “the whole of an action, which has a potential for resulting in

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<sup>115</sup> Appendix E at 30.

<sup>116</sup> IS/ND at 4-65.

<sup>117</sup> *Id.*



either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.”<sup>118</sup> CEQA defines “project” “extremely broadly.”<sup>119</sup> This broad interpretation aims to “maximize protection of the environment.”<sup>120</sup> A “curtailed or distorted project description may stultify the objectives of the reporting process.”<sup>121</sup> CEQA analysis of a project must include any “future action” that is “a reasonably foreseeable consequence of the initial project... [and which] will be significant in that it will likely change the scope or nature of the initial project or its environmental effects.”<sup>122</sup> For an action to be “reasonably foreseeable,” it is not necessary that a project applicant “formally decide[] *precisely* how they will use [the facility in question.]”<sup>123</sup> Rather, it is sufficient that applicant “intend[s]” a future action and that action is described in CEQA review documents.<sup>124</sup>

The IS/ND’s analysis of the Project’s impacts did not account for the impacts of oil refining activities that would occur as reasonably foreseeable consequences of the Project. The IS/ND states that the Project would provide “additional storage capacity of petroleum products for refining and distribution.”<sup>125</sup> These tanks would increase the storage capacity at the World Oil terminal by 50,000 barrels – a 10 percent increase in the terminal’s already-substantial total capacity.<sup>126</sup> This additional capacity is explicitly planned to allow World Oil to lease existing tanks at the terminal to several other refineries, including Marathon Petroleum Carson Refinery and the Glencore Long Beach Marine Terminal.<sup>127</sup> World Oil’s unambiguous intention to lease the Project’s storage tanks to specific refineries demonstrates that refining activities are reasonably foreseeable future consequences that must be weighed in the Port’s CEQA analysis.<sup>128</sup>

The Project would allow existing tanks at the terminal to “ship and receive fuel oils” serving Marathon and Glencore facilities, and the new tanks are planned

<sup>118</sup> CEQA Guidelines § 15378(a); see also *id.* at § 15003(h); Pub.Res. Code § 21065.

<sup>119</sup> Pub. Res. Code § 21065; CEQA Guidelines § 15002(d); *Azusa Land Reclamation Co. v. Main San Gabriel Basin Watermaster*, 52 Cal. App. 4th 1165, 1188 (1997).

<sup>120</sup> *McQueen v. Board of Directors*, 202 Cal.App.3d 1136, 1143 (1988).

<sup>121</sup> *Berkeley Keep Jets Over the Bay Comm. v. Bd. of Port Comm’rs*, 91 Cal. App. 4th 1344, 1358 (2001), *as modified on denial of reh’g* (Sept. 26, 2001).

<sup>122</sup> *Laurel Heights Improvement Assn. v. Regents of Univ. of California*, 47 Cal. 3d 376, 396, *as modified on denial of reh’g* (Jan. 26, 1989) (The Court established this rule when reviewing the sufficiency of an EIR, but its decision was based on CEQA’s definition of ‘project’ given in CEQA Guidelines § 15378(a), which also applies to an Initial Study or Negative Declaration.).

<sup>123</sup> *Id.* at 397 (Emphasis in original.).

<sup>124</sup> *Id.*

<sup>125</sup> IS/ND at 1-1.

<sup>126</sup> *Id.* at 2-4.

<sup>127</sup> *Id.* at 2-8.

<sup>128</sup> *Laurel Heights Improvement Assn. v. Regents of Univ. of California*, 47 Cal. 3d 376, 397, *as modified on denial of reh’g* (Jan. 26, 1989).

to “provide crude oil to the World Oil Refinery in South Gate.”<sup>129</sup> The IS/ND does not fully address impacts from “anticipated increase” in *fuel oil* throughput.<sup>130</sup> The IS/ND states that the Project would simply “provide for more efficient terminal operations,” but fails to account properly for the fact that the Project would “increase fuel oil throughput” at the terminal.<sup>131</sup> This increase in throughput would cause loading rack truck trips to “increase 10 percent during proposed project operations.”<sup>132</sup> Given that World Oil explicitly plans to use the Project’s tanks to facilitate increased terminal fuel oil transport, the resulting refinery activities are reasonably foreseeable as a consequence of the Project. By failing to analyze the impacts of those reasonably foreseeable refining operations, the IS/ND violates CEQA’s requirement to provide a complete and accurate view of the whole project.

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cont.

Moreover, the IS/ND repeatedly asserts without evidence that the Project would not “allow greater actual *crude oil* throughput.”<sup>133</sup> The Port’s claim that the Project would not increase crude oil throughput appears to be contradicted by SCAQMD permits granted to the Project’s tanks. As noted, the Port claims that increased terminal capacity would not result in greater crude oil throughput “beyond the permitted limits.”<sup>134</sup> However, it is unclear whether the Port is referring to *currently* permitted limits for World Oil’s existing facilities, or referring to the limits the terminal would have *after* construction of the new tanks. The SCAQMD permits for the Project’s new tanks specifically provide a maximum throughput of 75,000 barrels per month to each tank.<sup>135</sup> Those permits suggest that the terminal’s total permitted throughput would increase substantially with the construction of the new tanks. The Port claims that the Project would not allow “allow greater actual *crude oil* throughput,” but the Project’s SCAQMD permits allow storage of “crude oil *or* non-gasoline petroleum products having a Reid vapor pressure not to exceed 10.0 pounds per square inch.”<sup>136</sup> Thus, there is substantial evidence that the terminal’s permitted throughput would increase; if the Port asserts otherwise it must affirmatively show how, despite additional permitted capacity, the terminals’ permitted throughput would remain unchanged.

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<sup>129</sup> IS/ND at 2-1, 2-8.

<sup>130</sup> *Id.* at 4-19.

<sup>131</sup> *Id.* at 2-1, 4-9.

<sup>132</sup> *Id.* at 2-8.

<sup>133</sup> *Id.* at 4-26.

<sup>134</sup> *Id.*

<sup>135</sup> Appendix B at 1; Appendix C at 1.

<sup>136</sup> IS/ND at 4-26 (emphasis added); SCAQMD Permits at 1 (emphasis added).



## B. The IS/ND Fails to Include Foreseeable Combustion of Distributed Oil Products.

CEQA requires the Port to assess the Project's impacts under a broad enough scope "in order to maximize protection of the environment."<sup>137</sup> The IS/ND entirely fails to consider the environmental impacts of increased fossil fuel combustion that would result from this Project. The Project would allow World Oil to construct and lease additional crude oil storage "for refining and distribution" and would enable an increase in "fuel oil" transported to nearby refineries.<sup>138</sup> The use of fuel oil or bunker fuel – one of the dirtiest fossil fuels – generates sulfur oxides and particulate matter that contribute to respiratory harm, heart problems, and premature deaths.<sup>139</sup> By enabling increased distribution of fuel oils from the World Oil terminal, the burning of fuel oils is a "reasonably foreseeable consequence" of the Project that must be considered in the Port's CEQA analysis.<sup>140</sup> As described in Section V, the combustion of fossil fuels also necessarily contributes to the climate change crisis, and must fully considered by the Port.

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## V. THE IS/ND ANALYSIS OF GREENHOUSE GAS EMISSIONS IS INADEQUATE AND INCOMPLETE

### A. The IS/ND Fails to Consider Greenhouse Gas Emissions in the Context of California's Emission Reduction Goals and the Crisis of Climate Change.

The IS/ND concludes that the Project would "conform to state and local GHG emissions/climate change regulations, policies, and strategies."<sup>141</sup> However, at a time when California policies reflect a need to urgently *reduce* greenhouse emissions, approving the Project would lead the Port in exactly the wrong direction by *increasing* greenhouse gas emissions ("GHGs"). As such, the Project directly conflicts with State and local efforts to reduce GHG emissions.

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The need for deep and rapid greenhouse emission reductions grows more urgent with each passing day. The world faces a climate emergency with widespread and escalating harms, driven by fossil fuel production and use.<sup>142</sup> The

<sup>137</sup> *McQueen v. Board of Directors*, 202 Cal.App.3d 1136, 1143 (1988).

<sup>138</sup> IS/ND at 1-1, 4-19.

<sup>139</sup> Maria Gallucci, *At Last, the Shipping Industry Begins Cleaning Up Its Dirty Fuels*, YaleEnvironment360 (June 28, 2018), <https://e360.yale.edu/features/at-last-the-shipping-industry-begins-cleaning-up-its-dirty-fuels>.

<sup>140</sup> *Laurel Heights Improvement Assn. v. Regents of Univ. of California*, 47 Cal. 3d 376, 396, *as modified on denial of reh'g* (Jan. 26, 1989).

<sup>141</sup> IS/ND at 4-28.

<sup>142</sup> Intergovernmental Panel on Climate Change, *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (Rajendra K. Pachauri & Leo Meyer, eds., 2015), <https://www.ipcc.ch/report/ar5/syr/>; U.S. Global Change Research Program, *Climate Science Special Report: Fourth National Climate Assessment, Vol. I* (2017), <https://science2017.globalchange.gov/>;



landmark 2018 IPCC *Special Report on Global Warming of 1.5°C* provided overwhelming scientific evidence for the necessity of immediate, deep GHG reductions across all sectors and underscored the high costs of inaction or delays, particularly in the next crucial decade, in making these cuts. The IPCC emphasized that limiting warming to 1.5°C requires “rapid and far-reaching transitions” across all sectors, including energy.<sup>143</sup> At the global level, 1.5°C pathways require global CO<sub>2</sub> emissions to be cut by half by 2030 and to reach near zero by 2050,<sup>144</sup> with steeper emissions reductions required in wealthier countries. The latest United Nations *Emissions Gap* report similarly found that global GHG emissions must drop by at least 7.6 percent per year through 2030, for a total reduction of 55% between 2020 and 2030, to keep warming below 1.5°C.<sup>145</sup>

As the world’s fifth largest economy, California has both the ability and responsibility not just to meet but to exceed the average reductions necessary to respond to the climate emergency. To that end, California has strict mandates to rapidly reduce emissions. The Governor’s Executive Order B-30-15 and Assembly Bill 32 establish a GHG emissions reduction target for California of 40 percent below 1990 levels by 2030.<sup>146</sup> Executive Order S-3-05 calls for the State to reduce emissions levels by 80 percent below 1990 levels by 2050.<sup>147</sup> Executive Order B-55-18 calls for the State to achieve carbon neutrality by 2045.<sup>148</sup> The IS-ND fails to contextualize the impact of the Project within the State regulatory landscape.

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U.S. Global Change Research Program, *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Vol. II* (2018), <https://nca2018.globalchange.gov/>.

<sup>143</sup> IPCC, *2018: Summary for Policymakers*, in *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty* 15 (Valérie Masson-Delmotte, et al., eds., 2018), <https://www.ipcc.ch/sr15/>.

<sup>144</sup> Joeri Rogelj et al., *2018: Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development*, in *Global Warming of 1.5°C*, *supra*, 95, Figure 2.5, Figure 2.6 (2018), also at *2018: Summary for Policymakers*, *supra*, at 12-14.

<sup>145</sup> United Nations Environment Programme, *Emissions Gap Report 2019*, XV, XX, 26 (2019), <https://www.unenvironment.org/resources/emissions-gap-report-2019>.

<sup>146</sup> Cal. Exec. Order No. B-30-15 (Apr. 29, 2015),

<https://www.library.ca.gov/Content/pdf/GovernmentPublications/executive-order-proclamation/39-B-30-15.pdf>; Press Release, Office of Governor Edmund G. Brown, Governor Brown Establishes Most Ambitious Greenhouse Gas Reduction Target in North America (Apr. 29, 2015),

<https://www.ca.gov/archive/gov39/2015/04/29/news18938/index.html>; Assem. Bill 32, 2005-2006 Reg. Sess. (Cal. 2006), [https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=200520060AB32](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200520060AB32).

<sup>147</sup> Cal. Exec. Order No. S-3-05 (June 1, 2005),

<https://www.library.ca.gov/Content/pdf/GovernmentPublications/executive-order-proclamation/5129-5130.pdf>.

<sup>148</sup> Cal. Exec. Order No. B-55-18 (Sept. 10, 2018), <https://www.ca.gov/archive/gov39/wp-content/uploads/2018/09/9.10.18-Executive-Order.pdf>.

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cont.



Fossil fuels account for three quarters of all GHG pollution, and the world faces a tremendous over-production problem: producers currently plan to extract far more fossil fuels than the world can afford to burn.<sup>149</sup> There is enough oil and gas in already developed fields and mines globally—that is, places where the infrastructure is built and the capital is invested—to far exceed the pollution budget for 1.5°C if these reserves were all produced and burned, *even assuming no further fossil fuel extraction*.<sup>150</sup> This means that meeting global climate goals will require an immediate halt to the approval of new fossil fuel production and infrastructure and a phase-out of existing oil and gas fields before the reserves in existing fields are fully depleted.<sup>151</sup> Importantly here, ending the approval of new fossil fuel infrastructure projects is critical for preventing “carbon lock-in,” where approvals and investments made now can lock in decades-worth of fossil fuel production and associated emissions that we cannot afford.<sup>152</sup> The Project is therefore flatly inconsistent with meeting our climate goals or preserving a livable planet.

The IS/ND states that the Project will generate direct GHG emissions from construction and indirect GHG emissions during operation from electricity used to power the pipeline pumps.<sup>153</sup> However, as noted in [Section III.C.](#), the IS/ND fails to analyze the potentially significant impacts of GHGs during all stages of oil development, including lifecycle and cumulative impacts.

The IS/ND failed to provide relevant information or context for the discussion of GHGs and the climate crisis, let alone adequately assess the extent to which the incremental GHG impacts of the Project are inconsistent with State climate change efforts. In particular, the IS/ND failed to show with substantial evidence that operational GHG emissions from the Project are consistent with AB 32 and other statewide GHG emissions reduction plans.<sup>154</sup> The Port has failed to meaningfully

<sup>149</sup> Stockholm Environmental Institute et al., *The Production Gap: The Discrepancy Between Countries’ Planned Fossil Fuel Production and Global Production Levels Consistent with Limiting Warming to 1.5°C* (2019), <http://productiongap.org/2019report/>.

<sup>150</sup> Kelly Trout & Lorne Stockman, Oil Change International, *Drilling Towards Disaster: Why U.S. Oil and Gas Expansion Is Incompatible with Climate Limits*, Section I (Jan. 2019), <http://priceofoil.org/2019/01/16/report-drilling-towards-disaster/>.

<sup>151</sup> *Id.*; Christopher J. Smith et al., *Current fossil fuel infrastructure does not yet commit us to 1.5°C warming*, 10 *Nature Communications* 101, <https://doi.org/10.1038/s41467-018-07999-w> (2019); Dan Tong et al., *Committed emissions from existing energy infrastructure jeopardize 1.5°C climate target*, 572 *Nature* 373 (2019), <https://doi.org/10.1038/s41586-019-1364-3>.

<sup>152</sup> Fergus Green & Richard Denniss, *Cutting with both arms of the scissors: the economic and political case for restrictive supply-side climate policies*, 150 *Climatic Change* 73, 78 (2018), <https://doi.org/10.1007/s10584-018-2162-x>.

<sup>153</sup> IS/ND at 4-26.

<sup>154</sup> *Id.*



contextualize the Project's operating emissions within the larger landscape of California's GHG emissions reductions targets, in violation of CEQA.<sup>155</sup> As discussed above, there is substantial evidence that the GHG impacts from the Project are significant in the context of statewide emissions goals.

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cont.

### **B. The IS/ND Improperly Relies on SCAQMD's Outdated Interim GHG Threshold for Significance.**

EJ-23

A threshold of significance "does not relieve a lead agency of the obligation to consider substantial evidence indicating that the project's environmental effects may still be significant."<sup>156</sup> When determining the significance of GHG emissions, "[t]he agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes."<sup>157</sup>

That the Project's annual operating GHG emissions fall under the SCAQMD's significance thresholds does not obviate the need to assess the cumulative impacts of these emissions as compared to California's climate goals. The agency is required to consider, among other factors, "[t]he extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting."<sup>158</sup> SCAQMD's CEQA GHG Significance Thresholds is outdated: the threshold was determined in 2008—over a decade ago.<sup>159</sup> Since then, science has progressed—and determined that more emissions cuts than previously thought are needed to avert the worst climate catastrophes. As discussed above, the State has acted accordingly, enacting more stringent emissions targets.

That SCAQMD's 2008 draft significance thresholds were ostensibly met does not obviate the Port's duty to "independently review and analyze" the Project's GHG impacts.<sup>160</sup> The Port must exercise its independent judgment to determine whether the GHG impacts of the Project are significant. The agency cannot "simply rely on its settled . . . factors of significance in the face of substantial evidence [that] the

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<sup>155</sup> See, e.g., *Golden Door Props., LLC v. Cty. Of San Diego*, (2018) 27 Cal. App. 5th 892, 904 (The court found that the fact that a project would reduce GHG emissions by a greater percentage than required by the scoping plan in place at the time (31% to 29%) was insufficient evidence to show that the project was in fact compatible with statewide GHG emissions reductions plans. In that case, the agency's failure to identify and implement any cognizable relationship between county- and state-wide reductions fell short of the substantial evidence standard required by CEQA.)

<sup>156</sup> CEQA Guidelines § 15064(b)(2).

<sup>157</sup> CEQA Guidelines § 15064.4(b).

<sup>158</sup> CEQA Guidelines § 15064.4(b)(1).

<sup>159</sup> SCAQMD, Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans (2008) [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2).

<sup>160</sup> Cal Pub Resources Code § 21082.1(c); see also CEQA Guidelines § 15074(b).

project might have a significant impact on the environment.”<sup>161</sup> Here, the Port impermissibly accepted at face value that operating GHG emissions that fall under SCAQMD’s significance thresholds will have no impact,<sup>162</sup> despite substantial evidence to the contrary.<sup>163</sup> Rather than accept outdated metrics that have been contradicted by substantial evidence, the Port must, “to the extent possible,” base its significance determination on “scientific and factual data.”<sup>164</sup> Since 2008, California has adopted numerous GHG emissions reductions targets.<sup>165</sup> The IS/ND must take into account this new information. The lead agency cannot adopt the quantitative threshold of another regulatory body without first “ensur[ing] that the quantitative project-level threshold [is] properly correlated to statewide targets.”<sup>166</sup> The Port has failed to do so here.

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cont.

## VI. THE IS/ND IMPROPERLY UNDERESTIMATES EARTHQUAKE AND TSUNAMI RISK

EJ-24

### A. The IS/ND’s Earthquake Risk Analysis is Inadequate and Improperly Postpones Full Evaluation of Earthquake Risks.

The IS/ND failed to provide substantial evidence that earthquakes would not pose a risk of significant environmental impact. The IS/ND admits that “the site is likely to experience strong to very strong ground shaking within its lifetime.”<sup>167</sup> However, the Port asserts that “the final project design *would be reviewed*” in order to implement recommendations from a geotechnical investigation.<sup>168</sup> However, future implementation of unspecified geotechnical recommendations does not constitute “substantial evidence in the record.”<sup>169</sup> The IS/ND cannot rely upon a *future* geotechnical evaluation to presently conclude that no significant environmental impact may occur.<sup>170</sup>

<sup>161</sup> *John R. Lawson Rock & Oil, Inc. v. State Air Res. Bd.*, 20 Cal. App. 5th 77, 110 (2018).

<sup>162</sup> IS/ND at 4-27.

<sup>163</sup> *See supra* pp.19-21.

<sup>164</sup> *Cleveland Nat’l Forest Found. v. San Diego Ass’n of Gov’ts*, 3 Cal. 5th 497, 515 (2017) (citing 14 Cal. Code Regs. § 15064(b)) (finding that the Executive Order No. S-3-05’s 2050 goal of reducing California’s GHG emissions by 80 percent below 1990 levels provided important scientific and policy information regarding the pace and magnitude of GHG emissions reductions efforts that must be considered by the agency in determining the significance of GHG emissions).

<sup>165</sup> *See supra* p.20.

<sup>166</sup> Governor’s Office of Planning and Research, Discussion Draft: CEQA and Climate Change Advisory (Dec. 2018), <https://opr.ca.gov/docs/20181228-Discussion-Draft-Climate-Change-Advisory.pdf>.

<sup>167</sup> IS/ND at 4-22.

<sup>168</sup> *Id.* (emphasis added).

<sup>169</sup> CEQA Guidelines § 15091(b).

<sup>170</sup> IS/ND at 5-5.



Substantial evidence demonstrates that the Project's storage tanks would be vulnerable to earthquakes, risking dangerous fires, spills, and explosions.<sup>171</sup> The IS/ND improperly dismisses risks the Project would pose to people and the environment in the event of an earthquake. For example, the IS/ND fails to consider that "heavy black smoke [from a storage tank fire] can spread over residential areas for many miles," or that a fire at the Project could spread and threaten areas "well beyond the Project location."<sup>172</sup> Appendix A provides numerous detailed examples of earthquake impacts to storage tanks, and notes the particularly earthquake heightened risk at the Project site created by the San Andreas fault.<sup>173</sup>

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cont.

#### **B. The IS/ND Fails to Properly Assess Potentially Significant Risks from Tsunamis.**

The Port's analysis of tsunami risks improperly relies on studies that were not adequately cited or included in the record and does not account for substantial evidence showing risks of significant environmental impacts from a tsunami.<sup>174</sup> The IS/ND notes that "[d]ue to the project's location adjacent to the ocean, the project site is vulnerable to tsunamis generated off the coast of California."<sup>175</sup> Despite recognizing this vulnerability, the Port's analysis ignores key expert reports that find tsunamis pose considerable danger specifically to the Ports of Los Angeles and Long Beach.<sup>176</sup> Recent expert studies find that the risk that tsunamis pose "considerably more danger to the ports . . . than previously thought."<sup>177</sup> The Port's underestimation of risks posed by tsunamis resulted from a failure to consider substantial evidence demonstrating significant risks. The Port's CEQA analysis and findings must adequately reflect those risks.

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### **VII. THE PORT MUST PRODUCE AN ENVIRONMENTAL IMPACT REPORT FOR THIS PROJECT TO COMPLY WITH CEQA**

A lead agency can only issue a negative declaration if there is not even a "fair argument that the project will have a significant environmental effect."<sup>178</sup> An EIR is required if a project "may" have a significant effect on the environment "in light of the whole record before" the lead agency.<sup>179</sup> This standard applies "even though [the lead agency] may also be presented with other substantial evidence that the project will not have a significant effect."<sup>180</sup> CEQA requires its provisions "to be read so as

EJ-26

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<sup>171</sup> Appendix A, Section V.B.

<sup>172</sup> *Id.*

<sup>173</sup> *Id.*

<sup>174</sup> Appendix A, Section V.A.

<sup>175</sup> IS/ND at 4-36.

<sup>176</sup> Appendix A, Section V.A.

<sup>177</sup> *Id.*

<sup>178</sup> CEQA Guidelines § 15064(f)(1); *No Oil, Inc. v. City of Los Angeles*, 13 Cal.3d 68, 75 (1974).

<sup>179</sup> CEQA Guidelines § 15064(a)(1) (emphasis added).

<sup>180</sup> *Id.*

to afford the fullest possible protection to the environment within the reasonable scope of the statutory language.”<sup>181</sup> Further, CEQA Guidelines provide that “[i]f there is disagreement among expert opinion supported by facts over the significance of an effect on the environment, the Lead Agency *shall* treat the effect as significant and shall prepare an EIR.”<sup>182</sup> Any doubts are resolved in favor of environmental review.”<sup>183</sup>

As detailed in these comments and based on the referenced substantial evidence, a “fair argument” can be made that the Project is likely to have a significant adverse effect on the environment. The Port’s finding of no possible significant impact from the Project ignores crucial, substantial evidence. Moreover, the Port committed serious procedural errors in violation of CEQA’s requirements that undermine meaningful public participation and informed decision-making. The Port must produce an EIR for the Project to comply with CEQA and to properly serve the Act’s fundamental purpose of ensuring adequate environmental assessment of projects with potentially significant environmental impacts.

\* \* \*

Sincerely,

Kartik Raj  
Oscar Espino-Padron  
Lisa Fuhrmann  
Adrian Martinez  
Earthjustice

Jennifer Ganata  
Communities for a Better Environment

Lauren Packard  
Center for Biological Diversity

Taylor Thomas  
East Yard Communities for  
Environmental Justice

Chris Chavez  
Coalition for Clean Air

<sup>181</sup> *No Oil, Inc. v. City of Los Angeles*, 13 Cal.3d 68, 83 (1974).

<sup>182</sup> CEQA Guidelines § 15064(g) (emphasis added).

<sup>183</sup> *Pocket Protectors v. City of Sacramento*, 124 Cal.App.4th 903, 928 (2004).



## APPENDIX

- A. Julia May, *Communities for a Better Environment, Comments on the Draft Negative Declaration, World Oil Tank Installation Project* (Nov. 20, 2020)
- B. SCAQMD, *Permit to Construct, Application No. 614274* (Jan. 2, 2020)
- C. SCAQMD, *Permit to Construct, Application No. 614275* (Jan. 2, 2020)
- D. SCAQMD, *Facility Permit to Operate, Facility ID No. 800080, Lunday-Thagard CO. DBA (World Oil Refinery) (Revision No. 87, Sept. 11, 2020) (Title V Permit)*, <https://earthjustice.sharefile.com/d-s5312b425ff2c44f2a0c0415cd0f45d4a>.
- E. Johan Mellqvist, et al., *FluxSense Inc., Emission Measurements of VOCs, NO<sub>2</sub> and SO<sub>2</sub> from the Refineries in the South Coast Air Basin Using Solar Occultation Flux and Other Optical Remote Sensing Methods 3 (Final Report Apr. 11, 2017)*, <https://earthjustice.sharefile.com/d-s5312b425ff2c44f2a0c0415cd0f45d4a>
- F. Phyllis Fox, *Report on Bakersfield Crude Terminal Permits to Operate* (Dec. 24, 2014)
- G. Earthjustice, *Spreadsheet Summary of SCAQMD-approved Storage Tanks*
- H. Bahram Fazeli, *Communities for a Better Environment, Cumulative Impacts: Changing Regulatory Culture to Address Environmental Injustice & Environmental Racism* (Oct. 2009)
- I. Taylor Thomas, *Port of Long Beach Grant Program – A Lesson in Improving Funding for EJ Projects, in Environmental Justice Working Group Case Studies: Appendix To The Recommendations For The California State Lands Commission Environmental Justice Policy Update 9* (2018)



# APPENDIX A

## Appendix A

Comments of Julia May,  
Senior Scientist, CBE  
On the Draft Negative Declaration,  
World Oil Tank Installation Project,  
Port of Long Beach,  
11/20/2020

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ENVIRONMENT  
established 1978

## I. Introduction and Summary

I reviewed the Draft Negative Declaration / Application Summary Report for the World Oil Tank Installation Project, Port of Long Beach,<sup>1</sup> [the “World Oil Tank Project”, “Negative Declaration”, “ND”, or “the Project”]. I have also reviewed the South Coast Air Quality Management District’s (AQMD’s) Application Engineering Evaluation and Permit-to-Construct documents for the Project (although the ND did not provide these).<sup>2</sup>

EJ-27

World Oil proposes to construct two new 25,000 barrel (bbl) storage tanks for crude oil and other “non-gasoline” petroleum products at the existing World Oil Terminal located at 1405 Pier C Street in Long Beach, California.<sup>3</sup> I concluded there are deficiencies in the Negative Declaration, requiring detailed environmental analysis. In summary, I concluded:

EJ-28

- **The Negative Declaration makes unsupported conclusions**, fails to include basic information necessary for public review, and leaves mitigation for later.
- **The Project has clear potential to cause significantly increased hazards, air and water pollution, and cumulative impacts.**

EJ-29

- **Significant Air Impacts:** Project ongoing air emissions are greatly underestimated and have the potential to cause significantly increased Volatile Organic Compounds (VOCs), benzene, and other contaminants. This was demonstrated by multiple studies and many experts:

EJ-30

- **The South Coast 2017 Fluxsense study directly measured VOCs (attributed to storage tanks) at every refinery, and found each refinery’s emissions substantially underestimated, up to 12 times higher than the AQMD emission inventory.** On average this was 8.6 times higher (after excluding the low-end at a partially shut down refinery). Every single refinery including tank farms was measured at greatly higher emissions than the emission inventory. It found benzene up to 202 times higher, on average 71 times higher (again, excluding the partially shut refinery). (Even including the low outlier, VOCs on average were 6.2 times higher and benzene 34 times higher.)
- **The Fluxsense authors found that standard emission inventory factors (inherent in the EPA Tanks model) do not account for equipment degradation over time.** Using the average underestimation value of 8.6, Project storage tank VOC emissions would be 83.4 lbs/day. Using the highest underestimation, they would be 116.4 lbs/day. The Project clearly has the potential for significant VOC emissions. Other studies show emissions could be far higher (448 times the calculated values). With benzene 71 times higher, the cancer risk is likely to be significant (although the ND fails to provide information about what portion of the risk is attributable to benzene). Since it is likely that benzene is the largest part of the cancer risk and since the overall risk

<sup>1</sup> Prepared for the Port of Long Beach, October 2020, available under Environmental Documents as World Oil Tank Installation at: <https://www.polb.com/documents/#ceqa-nepa>

<sup>2</sup> SCAQMD, Engineering and Permitting Division, Application Evaluation and Calculations, Permit to Construct Evaluation, 8/5/2019; and SCAQMD, Permit to Construct, Ribost Terminal LLC, DBA World Oil Terminals, Granted 1/2/2020

<sup>3</sup> World Oil Neg. Decl. p. 2-4, available at: <https://www.polb.com/documents/#ceqa-nepa>



would only have to be 5.4 times higher to exceed 1 in a million, at 71 times higher benzene, cancer risk likely exceeds this threshold, requiring additional risk assessment according to Rule 1401.

EJ-30  
cont.

- **Another study in Texas similarly found 5-15 times the VOCs, confirming the general range of underestimation in the South Coast.** That study found the results indicated these emissions *systematically and substantially underestimated VOC emissions*.
- **Many experts have submitted comments or performed studies demonstrating the overarching large underestimation of petroleum storage tank VOC emissions,** including Dr. Phyllis Fox (environmental engineering expert), Dr. Ranajit (Ron) Sahu (environmental and energy expert), Dr. Jay Olaguer, Director of Air Quality Science at the Houston Advanced Research Center, and academics Dr. Daniel Hoyt & Dr. Loren H. Raun publishing in the Journal of Air & Waste Management.
- **The ND should have included an evaluation of cancer risk from diesel emissions due to portable equipment** such as that used at the Carson Equilon tank farm, which was determined to cause significant cancer risk. This equipment was used during tank maintenance operations and described in the recent AB2588 Health Risk Assessment.

EJ-31

- **Significant Air Impacts, and Hazards of Hydrogen Sulfide (H2S):** The ND leaves out key H2S data, is inconsistent, and makes unsupported conclusions. It also repeats an error previously identified by AQMD in other tank permits. When available studies and data are considered, and because of the ubiquity of H2S presence in crude oil and common occurrences of H2S releases, the Project has the potential for significant H2S impacts at minimum causing nuisance odors, and potentially causing health harms.

EJ-32

- **AQMD found H2S the most corrosive and toxic compound in crude oil.** H2S is very irritating at low levels, harmful to health at medium levels, causes death at high levels, and is highly corrosive to equipment.
- **AQMD identified the Ports area as the source of ongoing H2S odors from crude oil tankers (which are basically floating storage tanks), but it took years for AQMD to locate. This demonstrates the difficulty of enforcing the low H2S impact assumptions.** There are no permit conditions identified for the World Oil Project to ensure adequate, or any monitoring of H2S to catch odor nuisances. The World Oil tanks introduce new sources of H2S storage, adding to potential odors by itself, and to the cumulative risk.
- **The ND provides no information on H2S concentrations in the tanks, and concludes that associated releases and impacts would be insignificant, repeating a previous permitting and environmental review error.** Similarly, when Tesoro crude oil storage tanks were permitted by AQMD, in the absence of H2S data from Tesoro, AQMD at first assumed H2S in crude oil would be at a low level (5 ppm). When Tesoro's data became available years later, H2S was found nine-times higher (45 ppm), requiring new permitting and environmental analysis. Now the World Oil ND has taken this error one step further, by not



providing any assumption about H<sub>2</sub>S concentration at all, but still assuming no impacts. There are no permit conditions set to limit H<sub>2</sub>S concentrations in the storage tanks to low level assumptions. High concentrations would be allowed and must be assumed. High H<sub>2</sub>S content in Project tanks can be emitted to the air during the Project life, with the potential for significant impacts.

EJ-32  
cont.

- **The California Office of Environmental Health Hazard Assessment (OEHHA), Air Districts, and Oil Industry literature identified crude oil storage tanks, pipelines, and transport as sources of H<sub>2</sub>S releases, health impacts, and handling problems.** OEHHA identified chronic health hazards near oil industry sources. The Bay Area Air Quality Management District and oil industry literature identified specific emission points in floating roof storage tanks. SCAQMD identified accident risks. An oil industry report found H<sub>2</sub>S causes handling problems, and the ability of H<sub>2</sub>S to flash out of liquid and concentrate at higher levels in vapor spaces, causes safety risks and corrosion.
- **Hydrogen sulfide is well-known as a corrosion hazard, increasing the risk of rupture or leaks;** at higher concentrations it was shown to reduce storage tank roof lifetime to a few years. Mitigation measures are available which could reduce H<sub>2</sub>S levels in storage tanks, significantly reducing impacts.

- **Significant Tsunami Risks** – There is a significant risk of increased and severe tsunami hazards due to the Project.
  - The conclusion that this risk is less-than-significant (based on quoting a 2007 ports study that was not produced) is contradicted by a 2010 ports study published by the National Oceanic and Atmospheric Administration (NOAA), available online: *“Findings show that tsunamis generated along far-field subduction zones pose considerably more danger to the ports of Los Angeles and Long Beach than previously thought.”*
  - NOAA found 11 different far-away sites can produce tsunamis traveling a long distance *“significant to the ports of Los Angeles and Long Beach”*. It found these can trigger waves and currents exceeding 8 knots in the Ports of Long Beach and Los Angeles, and concluded: *“Currents are particularly noteworthy since those exceeding 8 knots (≈4 m/s) are known to break mooring lines and damage harbor piers and other structures.”*
  - The Project location is within the Long Beach inundation zone.
  - This is sufficient to conclude there is a significant potential risk due to the Project as a result of tsunamis which could damage Project equipment. Damage can cause oil spills and fires, as shown in other evidence below.

EJ-33

- **Significant Earthquake Risks** -- The Negative Declaration conclusion that hazards due to earthquake are less-than-significant is contradicted by many studies and is incorrect.
  - **The ND is internally inconsistent,** at one point stating uncertainly that *“a ground improvement system **may** reduce the effects of static and seismic settlements”* (emphasis added, p. 2-5). Elsewhere it states *“Although the site is likely to experience strong to very strong ground shaking within its lifetime,*

EJ-34

*implementation of the geotechnical investigation report's recommendations in the final project design ensures that impacts from ground shaking would be less than significant."*

- **The ND relies on future evaluation, but this mitigation discussed is not identified as a requirement:** *"The final project design would be reviewed by Albus-Keefe & Associates, as the design implements recommendations of the geotechnical investigation report (Matrix, 2019). . . . Mitigation Measures: No mitigation is required."* (p. 4-22, emphasis added)
- **The ND includes erroneous conclusions, for example:** *"The proposed project would not include habitable structures and would therefore not result in a change or increase in the seismic hazard to people."* (p. 4-22) This is incorrect – earthquake induced failures causing fires at petroleum storage tanks are a known hazard (and documented below). Fires can spread well beyond the Project location, and produce heavy black smoke known to have caused hazardous levels of PM2.5 air pollution miles away, in residential areas. (See for example Nustar fire below, reported by public officials.)
- **This Project significantly increases the potential for major hazards due to earthquake** (and due to other malfunctions), causing dangerous fires, explosions, smoke, and spills listed below and supported by USGS and other predictions (by itself and by further concentrating petroleum product storage and infrastructure).

EJ-34  
cont.

My resume is attached, encompassing over three decades of environmental engineering assessment of petroleum facilities in California, including storage and distribution, refining, and extraction operations. This covered regulatory, permitting, CEQA, and other analysis of sources, emissions, and pollution prevention for normal operations. I have evaluated numerous petroleum industry upsets, and major accidents, explosions, and fires, examining data and documents of regulatory agencies and industry. I directly witnessed major accidents in person, and received numerous calls over the years from neighbors living next to such facilities, who asked for help and information during releases. I have operated sampling devices and Remote Optical Sensors during normal and upset conditions next to petrochemical facilities.

EJ-35

I was appointed by the LA County Board of Supervisors to its Oil & Gas Strike Team Advisory Committee, to advise on emissions, safety, chemical use, hazards, and mitigation options, regarding some of the largest urban oil fields in the country, serving during the last four years. The South Coast Air Quality Management District hired me as a technical consultant to support community members taking part in the AQMD Refinery Pilot Project, to provide a technical report on oil refinery direct emissions controls available in lieu of emissions trading in 2007. Early in my engineering career, I was an electrical engineer in Silicon Valley at National Semiconductor, before moving into environmental engineering. I have also provided expert testimony in quasi-judicial proceedings of the California Public Utilities Commission on long term electricity planning and zero emission options.

Outside California I provided expert testimony regarding oil refinery permitting for nationally-based environmental organizations, including engineering analysis for the Natural Resources Defense Council (NRDC), the Environmental Integrity Project, and others, in Michigan, Illinois, Texas, Louisiana, North Dakota (the MHA Nation), Oregon, and other parts of the country.



**II. Storage Tank VOC, benzene, and other emissions estimates are unreliable – potential emissions are much higher and significant**

*A. Crude Tank VOC and Benzene emission assumptions are unreliable, as demonstrated in the 2017 Fluxsense Study in the South Coast Air District*

World Oil Project emissions were estimated using the standard EPA Tanks Model 4.0 which AQMD normally uses as it did in this case (based on the tank size, construction, contents, turnover rate, etc.). Unfortunately, many experts have concluded the model underestimates emissions substantially and systematically, especially given that equipment degrades over time. I agree based on the multiple studies, numerous experts who have found the same problem, and my personal experience of petroleum industry emission factor review within regulatory frameworks over decades. The EPA Tanks modeling is based on emissions factors which by their nature are meant to generalize emissions estimation, and which are well-known to vary in accuracy.

The problem of gross underestimation of VOC and benzene emissions at refineries including the tank farms was directly demonstrated in the South Coast in the Fluxsense study performed by Swedish scientists with AQMD.<sup>4</sup> The underestimation was found at every single South Coast refinery. The chart below summarizes the underestimation, which showed results ranging from 2.7 to 12 times higher VOCs. Benzene ranged from 3.2 to 202 times higher. On *average*, the study directly measured 6.2 times the VOCs and 34 times the benzene compared to the District inventory, for every oil refinery in the South Coast. However, the low-end represented unusual conditions at the Torrance refinery, which had many units closed due to an earlier explosion.<sup>5</sup> **Without these low-end outliers, average VOCs would be 8.6 times higher, benzene would be 71 times higher.**

Ratio of measured emissions to reported emissions (p. 94)	How much higher were VOCs?	How much higher was Benzene?
Refinery A - TESORO Carson refinery (Tesoro LA)	6.4 times	43 times
Refinery B & C (Phillips 66 Carson & Wilmington respectively)	8.3 to 12 times	33 to 202 times
Refinery D – Valero Wilmington	11 times	39 times
Refinery E – Chevron El Segundo	5.4 times	38 times
Refinery F – Torrance Refinery	2.7 times	3.2 times
<b>All LA Refineries Average</b>	<b>6.2 times</b>	<b>34 times</b>

*(Also note that the study did not include the Wilmington half of the Tesoro refinery.)*

<sup>4</sup> *Emission Measurements of VOCs, NO<sub>2</sub> and SO<sub>2</sub> from the Refineries in the South Coast Air Basin Using Solar Occultation Flux and Other Optical Remote Sensing Methods*. Final Report, FluxSense Inc, 11 April 2017, Authors: Johan Mellqvist, Jerker Samuelsson, Oscar Isoz, Samuel Brohede, Pontus Andersson, Marianne Ericsson, John Johansson

<sup>5</sup> Daily Breeze, August 14, 2015, *Torrance leaders question ExxonMobil's credibility on safety in wake of state accusations*. [After a major explosion shut down the plant in Feb. 2015, the plant was partially reopened. This August 2015 article quoted AQMD: "Currently, the company is producing less than 20 percent of the 155,000 barrels a day the plant typically refined, AQMD spokesman Sam Atwood said."] <https://www.dailybreeze.com/2015/08/14/torrance-leaders-question-exxonmobils-credibility-on-safety-in-wake-of-state-accusations/>



Regarding these VOCs (including benzene), the study authors found:

**In our experience, tank emissions contribute approximately 2/3 of the total refinery [VOC] emissions** (Kihlman 2005). (at p. 94) . . .

Refineries and tank farms are complex environments with a large number of installations and numerous potential emission sources (e.g. tank seals, valves, gauges, flares, vapor recovery units, etc.). **Many of these components can show degrading performance over time, and to accurately account for the impact of non-ideal performance in emissions inventory reporting is, we believe, an impossible task.** p. 95

. . . In our experience, the observed difference in fugitive VOC emissions between measured and inventory estimates is a general issue for the petroleum industry worldwide. **We believe that a possible path forward could be to conduct monitoring in parallel with continued AP 42 based reporting, and to use the measurements to guide and verify the efficiency of the emission reduction efforts at the industrial sites.** p. 96

. . . The ORS [Optical Remote Sensing] techniques used in this study have demonstrated their ability to quickly quantify and map refinery emissions and to identify potential air pollution sources within a facility. p. 96

In other words the Fluxsense study performed with AQMD found that although EPA's AP 42 emissions factors (inherent in the EPA TANKS model) have their place, they cannot be relied on by themselves, and it is *very likely* that emissions for petroleum storage tanks are in general underestimated by EPA factors. **The study found most of the VOCs come from tanks, and that the emissions factors do not account for degradation over time.** It also found additional monitoring is needed to verify emissions beyond idealized estimations for new tanks, and that these are world-wide problems.

*B. A similar study in Texas found the same results regarding systematically and substantially underestimated VOC emissions*

The same kind of study performed in the Houston-Galveston Texas area and published in 2013,<sup>6</sup> likewise found greatly underestimated VOCs at petroleum related operations including tank farms. It included additional evaluation to determine if weather-related impacts or upset conditions could account for these higher emissions. The authors concluded those conditions only had a small impact on emissions relative to this large and across-the-board underestimation. They found that this indicated VOCs are systematically and substantially underestimated, by a factor of 5 to 15:

A mobile platform for flux measurements of VOCs (alkanes and alkenes), SO<sub>2</sub>, and NO<sub>2</sub> emissions using the Solar Occultation Flux (SOF) method and mobile differential optical absorption spectroscopy (DOAS) was used in four different studies to measure industrial emissions. The studies were carried out in several large conglomerates of oil refineries and petrochemical industries in Southeast and East Texas in 2006, 2009, 2011, and 2012. . . . **The results were compared to annual inventory emissions, showing that measured VOC**

<sup>6</sup> Johansson, J. K. E., J. Mellqvist, J. Samuelsson, B. Offerle, B. Lefer, B. Rappenglück, J. Flynn, and G. Yarwood (2014). Emission measurements of alkenes, alkanes, SO<sub>2</sub>, and NO<sub>2</sub> from stationary sources in Southeast Texas over a 5 year period using SOF and mobile DOAS, *J. Geophys. Res. Atmos.*, 119, 1973–1991, doi:10.1002/2013JD020485., available at: <https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2013JD020485>



**emissions were typically 5–15 times higher . . . Both meteorological and upset effects were small compared to the factor of 5–15, suggesting that VOC emissions are systematically and substantially underestimated in current emission inventories.**

*C. Many experts agree that oil industry storage tank emissions are underestimated in the standard EPA TANKS modeling factors*

*i. Phyllis Fox, Ph.D., P.E.*

Dr. Fox evaluated the significance of the FluxSense studies and implications for emissions estimation of petroleum storage tanks at other facilities undergoing permitting, including storage tanks. Her conclusions further described this VOC underestimation problem in the following example of her work (this did not account for the closed Torrance refinery, which would make the average even higher if excluded):<sup>7</sup>

The FluxSense comparison demonstrated that VOC emissions were underestimated by an average factor of 6.2, ranging from 2.7 to 12 for the six facilities, compared to emissions reported to the SCAQMD. A factor of 6.2 means that the emission inventories underestimated VOC emissions by a factor of 6.2 compared to measured VOC emissions. This is consistent with results reported elsewhere for other facilities that also estimate their emissions using AP-42 and other similar methods. Johansson et al. (2014), for example, reported that, “**Despite some significant variations from year to year and from area to area, there is a clear pattern of measured VOC emissions (alkanes, ethane, and propene) exceeding reported emissions with almost an order of magnitude on average.**”<sup>40</sup> The majority of the VOC emissions originate from the tanks.

*ii. Dr. Ranajit Sahu found crude storage emissions 3-7 times higher than EPA Tanks estimates*

Dr. Sahu provided expert testimony to the State of Washington regarding the proposed Tesoro Savage Vancouver crude oil storage tanks, which used the same EPA TANKS modeling. He found this modeling includes errors, underestimates emissions, and that VOC estimates are problematic as a result. He found storage tank VOC sources are “the big ones”:<sup>8</sup>

So all of these crude or crude-related liquids that are produced or handled will have the capability to produce VOC emissions. So there are many different sources. The big ones are the tanks, which I'm sure we'll talk about. (at p. 3594)

. . . in the air permitting activities, they have actually estimated some tank emissions. I take issue with the accuracy of those estimates, and so that's an example of where they have done some calculations and I'm questioning the accuracy. (at p. 3596)

<sup>7</sup> *Petition requesting that the Administrator object to the issuance of the Proposed Title V Air Permit No. 2240-00452-V0 issued by the Louisiana Department of Environmental Quality to IGP Methanol, LLC for the Gulf Coast Methanol Complex in Plaquemines Parish, Louisiana*, Nov. 28, 2017, Sierra Club Petition including summary of Dr. Fox comments, <https://www.epa.gov/sites/production/files/2018-01/documents/sierraclubbigmethanoltilevpetition2017.pdf>

<sup>8</sup> Sahu Testimony, Hearing - Vol. 15 In Re: Application 2013-01 Tesoro Savage Vancouver Energy Distribution Terminal, BUELL REALTIME REPORTING, LLC 206 287 9066, excerpt in Attachment 2.

He estimated that storage tank emissions should be 3 to 7 times higher, which is consistent with Fluxsense results:

Q. And what adjustments would you make, then, to the calculations for tank emissions and how would that differ from the applicant?

A. . . . **My best engineering estimate is it is a multiple of what they have estimated, somewhere around maybe three to seven times higher, based on what we know about tank emissions and what we have learned about tank emissions in the last many years with more accurate instruments and more accurate measurement methodologies.** (at p. 3598)

Dr. Sahu explained problems with the EPA TANKS model, and stated EPA has publicly acknowledged these problems. (at pp. 3626 to 3628). The Sahu Transcript contains many pages of testimony demonstrating his expert conclusion that VOC emissions are underestimated, particularly for storage tanks, that the EPA TANKS model is known to be unreliable, and that instead direct emissions measurement technologies show higher emissions. He also discussed the problem of underestimated benzene in VOCs (for example at p. 3710). **The proposed World Oil crude oil tanks represent exactly the same use of EPA Tanks modeling.**

iii. *Dr. Jay Olaguer, Director, Air Quality Science, Houston Advanced Research Center, found emission factors underestimating oil industry emissions is typical*

Dr Olaguer also discussed the Fluxsense study, finding that underestimation of emissions by the oil industry was typical:<sup>9</sup>

“That’s very typical. People have done the same sort of [study] in other areas and invariably, it’s a similar result,” said Jay Olaguer, the director of air quality science at the Houston Advanced Research Center, who was familiar with the AQMD study but not involved with it.

That’s because currently, most refineries do not measure their emissions. Instead, they use an engineering handbook to calculate what emissions from flares, tanks, pipelines, smokestacks and valves might be, and then report their best estimate to state and federal regulators.

“It’s only somewhat better than a wild-ass guess, but it’s basically a wild-ass guess,” said Olaguer, who has authored a book on air emissions from the oil and gas industry. The calculations do not capture things like unexpected days of flaring, releases of hydrocarbons or leaks, he said.

iv. *Daniel Hoyt & Loren H. Raun demonstrated in Air & Waste Management Journal that measured floating roof tank VOCs were 448 times higher than estimated*

Another study published in 2015 in the Journal of Air & Waste Management found similar results. *Measured and estimated benzene and volatile organic carbon (VOC) emissions at a major U.S.*

<sup>9</sup> Southern California Public Radio, December 29, 2016, *LA-area refineries emit up to 12 times more toxic chemicals than reported*, <http://www.scpr.org/news/2016/12/29/67663/la-area-refineries-emit-up-to-12-times-more-toxic/>



*refinery/chemical plant: Comparison and prioritization* found that **emissions factors provided unreliable results, causing consistent underestimation of emissions, particularly at storage tanks:**<sup>10</sup>

The most commonly used method, based on emission factors, results in unreliable estimates. . .

To address this need, benzene and volatile organic compound (VOC) emissions within a major chemical plant/refinery were measured and compared with emission factor estimates. The results of this study indicate estimated emissions were never higher and commonly lower than the measured emissions. At one source location, VOC emissions were found to be largely representative of those measured (i.e., the catalytic reformer), but **more often, emissions were significantly underestimated (e.g., up to 448 times greater than estimated at a floating roof tank). The sources with both the largest relative error between the estimate and the measurement and the largest magnitude of emissions in this study were a wastewater treatment process, an aromatics concentration unit and benzene extraction unit process area, and two sets of tanks . . .**

*D. These studies and evaluations are more than enough to conclude the Potential to Emit VOCs and toxics from Project tanks is far higher than Negative Declaration estimation, and Significant.*

Using the Fluxsense study result average underestimation (without the Torrance outlier data point), the VOC emissions from the new storage tanks would be 8.6 times higher, and the benzene emissions would be 71 times higher than estimated – resulting in 83.4 lbs/day ( $9.7^{11} \times 8.6$ ), which exceeds the District's 75 lb./day threshold of significance, but which has the potential to go much higher. If the upper end of the Fluxsense study was used (12 times higher), the Project VOC emissions would be 116.4 lbs/day ( $9.7 \times 12$ ). There is even a far higher potential (hundreds of times higher), as shown above. The assumption that the Project will start at and continue at the EPA Tanks estimate is demonstrably incorrect. **The Project requires additional analysis and mitigation to address these emissions, including monitoring and control measures.**

Benzene emissions (which are VOCs) and other BTEX compounds (Benzene, Toluene, Ethylbenzene, and Xylene) would also be increased, potentially by 71 times higher compared to that estimated using EPA TANKS modeling, and should be evaluated at this higher potential to emit. The AQMD Engineering Evaluation for the Permit identifies Benzene at 34.88 lbs/year, which would rise to 2,486 lbs/year. Cancer risk should be re-calculated using health-protective conservative assumptions including the higher potential benzene emissions indicated by the Fluxsense studies.

Since the HRA results in the AQMD Engineering Evaluation show residential risk for all toxics at  $1.85E-7$  (or 0.185 per million, page 2), the risk would have to rise by a factor just over 5.4 to go over 1 in a million (0.185 per million  $\times 5.4 = 1$  per million). The permit identifies this threshold under Rule 1401 as requiring a cancer risk analysis at p. 4). The portion of the risk attributed to benzene is not provided, but it probably drives the cancer risk, and at 71 times higher-levels of benzene, the overall

<sup>10</sup> *Measured and estimated benzene and volatile organic carbon (VOC) emissions at a major U.S. refinery/chemical plant: Comparison and prioritization*, Daniel Hoyt & Loren H. Raun, *Journal of Air & Waste Management*, Volume 65, 2015 – Issue 8, pp. 1020-1031, Published online: 11 Jun 2015, available at: <http://www.tandfonline.com/doi/full/10.1080/10962247.2015.1058304>

<sup>11</sup> Negative Declaration, Table 4.3-2. Summary of Maximum Daily Operation Emissions Increase Estimates (Pounds Per Day), Fugitive VOC Emissions, at p. 4-10

cancer risk is likely to go up by far more than 5.4, resulting in a significant cancer risk (over 1 in a million). The ND does not provide this kind of detail – a full analysis is necessary.

*E. The ND should also evaluate known significant cancer risk due to portable diesel equipment*

The ND should have included an evaluation of cancer risk from diesel emissions due to portable equipment such as that used at the Carson Equilon tank farm, which was determined to cause significant cancer risk in the recent AB2588 Health Risk Assessment (HRA).<sup>12</sup> This equipment was used during tank maintenance operations. The HRA found: “Cancer risk at each of these receptors was primarily due to exposure to diesel particulate matter (DPM) and PAHs from contractor-operated portable diesel engines and to a lesser extent benzene from storage tanks and pipeline component fugitive emissions.” (p. 5) and “In 2015, contractors operated numerous gasoline and diesel engines to assist in performing maintenance tasks onsite, such as tank degassing and coating/painting of tanks and piping.”(p.9)

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cont.

### III. Crude tank H<sub>2</sub>S Project impacts are missing and potentially significant

*A. The ND leaves out key H<sub>2</sub>S data, is inconsistent, makes unsupported conclusions, and repeats an error identified by AQMD in another storage tank permitting process*

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► **The Negative Declaration never mentioned one of the most impactful chemicals present in crude oil - hydrogen sulfide (H<sub>2</sub>S). This hazardous chemical is irritating at low levels, harmful at medium levels, causes death at high levels, and is highly corrosive to equipment.**

The ND is internally inconsistent in identifying the potential for objectional odors, but then finding impacts less than significant. It mentions “there is the potential for individuals to find such odors as objectionable” but concludes uncertainly without basis “given the distance between project emission sources and the nearest sensitive receptors (i.e., approximately 800 meters), adequate dispersion of these odorous emissions to below objectionable levels would be **anticipated**”. (emphasis added p. 4-13) This is insufficient to conclude that there is no possibility of a significant impact. In fact, the identification of objectional odors is by definition a public nuisance, which is itself a significant impact. In addition, studies and data below provide overwhelming evidence that H<sub>2</sub>S odor problems and dangers near petroleum operations are common and present health risks and equipment hazards, in addition to public nuisances. This Project increases the potential for significant H<sub>2</sub>S impacts described below. Furthermore, this Project has no permit limit on percentage of H<sub>2</sub>S allowed to be present within the crude oil.

► **The ND repeats but makes worse a history of underestimation and missing analysis on H<sub>2</sub>S in crude oil storage tank permitting that was already identified as problematic by AQMD.**

In another crude oil storage tank permit process, AQMD staff realized H<sub>2</sub>S concentrations in crude oil could be present at 9 times higher than previously assumed for new Tesoro crude oil storage tanks<sup>13</sup> (now owned by Marathon). In the absence of crude oil data from Tesoro, AQMD assumed H<sub>2</sub>S levels

<sup>12</sup> Equilon Enterprises, LLC, 2015 HRA & Approval Letter (6/5/2020), <http://www.aqmd.gov/home/rules-compliance/compliance/toxic-hot-spots-ab-2588/health-risk-assessment>

<sup>13</sup> Tesoro Los Angeles Refinery Integration and Compliance Project



would be low, and included this assumption in the Tesoro Environmental Impact report (EIR). But after AQMD received data more than two years later, the permit had to be corrected, and an Addendum to the EIR was published to analyze impacts of increased H<sub>2</sub>S.<sup>14</sup> The World Oil Tank Project ND is repeating this error in a more extreme form – not even identifying H<sub>2</sub>S concentration in crude oil as an environmental issue, and concluding without evidence that impacts are not significant. Now that AQMD has identified this problem, the World Oil Project evaluation must not repeat the error. An assessment of the potential maximum H<sub>2</sub>S concentrations in crude oil is needed. (Furthermore, Marathon (previously Tesoro), leases tanks at the World Oil Project location. (ND, p. 2-3))

*B. There is widely available data and studies regarding the importance of H<sub>2</sub>S, storage tanks, and impacts, demonstrating the Project has a potential for significant impacts*

► **AQMD has found in other CEQA documents that “Hydrogen sulfide is the most corrosive and toxic compound found in crude oil.”<sup>15</sup>**

H<sub>2</sub>S is a neurotoxin, extremely odorous at low levels, and causing highly irritating episodes in communities surrounding oil refineries, crude oil storage, oil tankers, and oil drilling. H<sub>2</sub>S can cause headaches, nausea, eye inflammation, and more.<sup>16</sup> It regularly kills workers across the country (including 20 deaths or severe exposures in industrial accidents from 2016 to 2019 according to the Occupational Safety and Health Administration (OSHA)).<sup>17</sup> The OSHA data illustrates the seriousness of exposure to high levels of H<sub>2</sub>S, and the relatively common occurrence of accidents in the U.S. The State of California Office of Environmental Health Hazard Assessment (OEHHA) found “Hydrogen sulfide is very toxic by inhalation. Because exposure to this chemical affects most organ systems, hydrogen sulfide is considered to be a broad spectrum toxicant and may pose a significant health risk to those exposed.”<sup>18</sup> This recent OEHHA report also found “individuals living in close proximity to oil refineries may be at risk of chronic exposure to hydrogen sulfide.”<sup>19</sup> Although the OEHHA report

<sup>14</sup> The Tesoro LARIC project crude oil tank H<sub>2</sub>S content estimate had to then be changed from 5 parts per million (ppm), to 45 ppm. Addendum to the Final Environmental Impact Report for the Tesoro Los Angeles Refinery Integration and Compliance Project, October 2019, p. 17, [“In the baseline period (i.e., 2012-2013) analytical data from crude oil suppliers did not include data for H<sub>2</sub>S in crude oil. Thus, the data used during the preparation of the May 2017 Final EIR did not provide concentration data for H<sub>2</sub>S as a potential TAC in crude oil. For this reason, the May 2017 Final EIR describes the concentration of H<sub>2</sub>S in crude oil as typically less than 5 ppm (the analytical detection limit) (page G1-1186 in Appendix G1 of the May 2017 Final EIR). During the preparation of the permit applications for the CCT storage tanks, analytical data became available that identified differences in concentrations of some TACs and included H<sub>2</sub>S concentrations for some crude oils (up to 45 ppm).”] Available at: <http://162.80.26.25/docs/default-source/ceqa/documents/documents/permit-projects/2019/oct2019addendumtomay2017finaleirfortesorolaric.pdf?sfvrsn=6>

<sup>15</sup> Tesoro LARIC, Final EIR, Volume V: Appendix G, May 2017, p. G1-1186), available at: [http://www.aqmd.gov/docs/default-source/ceqa/documents/permit-projects/2017/tesorolaric/appg1\\_2.pdf](http://www.aqmd.gov/docs/default-source/ceqa/documents/permit-projects/2017/tesorolaric/appg1_2.pdf)

<sup>16</sup> Toxic Substances Portal, Hydrogen Sulfide and Carbonyl Sulfide, Agency for Toxic Substances and Disease Registry (ATSDR), <https://www.atsdr.cdc.gov/mmg/mmg.asp?id=385&tid=67#:~:text=At%20low%20levels%2C%20hydrogen%20sulfide,convulsions%2C%20coma%2C%20and%20death.>

<sup>17</sup> OSHA online database, *Accident Search Results, Hydrogen Sulfide*, at: [https://www.osha.gov/pls/imis/AccidentSearch.search?acc\\_keyword=%22Hydrogen%20Sulfide%22&keyword\\_list=on](https://www.osha.gov/pls/imis/AccidentSearch.search?acc_keyword=%22Hydrogen%20Sulfide%22&keyword_list=on)

<sup>18</sup> At page A-16

<sup>19</sup> California Office of Environmental Health Hazard Assessment (OEHHA), Analysis of Refinery Chemical Emissions and Health Effects, March 2019 p. A-17, available at: <https://oehha.ca.gov/media/downloads/faqs/refinerychemicalsreport032019.pdf>



focused on oil refineries, it included evaluation of storage tanks, and so is relevant to oil terminals including World Oil.

► **OEHHA, AQMD, and Oil Industry literature identified crude oil storage tanks, pipelines, and transport as sources of H<sub>2</sub>S corrosion, accidents and releases.**

OEHHA detected H<sub>2</sub>S at crude storage tanks and highlighted them as sources. (p. A-16) AQMD identified pipelines connected to storage tanks as sources of hazardous gas releases: *“An accidental release of hazardous materials at a facility can occur due to natural events, such as earthquakes, and non-natural events, such as mechanical failure or human error. . . Risks are also associated with transportation, including truck transport, rail transport, and **pipeline** transport.”*<sup>20</sup> (emphasis added) Oil industry literature also identified H<sub>2</sub>S in petroleum storage tanks as commonly causing handling problems, corrosion, environmental risk, safety, and odor problems. (See below.) An accidental release from storage tanks and pipelines has the potential to reach significant levels over the period of the lifespan of the World Oil tanks Project. Although not every H<sub>2</sub>S release would be extreme, the ubiquity of its presence, and OEHHA’s finding that such releases are common increases the potential for a substantial release over a period of years at World Oil. Adding new sources of H<sub>2</sub>S to the area of Long Beach and Wilmington (which already has extremely high concentrations of crude oil transport, extraction, refining, and storage) also causes a significant cumulative impact. (See more in Environmental Justice and Cumulative Impacts section below.)

► **The Bay Area Air Quality Management District and oil industry literature identified particular emission points from floating roof storage tanks.**

The new storage tanks are internal floating roof tanks. This design reduces emissions to atmosphere due to wind effects compared to an external floating roof tank without a dome, but does not eliminate emissions above the floating roof, into the space below the dome (or to atmosphere). For example, BAAQMD found: *“**External and internal floating roof tanks are emission sources because of evaporative losses that occur during standing storage and withdrawal of liquid from the tank. Standing storage losses are a result of evaporative losses through rim seals, deck fittings, and/or deck seams.**”*<sup>21</sup> Fittings on floating roofs tanks also deteriorate with time. This would increase emissions into the space above, where H<sub>2</sub>S can concentrate.

► **Oil Industry literature found H<sub>2</sub>S in crude oil causes handling safety, and odor problems:**

*“Refineries and storage facilities, such as tank farms, are likely to encounter problems specific to the handling of crude oils, intermediates and refined products that contain or generate H<sub>2</sub>S. Heavy oils, **including crude oil, residual fuel and gas oil, tend to have large concentrations of H<sub>2</sub>S.** This becomes a concern if these products are to be stored for an extended time or transported.”*<sup>22</sup> (emphasis added) This article also found that in tank farms, there is very little time to correct such H<sub>2</sub>S problems, and that this contamination causes corrosion and odor concerns: *“In many cases, tank farm or terminal operators have very little time in which to correct H<sub>2</sub>S-related problems. These could impact operations (personnel safety issues) or profitability (product transport/transfer issues) in a time critical manner. . .*

<sup>20</sup> Tesoro LARIC, Final EIR, Volume I: FEIR & Appendix A2017, p. 1-20, available at: [http://www.aqmd.gov/docs/default-source/ceqa/documents/permit-projects/2017/tesorolaric/tesoro\\_feir.pdf](http://www.aqmd.gov/docs/default-source/ceqa/documents/permit-projects/2017/tesorolaric/tesoro_feir.pdf)

<sup>21</sup> *Assembly Bill 617, Industrial Cap-and-Trade Sources, Expedited BARCT Implementation Schedule*, BAAQMD, Dec. 2018, p. 2, [Hereafter - BAAQMD Report] available at: [https://www.baaqmd.gov/~media/files/ab617-community-health/barct/20181214\\_fsr\\_ab617\\_barct-pdf.pdf?la=en](https://www.baaqmd.gov/~media/files/ab617-community-health/barct/20181214_fsr_ab617_barct-pdf.pdf?la=en)

<sup>22</sup> Baker Hughes, p. 3, Available at: <https://www.worldoil.com/uploadedFiles/Media/SULFIX-H2S-White-Paper.pdf>



*Additional issues caused by H<sub>2</sub>S contamination include corrosion problems, odor concerns and product degradation.*<sup>23</sup>

The Baker Hughes report and other articles found levels of H<sub>2</sub>S above crude oil liquid can concentrate to much higher levels (in the vapor space above the crude oil (the “headspace”). Baker Hughes found storage tanks with H<sub>2</sub>S in the crude liquid at concentrations of 15-25 ppm could reach much higher concentration in the headspace (up to 600 ppm measured H<sub>2</sub>S). This is due to agitation, higher temperatures, or increasing the liquid in the tank so that the vapor phase is compressed and concentrated: “H<sub>2</sub>S is a gas at typical storage temperatures and equilibrates between liquid and vapor phases. **Distressed cargoes containing high H<sub>2</sub>S levels can easily generate percent levels (parts per hundred) of H<sub>2</sub>S in storage tank and transport vessel headspaces. Certain tank conditions (increased liquid volume, agitation and high temperatures) cause deterioration of this already hazardous situation by changing.**” p. 4

- ▶ **Hydrogen sulfide is well-known as a corrosion hazard, increasing the risk that a rupture or leak could occur; higher concentrations reduced roof lifetime to a few years.**

The H<sub>2</sub>S tank headspace concentrations up to 600 ppm in the Baker Hughes article were found to increase corrosion rates and reduce storage tank roof lifetime to less than five years. Such deterioration was not considered in the Negative Declaration and must be evaluated.

Another article (on oil and gas production – crude oil extraction) identified similar H<sub>2</sub>S hazards in crude oil storage tanks. It found H<sub>2</sub>S “. . . **is also a corrosive, making it more likely that oil storage tanks where hydrogen sulfide is present will leak.**”<sup>24</sup> And Corrosion Journal found increased sulfur concentrations in crude oil due to cost-cutting toward using cheaper crude oils (called “opportunity crudes”) could introduce higher-H<sub>2</sub>S crude oils into equipment, resulting in increased corrosion. It found that worldwide, a severe corrosion incident occurs each week (such as sudden leakages from pipe ruptures).<sup>25</sup>

- ▶ **Mitigation measures could reduce H<sub>2</sub>S in storage tanks, significantly reducing impacts.**

For example, mitigation to further reduce toxic gases using a combination of Domed External Floating Roof Tanks in addition to vapor recovery and incineration was identified by the Bay Area Air Quality Management District (BAAQMD).<sup>26</sup> This Bay Area regulatory report found additional emissions reductions could be achieved by adding vapor recovery, and further reductions by also adding incineration to domed external floating roof tanks to reduce ROG (Reactive Organic Gases).<sup>27</sup> In addition to reducing ROG (aka VOCs), this measure would capture, remove vapors, and combust H<sub>2</sub>S

<sup>23</sup> Baker Hughes p. 12

<sup>24</sup> Hydrogen Sulfide In Texas Oil and Gas Production, On behalf of Abraham, Watkins, Nichols, Sorrels, Agosto & Aziz posted in Oil and Gas Accidents on Thursday, December 4, 2014, at:

<https://www.abrahamwatkins.com/blog/2014/12/hydrogen-sulfide-in-texas-oil-and-gas-production.shtml>

<sup>25</sup> About the Correlation Between Crude Oil Corrosiveness and Results From Corrosion Monitoring in an Oil Refinery Philipp Schempp,\*, \* Karsten Preuß,\* and Micha Tröger\* 2016, <https://corrosionjournal.org/doi/pdf/10.5006/1940>

<sup>26</sup> *Assembly Bill 617, Industrial Cap-and-Trade Sources, Expedited BARCT Implementation Schedule*, BAAQMD, Dec. 2018, p. 2, available at: [https://www.baaqmd.gov/~media/files/ab617-community-health/barct/20181214\\_fsr\\_ab617\\_barct-pdf.pdf?la=en](https://www.baaqmd.gov/~media/files/ab617-community-health/barct/20181214_fsr_ab617_barct-pdf.pdf?la=en)

<sup>27</sup> Potential ROG emission reductions may be achieved by installing domes on external floating roof tanks, **and by capturing vented emissions from internal floating roof or coned roof tanks and removing ROG emissions through a vapor recovery unit (VRU) flowing back to the tank(s) or to a thermal incinerator.** (emphasis added) BAAQMD Report labeled p.3, 30<sup>th</sup> page of pdf.



vapors. This mitigation could reduce H<sub>2</sub>S tank concentrations and reduce these gases available to be released during accidents. The BAAQMD Report showed these additions on a domed floating roof tank cutting ROG an additional 25 tpy (tons per year) through added vapor recovery, plus another 25 tpy by also adding incineration -- beyond the 75 tpy cuts achieved by the domed roof on the external floating roof tank. (This example, p. 4, assumes emissions without controls of 400 tons per year.) Another document identified H<sub>2</sub>S scavengers to remove H<sub>2</sub>S, because of the dangers of H<sub>2</sub>S levels in crude oils, which it finds are increasing on average.<sup>28</sup> Further, an article in Chemical Engineering Online, *Removing H<sub>2</sub>S from Crude Petroleum On-Site*, identified a system used at extraction sites to remove H<sub>2</sub>S before transport to refineries, which strips H<sub>2</sub>S using an inert gas.<sup>29</sup> Another mitigation option could be agreements for World Oil to contract with crude suppliers to require that H<sub>2</sub>S be removed upstream, before shipping to the terminal.

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cont.

► **The Ports area required years of AQMD investigation and resources before identification of the source of ongoing odors, including H<sub>2</sub>S from crude oil tankers.**

The Los Angeles Times reported in November of 2018 that inspectors identified fugitive emissions from an oil tanker as the source of periodic pungent odors that took years to identify.<sup>30</sup>

AQMD also published its own News Release in 2018, describing its years of work and extensive resources necessary to identify these odors, and the association violations.<sup>31</sup>

**“For the past two years we have devoted extensive resources to finding the sources of periodic foul odors in Long Beach, Seal Beach and Huntington Beach,”** said Wayne Nastri, SCAQMD’s executive officer. “Using a combination of dedicated field staff, advanced emissions imaging technology, atmospheric modeling and in-house laboratory analysis, now for the first time we have confirmed one potential source of these odors.” . . .

Crude oil contains dissolved hydrocarbon and sulfur gases that can be released to the atmosphere if not properly contained in the vessel’s storage tanks.

Gases detected included H<sub>2</sub>S (one of the most odorous sulfur compounds), and hydrocarbons.<sup>32</sup>

**IV. Hazards of fires, explosions, or spills due to tsunami or earthquake are significant**

The Negative Declaration states there are less-than-significant risks of impacts from tsunamis and earthquakes. This is not only illogical at face value since the Project is in a tsunami inundation zone and a region at high earthquake risk, but the specific studies and facts below demonstrate that there is a

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<sup>28</sup> Baker Hughes, *Hydrogen Sulfide Management Mitigation options in petroleum refining, storage and transportation*, <https://www.worldoil.com/uploadedFiles/Media/SULFIX-H2S-White-Paper.pdf>

<sup>29</sup> May 1, 2018, <https://www.chemengonline.com/removing-h2s-crude-petroleum-site/>

<sup>30</sup> ‘Fugitive emissions’ from oil tanker identified as a source of foul mystery odors in local cities, LA Times, Nov. 12, 2018, [“Inspectors say they have identified “fugitive emissions” from a 2-million-barrel crude oil tanker as a culprit in periodic pungent odors that have offended coastal residents and whose source has *eluded detection for years.*”] available at: <https://www.latimes.com/socal/daily-pilot/news/tn-dpt-me-coastal-odor-20181112-story.html#~:text=Inspectors%20say%20they%20have%20identified,has%20eluded%20detection%20for%20years.>

<sup>31</sup> SCAQMD Issues Violation to Oil Tanker Ship for Fugitive Emissions, Nov. 9, 2018, <http://www.aqmd.gov/docs/default-source/news-archive/2018/violation-to-oil-tanker-ship-nov9-2018.pdf?sfvrsn=8>

<sup>32</sup> LA Times 11/12/18 article above, [“The agency partnered with the fire departments in those cities to train their personnel to collect air samples when residents report odors. Analysis of those samples showed higher levels of chemical compounds indicative of an odor from crude oil or unprocessed natural gas, the agency said. The compounds included several hydrocarbons and **hydrogen sulfide**, the agency said.” (emphasis added)]



significant risk of impacts due to the Project because fires, explosions, spills, and other impacts can result from earthquakes and tsunamis (and from general malfunctions which can also cause fires in this kind of project, which were not evaluated).

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cont.

*A. Tsunami risk is significant at the Project location, increasing hazards due to new tanks*

The Negative Declaration conclusion that hazards due to tsunami are less-than-significant (based on reference to a 2007 ports study that was not produced) is contradicted by a 2010 ports study published by the National Oceanic and Atmospheric Administration (NOAA) and other information available online. The 2010 study for example provides clear evidence that there is a significant risk of damage during tsunami to the Project area. Such damage has the potential to cause oil spills and potentially other hazards which must be fully evaluated.

The Negative Declaration found the risk of damage from a tsunami would be less than significant. But it also contradicts itself by acknowledging that *“Due to the project’s location adjacent to the ocean, the project site is vulnerable to tsunamis generated off the coast of California.”* (Negative Declaration at 4-36) It also identified a 2007 report which it states shows a tsunami would only occur at this location every 10,000 years. (Moffatt & Nichol, 2007). This report was not provided. It is not possible to determine which conclusions in the Negative Declaration came from the 2007 study report, and which were otherwise assumed or concluded by the Negative Declaration authors.

Either way, other expert reports which studied tsunami impacts in the Ports of Long Beach and LA (published later and available to the public online) contradict the Negative Declaration’s conclusion. These show that there is a potential of significant impacts at the Project location in the Ports of Long Beach and Los Angeles.

For example, a 2010 Special Report on Tsunami Hazard Assessment of the National Oceanic and Atmospheric Administration (NOAA) – *Distant tsunami threats to the ports of Los Angeles and Long Beach, California*<sup>33</sup> – found tsunami risks from 11 different far-away sites can produce tsunamis traveling a long distance that are “significant to the ports of Los Angeles and Long Beach”.<sup>34</sup>

It specifically found such tsunamis can trigger waves and currents exceeding 8 knots ( $\approx 4$  m/s) in the Ports of LA and Long Beach, and concludes that **“Currents are particularly noteworthy since those exceeding 8 knots ( $\approx 4$  m/s) are known to break mooring lines and damage harbor piers and other structures.”** (pp. ix-x) The only way to interpret the statement above and the following conclusion of the report, is that tsunamis pose a significant, and “considerable” danger in the Ports of Long Beach and Los Angeles. The conclusion goes on to state:

**Findings show that tsunamis generated along far-field subduction zones pose considerably more danger to the ports of Los Angeles and Long Beach than previously thought . . .** Due to their importance to United States commerce, the hazard posed by tsunamis is of great concern because the

<sup>33</sup> Burak Uslu, et al, Joint Institute for the Study of the Atmosphere and Ocean (JISAO), University of Washington, Seattle, WA, NOAA/Pacific Marine Environmental Laboratory (PMEL), Seattle, WA, May 2010, available at: [https://nctr.pmel.noaa.gov/hazard\\_assessment\\_reports/02\\_LA\\_LB\\_CA\\_3532\\_web.pdf](https://nctr.pmel.noaa.gov/hazard_assessment_reports/02_LA_LB_CA_3532_web.pdf)

<sup>34</sup> “Of these 322 scenarios [investigated], tsunamis from 11 source regions in Alaska, Chile, Philippines, Manus, New Zealand, and Vanuatu are identified as having the potential to generate a tsunami significant to the ports of Los Angeles and Long Beach, so these are investigated in detail.” at pp. ix-x

potential devastation and impact would likely interrupt commerce, marine, and tourism activities. Tourist attractions, including the Maritime Museum, Aquarium of the Pacific, and Queen Mary (Figure 1.1), along with the large number of tourists who visit them daily, are potentially at risk. (p. 30)

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cont.

The implication is clear that the 2010 report's authors do not interpret this risk as extremely rare (such as every 10,000 years, which the Negative Declaration concluded).

The California Department of Conservation publishes detailed tsunami maps, including the *Long Beach Tsunami Inundation Area* map below. It shows the World Oil Project site clearly included in the inundation zone (with the blue arrow I added to highlight World Oil).<sup>35</sup>



*B. Earthquake risk is high at the Project location, which adds significant new hazards*

As in the case for tsunamis, the Negative Declaration acknowledges that the region can experience strong earthquakes, but it then concludes that risk is less-than-significant. It also describes plans to *later* evaluate the Project design and concludes later recommendations will ensure impacts are not significant. It even states No Mitigation is Necessary. (Neg. Dec. p. 4-22)

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The final project design would be reviewed by Albus-Keefe & Associates, as the design implements recommendations of the geotechnical investigation report (Matrix, 2019). Although the site is likely to experience strong to very strong ground shaking within its lifetime, implementation of the geotechnical investigation report's recommendations in the final project design ensures that impacts from ground shaking would be less than significant.

**Mitigation Measures:** No mitigation is required.

<sup>35</sup> California Dept. of Conservation, Los Angeles County Tsunami Inundation Maps, Long Beach Quad, at [https://www.conservation.ca.gov/cgs/Documents/Publications/Tsunami-Maps/Tsunami\\_Inundation\\_LongBeach\\_Quad\\_LosAngeles.pdf](https://www.conservation.ca.gov/cgs/Documents/Publications/Tsunami-Maps/Tsunami_Inundation_LongBeach_Quad_LosAngeles.pdf)



It is not possible to rely on future evaluations, not even require them as mitigation, and then conclude these will ensure Project mitigation of “very strong ground shaking within its lifetime”. This also goes against known severe impacts at storage tanks due to earthquake, including examples below.

In addition, in other places, the Negative Declaration itself identifies uncertainty regarding the effectiveness of future improvements in reducing effects of seismic and other ground-settlement:

Because the site is underlain by compressible earth materials that are susceptible to liquefaction, implementation of a **ground improvement system may reduce the effects of static and seismic settlements**. Construction of the ground improvement system would consist of vibratory stone column Geopiers, also known as vibro piers, or equivalent rammed aggregate piers (RAPs). (emphasis added, p. 2-5)

The Negative Declaration also states that because people would not live at the project sites, therefore, it cannot result in an increase in seismic hazards to people.

The proposed project would not include habitable structures and would therefore not result in a change or increase in the seismic hazard to people. (p. 4-22)

This is also erroneous. For example, earthquake induced failures causing fires at petroleum storage tanks are a known hazard (also documented below). Such fires can spread well beyond the Project location, and even if they don't, produce heavy black smoke that can spread over residential areas for many miles. (See for example Nustar fire below.) This Project does significantly increase the potential fire hazard with associated significant impacts listed below.

These uncertainties, inconsistencies, and incorrect information regarding effectiveness of future mitigation, as well as great underestimation of potential impacts, cannot form a basis to conclude that there is no potential for a significant impact from earthquakes due to the Project. Furthermore, common sense, the information below, and other widely available information means there is certainly a potential for significant impacts due to earthquakes.

In 2015, USGS predicted that within the next 30 years, the LA Region has a greater than 60% chance of an earthquake of magnitude 6.7,<sup>36</sup> and a 31% chance of a magnitude 7.5 (Richter Scale). In 2016, Thomas Jordan, director of the Southern California Earthquake Centre stated at a conference in Long Beach that **the San Andreas fault in Southern California is “Locked, Loaded, and Ready to Roll.”** The Nature Science Alert publishing this warning also found: *“California's San Andreas fault has been quiet for far too long and is overdue for a major earthquake. The state was warned to prepare for a potential earthquake as strong as magnitude 8.0.”*<sup>37</sup> Consequently there is more than a passing chance of major seismic shaking in this location soon, and certainly during the Project equipment life.

The proposed World Oil tanks are floating roof tanks, which have seismic vulnerabilities such as damage caused by sloshing, sinking roofs and many failure modes during earthquakes. These can cause,

<sup>36</sup> [https://www.usgs.gov/faqs/what-probability-earthquake-will-occur-los-angeles-area-san-francisco-bay-area?qt-news\\_science\\_products=0#qt-news\\_science\\_products](https://www.usgs.gov/faqs/what-probability-earthquake-will-occur-los-angeles-area-san-francisco-bay-area?qt-news_science_products=0#qt-news_science_products), and <https://pubs.usgs.gov/fs/2015/3009/pdf/fs2015-3009.pdf>, p. 4

<sup>37</sup> Science Alert, Nature, *Scientist Says The San Andreas Fault Is "Locked, Loaded, And Ready to Roll"*, Fiona Macdonald, 5 May 2016, <https://www.sciencealert.com/the-san-andreas-fault-is-locked-loaded-and-ready-to-roll-say-scientists>



spills, fires and explosions, and can spread to other tanks and facilities. Crude oil fires can cause extremely smoky air pollution that is harmful to people breathing it well downwind. Some known examples of tank failures during earthquake are shown below. **These include both fires and failures caused by a large earthquake in Japan, and a major fire that regulators investigated as potentially caused by a small earthquake in the San Francisco Bay Area (which were found as the cause of oil refinery incidents at the same time).**

EJ-39  
cont.

i. A 2008 Japanese study of tank failures showed multiple seismic vulnerabilities

A Japanese 2008 study of seismic damage to petroleum storage tanks demonstrated impacts including sloshing, fires, spills, weld-splitting, pontoon buckling, roof sinking, and more.

This study included both an experiment (where a full scale storage tank was built and subjected to shaking to verify calculations) as well as documentation of actual fires and other damage to storage tanks during major earthquakes including the Tokachi-oki Sept. 28, 2003, (also known as the Hokkaido 2003 earthquake, 8.1<sup>38</sup> on the Richter scale), and others. The study slides in English are shown at right and below.<sup>39</sup>



### Seismic Sloshing of Oil Storage Tank

- Resonance between liquid (oil) and ground motion
- Larger diameter – longer sloshing period
- Higher liquid height – shorter sloshing period

The diagrams show the sloshing of liquid in three tanks of different diameters: D=10m (T=3s), D=50m (T=8s), and D=100m (T=13s). The sloshing height increases with the diameter of the tank.



<sup>38</sup> Geotimes, 9/26/2003, American Geological Institute, <http://www.geotimes.org/sept03/WebExtra092603japan.html>

<sup>39</sup> *Experimental Study of Floating Roof Integrity for Seismic Sloshing*, October 8, 2008 Haruki NISHI, Dr. Eng. National Research Institute of Fire and Disaster Fire and Disaster Management Agency, Japan, at: <https://mycommittees.api.org/standards/crc/scast/Shared%20Documents/Meeting%20Minutes%20and%20Presentations/StorageTankConf2008NISHISloshing.pdf>



Damage to the Oil Storage Tanks due to Liquid Sloshing in the Past Earthquakes

- 1964 Niigata Earthquake
- Nihonkai-chubu Earthquake(1983)
- 2003 Tokachi-oki Earthquake
  
- Detail of the Damage
  - Overflow of the Oil
  - Tank Fire Ring-type, Open-top
  - Sinking of the Floating Roof



EJ-39  
cont.

Sinking of the floating roof of the 40,000 k l kerosene tanks



Two floating roofs sank.  
(2003/9/30 16:43)

(2003/9/28 14:26)



Fractured welding part between the outer rim and the lower deck of the pontoon (Bottom view)

Damage to tanks in Japan included smoking fires, which are difficult to extinguish, and which can cause health harms far downwind depending on weather conditions (see below). The slides also identified both short and long period shaking depending on tank size. Shorter period means faster shaking, longer period means slower shaking; both can be damaging.

- ii. *A San Francisco Bay Area major storage tank fire followed a small earthquake, impacting a whole region for hours, illustrating the significant impacts of tank fires*

Many details are available on the minute-by-minute breakout of a dramatic fire on Oct. 15, 2019, when a storage tank at NuStar Energy petroleum storage in Crockett, California exploded. This was documented by extensive news media, by fire department and regulatory agency press conferences during the many hours of the fire, and in a follow-up public hearing. **It is worthwhile to evaluate the real-life impacts of storage tank fires in general in California.**



NuStar, slides from [Contra Costa County 10/22/19 hearing](#)

**This fire demonstrated the complexity of impacts and emergency response necessary when just one petroleum tank catches fire.** The fire involved two tanks and meant risk of spreading fire (from the tanks and ensuing brush fire), black smoke harmful to breathing, evacuation of the very small nearby community of Tormey, and a Shelter-in-Place order for the rest of the extensive surrounding communities. (Some in the Shelter-in-Place area wanted to evacuate due to poor air quality but could not due to widespread gridlock). The fire involved major freeway and road shutdown for hours, and extensive use of emergency response resources.



Top  
10/15/2019,  
ABC7 News



Bottom [Photo](#),  
Dick Lyon,  
NuStar fire  
from Treasure  
Island, SF (~20  
miles)

EJ-39  
cont.



The NuStar tanks burned for seven hours,<sup>40</sup> creating smoke over the Bay Area and high levels of fine particulate matter (PM2.5) measured by local regulatory agencies. (See data below.)

This explosion followed a small earthquake that was felt throughout the region (Richter Scale 4.5). This was determined by County officials as the cause of malfunctions and flaring at two refineries.<sup>41</sup> Likewise the earthquake was identified as a *potential* cause of the NuStar explosion.<sup>42</sup> (The final determination of cause was never publicized.) Whether it had the same cause as the refinery malfunctions (earthquake), the NuStar explosion demonstrates how one tank fire can impact a whole region. If the NuStar event was caused by some other root-cause, it nevertheless illustrates that the potential impacts due to a tank fire at the World Oil facility Project in Long Beach, are significant, regardless of cause.

**A fire breaking out at only one tank in a petroleum tank farm always presents a danger to the other tanks.** In the case of NuStar the fire engulfing two ethanol tanks did threaten other tanks nearby, for example shown by scorch marks at right.<sup>43</sup> Contra Costa County praised firefighters for keeping the fire

only to the two tanks, when it could have been much worse, during its public hearing discussion. The



Photo above field blackened by fire, nearby freeway later shutdown), from ABC 7 News video, 10/15/2019



EJ-39  
cont.

<sup>40</sup> Contra Costa County Board of Supervisors hearing, 10/22/2019, Item D.3, CONSIDER update on the status of the NuStar Energy incident, Crockett area. (Randy Sawyer, Director of Hazardous Materials Program and Lewis Broschard, CCC Fire Protection District Fire Chief), Video of hearing including slides available at: [https://contra-costa.granicus.com/MediaPlayer.php?view\\_id=2&clip\\_id=1635#](https://contra-costa.granicus.com/MediaPlayer.php?view_id=2&clip_id=1635#) Video download also available on this webpage.

<sup>41</sup>Media agencies were told by Randy Sawyer, Director of the Hazardous Materials Program, Contra Costa County, that the two refinery malfunctions were caused by this earthquake. KQED, Wed. update to Tuesday 10/15/2020 article [*The stronger quake [4.5] caused malfunctions at the Shell and Marathon oil refineries in Martinez, said Randy Sawyer, Contra Costa County's chief environmental health and hazardous materials officer.*] at: <https://www.kqed.org/news/11780107/4-5-magnitude-earthquake-near-pleasant-hill-rattles-bay-area>

<sup>42</sup> By the Associated Press in ABCNews, Earthquake probed as possible cause of California fuel fire, 10/16/19 [*"CROCKETT, Calif. -- Officials were trying to determine Wednesday if a 4.5 magnitude earthquake triggered an explosion at a fuel storage facility in the San Francisco Bay Area that started a fire and trapped thousands in their homes for hours because of potentially unhealthy air."*], at: <https://abcnews.go.com/Business/wireStory/earthquake-probed-california-fuel-fire-66319966>

<sup>43</sup> KPIX 5, Shelter in Place for People Near NuStar Facility by Crockett & Rodeo, 10/15/2019, available at: <https://www.youtube.com/watch?v=VZNTLNclIzQ&app=desktop>



tanks are connected by pipeline to other facilities (such as the nearby oil refinery), raising questions about potential spreading hazards. Drainage from the bermed area surrounding each tank was connected to the Bay, threatening discharge of petroleum products and firefighting foam.

**Dozens of firefighters also had to battle the brushfire caused by NuStar, using a helicopter, tractor, and by hand** near an oil refinery, public roads, and a major freeway (which had to be shut down). Additional petroleum storage tanks at the nearby Phillips 66 refinery were uphill from NuStar.

Workers had to flee following the initial explosion, and locked the gate on their way out, hampering firefighter entrance, and failing to turn on fire-suppression equipment. One contractor was unable to escape and had to hide in a ditch until firefighters reached him. The tank fires kept re-igniting, and took many hours to put out. (Firefighters stated that the ethanol fires weren't particularly harder to address than other kinds of petroleum fires, indicating such tank fires are all difficult to control.<sup>44</sup>) In addition to the two ethanol tank fires, firefighters had to constantly spray cooling water on surrounding tanks licked by flames. After the fire was put out, other tanks had to be carefully depressurized in the following days.<sup>45</sup>

**By comparison, World Oil in Long Beach has a heightened fire risk due to an expected (and much larger) earthquake which can occur at any time.** There is a significant risk that a major earthquake could cause a NuStar-like fire during the lifespan of the Project. The higher concentration of petroleum storage at World Oil would also increase danger of one incident (fire at one tank) spreading to another. I measured the distance using an aerial map<sup>46</sup> between a burned tank at NuStar and another NuStar tank shown as scorched in the photo on the previous page. I found it was much farther than the distance between existing World Oil tanks, and proposed tanks, yet the NuStar burned tank still endangered the nearby tank. This is another indication that adding two World Oil tanks increases cumulative risk of fire due to earthquake or other accidents involving fire at the facility due to proximity of new tanks.

The Bay Area Air Quality Management District's incident report during the release reported large plumes of black smoke, a major highway closure for many hours (during rush hour), and a shelter-in-place ordered:<sup>47</sup>



EJ-39  
cont.

<sup>44</sup> ABC News, Oct. 15, 2019, *Latest: California oil fire health warning lifted*, ["He says ethanol blazes are not necessarily any more difficult to fight than gasoline or diesel fires."], <https://abcnews.go.com/US/wireStory/latest-fuels-company-cooling-nearby-tanks-stem-fire-66302190>

<sup>45</sup> KQED News, 10/16/2020, ["They're going to vent adjacent tanks ... to relieve pressure and prevent fire," Hill said at a news conference.], available at: <https://www.kqed.org/news/11780224/shelter-in-place-order-issued-for-rodeo-crockett-following-fire-at-nustar-energy-facility>

<sup>46</sup> [NuStar site on google map](#). NuStar tanks were over 80' apart, whereas World Oil new tanks would only be ~30' from existing World Oil tanks.

<sup>47</sup> BAAQMD, INCIDENT REPORT, NuStar Energy LP (Site #A0581), 90 San Pablo Ave Crockett, CA, October 15, 2019, [https://www.baaqmd.gov/~/media/files/compliance-and-enforcement/incident-reports/2019/nustar\\_incident\\_report\\_10152019\\_final-pdf.pdf?la=en](https://www.baaqmd.gov/~/media/files/compliance-and-enforcement/incident-reports/2019/nustar_incident_report_10152019_final-pdf.pdf?la=en)



Large plumes of black smoke were observed throughout the Bay Area. Winds at the time were light and variable. Both directions of Highway 80 were closed at approximately 3:00PM and are expected to remain closed until at least 11:30PM. A shelter-in-place was ordered by Contra Costa County Sheriff's office shortly after 2:00PM for Rodeo and Crockett.

The Contra Costa County Board of Supervisors held a public hearing 10/22/2019, where Randy Sawyer (Director of Hazardous Materials Program, Contra Costa County) and Lewis Broschard, Fire Chief testified and presented data and slides on the NuStar explosion. Much of the material above was described in the County presentations as well. **In addition, Mr. Sawyer made the following points:**

- He believed the source of the heavy smoke was not the ethanol itself in the storage tanks, but the introduction of diesel, jet fuel, or other petroleum products into the fire due to compromised piping caused by the fire/explosion.<sup>48</sup>
- He reported on County measurements of PM2.5 and provided the chart at right showing that levels were in some cases in the highest category (Hazardous —above 0.2505 mg/m3 (milligrams per cubic meter of air)). His chart showed other samples rose to Unhealthy levels (for all individuals - over 0.0555 mg/m3).
- He stated generally that PM2.5 in the thick black smoke is unhealthy, and was the reason for the Shelter-in-Place.

Unhealthy for Sensitive Group	0.0355-0.0554			
Unhealthy	0.0555-0.1504			
Very unhealthy	0.1505-0.2504			
Hazardous	0.2505 and above			
Collected	Location	Comment	PM 2.5 (mg/m3)	PM 10 (mg/m3)
10/15/2019 15:04	38.045052, -122.237830		0.032	0.089
10/15/2019 15:22	38.023352, -122.262999		0.016	0.25
10/15/2019 15:30	38.038660, -122.266481		0.077	0.077
10/15/2019 15:31	38.038681, -122.266447		0.024	0.036
10/15/2019 15:37	38.049696, -122.255679		0.035	0.067
10/15/2019 15:38	38.049690, -122.255741		0.112	0.186
10/15/2019 15:43	38.048730, -122.251676		0.334	0.592
10/15/2019 15:44	38.048689, -122.251629		0.148	0.037
10/15/2019 15:49	38.050228, -122.242435	Incident command post	0.014	0.026
10/15/2019 16:08	38.048523, -122.241282	105 ug/m3 - .105mg/m3 Total		
10/15/2019 16:27	38.055207, -122.231406		0.017	0.024
10/15/2019 16:35	38.053050, -122.234271		0.02	0.034
10/15/2019 16:38	38.053260, -122.234149		0.017	0.033
10/15/2019 16:42	38.052574, -122.233355		0.022	0.023
10/15/2019 16:50	38.048211, -122.221492	Crockett regional park near high school	0.018	0.023

**Lewis Broschard, County Fire Chief also made many points similar to the above descriptions of the fire, and stated during the County hearing and further stated:**

- It was necessary to rely heavily on the joint response of refinery fire departments (Petrochemical Mutual Aid Organization, or PMAO including Chevron, Marathon, Phillips 66 refineries and others), who provided substantial additional firefighting staff and equipment.
- The County had to keep replacing fire suppression foam to remove the oxygen source from the flames in the tanks, which re-ignited a few times. This necessitated receiving much additional

<sup>48</sup> At time 1:33 of the CCC County hearing, [https://contra-costa.granicus.com/MediaPlayer.php?view\\_id=2&clip\\_id=1635](https://contra-costa.granicus.com/MediaPlayer.php?view_id=2&clip_id=1635)



foam from PMAO, as well as industrial pumping facilities with ladders that could put out twice as much foam quickly. They used up most of the foam by the end of the night. The County indicated this access was key.

- The County Timeline at right shows it took hours to put resources in place, and stop the fire.<sup>49</sup>

In summary, storage tanks containing petroleum materials are vulnerable to earthquakes, tsunamis, and other malfunctions, which can cause fires, explosions, spread to other tanks, cause spills, spread fire to surrounding lands, cause major air pollution episodes, and shutdown regional transportation. **These are significant impacts, and the World Oil Project significantly increases the risk of these occurring. The addition of even one new petroleum storage tank significantly increases this risk, moreso for two.** Additional photos below.

Fire Started	1:48 PM
Fire Responded	1:50 PM
PMAO Requested	1:57 PM
HazMat Learned of Incident	-2:00 PM
Request to Activate CWS	2:09 PM
CWS Activated	2:23 PM
Air Monitoring Started	2:45 PM
Road Closures	3:30 PM
Roads Opened	9:18 PM
All Clear Activated	9:30 PM

EJ-39  
cont.



<https://www.usnews.com/news/us/articles/2019-10-15/the-latest-fuels-company-cooling-nearby-tanks-to-stem-fire>

KPIX 5, Moment when Tank Roof explodes



## V. Environmental Justice and Cumulatively Significant Impacts

### A. *The State of California and many regulators have recognized that existing impacts and hazards in the surrounding community are already considerable and need to be reduced*

The community surrounding this Project in the general harbor area is recognized as disadvantaged due to extreme concentration of heavy industry, with high levels of cumulative impacts to air, water, and soil contamination, exacerbated by health burdens and other socioeconomic disadvantages. The worst impacted are communities of color and low-income communities. This is not a matter of opinion, but well-documented and accepted by the State of California and AQMD, because of studies too numerous to list. As a result, most public agencies have adopted Environmental Justice policies to address such inequities. For example, the California Coastal Commission adopted an Environmental Justice Policy in 2019.<sup>50</sup> It states:

**Heavy industrialization and environmental contamination of some portions of California's coast has effectively eliminated much of the public coastal use in these industrialized and contaminated areas.** The Commission will also work with the relevant public agencies to consider project impacts to air quality and soil health in disadvantaged communities which reduce the positive health and recreational benefits associated with coastal access and coastal resources for pollution-burdened communities. . . . The intent will be to ensure that low-income communities and communities of color, and other disadvantaged communities are not disproportionately affected by water contamination or overuse, or diminished environmental services such as those provided by healthy ecosystems, fully-functioning wetlands, and clean waters and lands in the coastal zone.

To evaluate such cumulative impacts, CalEPA's OEHHA publishes CalEnviroScreen, a mapping program which maps and scores concentrated environmental and socioeconomic burdens in California. OEHHA describes its tool as follows:<sup>51</sup>

#### What is CalEnviroScreen?

- CalEnviroScreen is a mapping tool that helps identify California communities that are most affected by many sources of pollution, and where people are often especially vulnerable to pollution's effects.
- CalEnviroScreen uses environmental, health, and socioeconomic information to produce scores for every census tract in the state.
- The scores are mapped so that different communities can be compared. **An area with a high score is one that experiences a much higher pollution burden than areas with low scores.**
- CalEnviroScreen ranks communities based on data that are available from state and federal government sources.

(emphasis added)

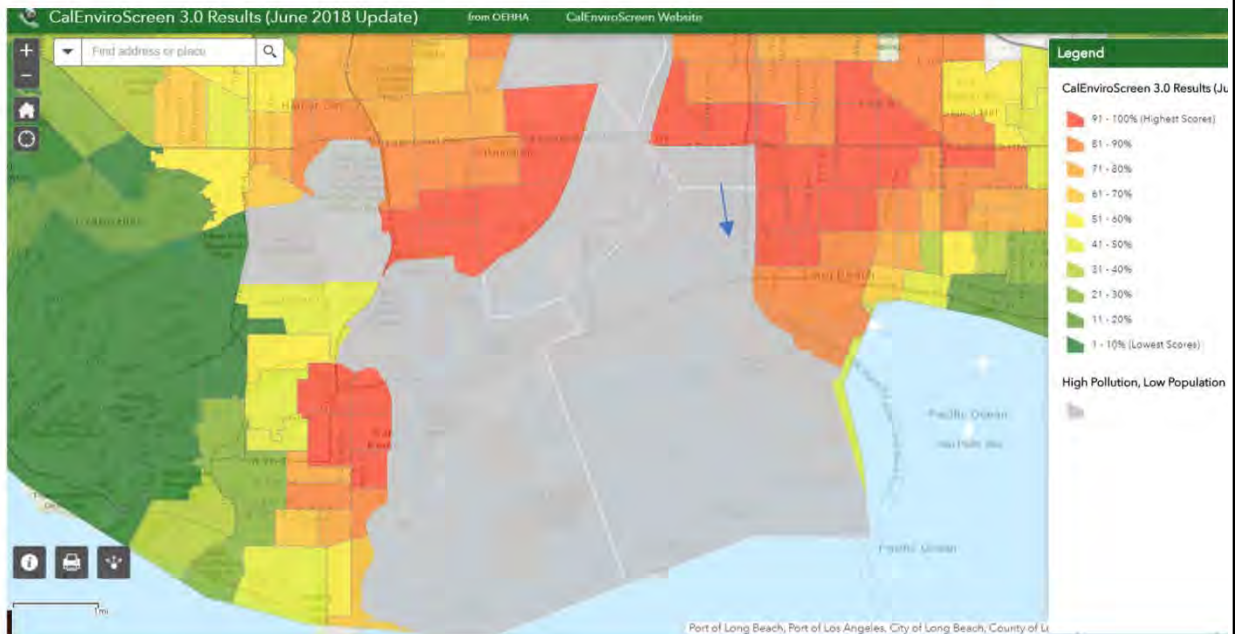
<sup>50</sup> Available at: [https://documents.coastal.ca.gov/assets/cnv-justice/CCC\\_EJ\\_Policy\\_FINAL.pdf](https://documents.coastal.ca.gov/assets/cnv-justice/CCC_EJ_Policy_FINAL.pdf)

<sup>51</sup> <https://oehha.ca.gov/calenviroscreen/about-calenviroscreen>



The CalEnviroScreen maps below show that residential areas around the ports where World Oil is located are among the highest scored pollution burdens in the state (over 91% highest impact scores in the red and orange zones).<sup>52</sup> No areas near the ports show green (the healthiest, least impacted areas, which only appear farther away from the ports). Grey areas are industrial or commercial areas (non-residential) not scored by CalEnviroScreen, although workers at these offsite areas can also have high impacts. I added the Blue Arrow to show the location of the World Oil (Ribost) Terminal.

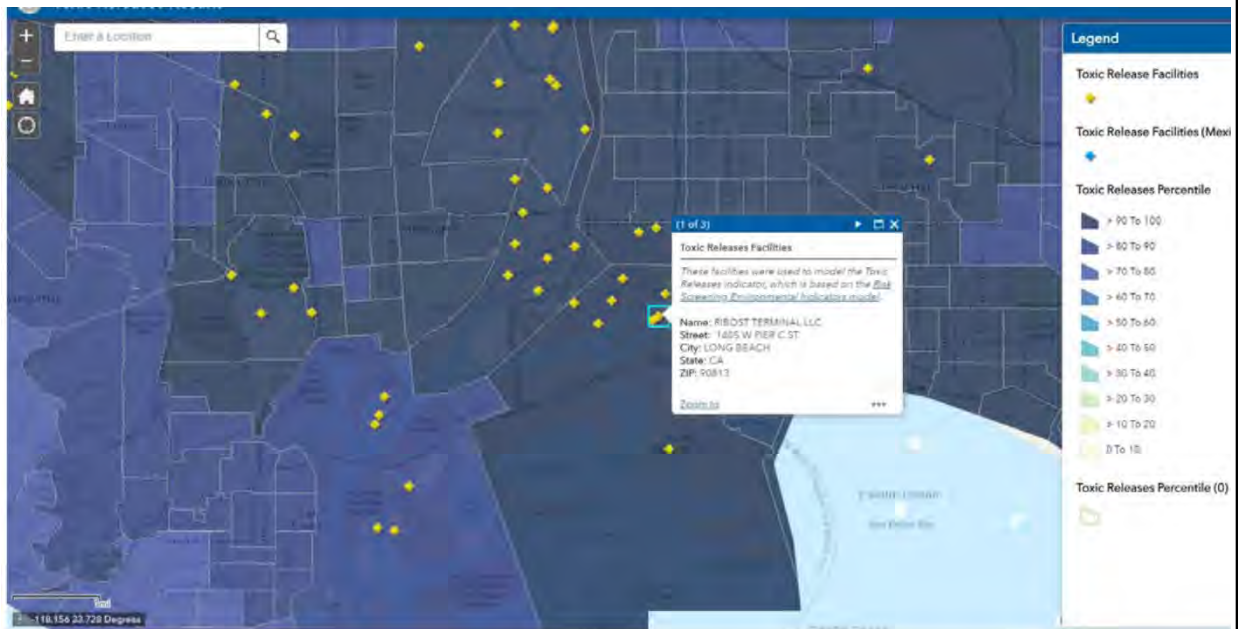
EJ-40 cont.



In addition to overall pollution burdens, CalEnviroScreen provides separate scoring for Toxic Air Contaminants, including the following ports area map. The yellow stars are addresses of toxic sources (such as refineries). The map specifically identifies Ribost Terminals (World Oil), as one of these Toxic Release Facilities, and shows this area at the highest-impact level (over 90% worst impacted by Toxic Releases, shown as dark purple in the Legend at right).

<sup>52</sup> To get to the maps shown in this comment letter, the CalEnviroScreen website is available at the following link, and by zooming in on specific areas of the state, or inputting cities or zip codes.  
<https://oehha.maps.arcgis.com/apps/webappviewer/index.html?id=4560c1bce7c745c299b2d0cbb07044f5>





EJ-40  
cont.

The South Coast Air Quality Management District also has an Environmental Justice Policy,<sup>53</sup> and developed a Community Emission Reduction Plan (CERP) for the Wilmington / Carson / W. Long Beach (WCWLB) area. This was adopted in 2019 by AQMD, and finalized 2020 by the California Air Resources Board. The ports area is identified in the CERP as one of the 6 main priorities for emissions reductions.<sup>54</sup>

The Wilmington, Carson, West Long Beach community identified the following air quality priorities to be addressed by this plan:

- Refineries
- Ports
- Neighborhood Truck Traffic
- Oil Drilling and Production
- Railyards
- Schools, Childcare Centers, and Homes

At its core, this plan seeks to address the identified priorities with **actions that reduce air pollution emissions from sources within this local community** as well as reduce air pollution exposures to the people in this community. (emphasis added)

<sup>53</sup> <http://www.aqmd.gov/nav/about/initiatives/community-efforts/environmental-justice#:~:text=The%20purpose%20of%20South%20Coast,of%20air%20within%20their%20communities.>

<sup>54</sup> AQMD, *Community Emission Reduction Plan, Wilmington, Carson, West Long Beach*, Sept. 2019 Final, p. ES-5, <http://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/wilmington/cerp/final-cerp-wcwlb.pdf?sfvrsn=8>

Note that in addition to the Ports, related priorities include the refineries (which use crude oil and lease tanks from the World Oil terminal) drilling operations (which produce crude oil), and neighborhood truck traffic, which would be increased by the Project. In addition, schools, childcare centers, and homes in the area of the ports are impacted by cumulative air pollution due to the Project (for example, when winds blow in their direction); these are also listed as priority areas to receive additional protections and reductions in pollutants.

EJ-40  
cont.

Because of high impacts, WCWLB was chosen by the California Air Resources Board as one in only ten communities in the state to receive a specialized CERP in the first year of this program, out of many dozens which applied to receive one.

Neighbors and community organizations in the Ports area WCWLB have long sought protective measures to slow the concentration of new polluting and hazardous sources and reduce pollution. This requires serious evaluation of cumulative impacts, rather than streamlining of permitting and environmental assessment, as in the ND's cumulative impacts analysis.

EJ-41

At a minimum, environmental assessment before finalizing a permit is necessary and appropriate, but the Project received a permit even before the ND was published (early this year). Unfortunately, instead of the especial importance of evaluating cumulative impacts in this area, the ND analysis is very inadequate, and would allow the Project to add hazards and pollution which are significant by themselves, but also cumulatively significant.

EJ-42

#### *B. Cumulative Impacts of the Project are Significant*

The Project analysis gave short shrift to many specific cumulative impacts. This area contains arguably the most intensive concentration of petroleum processing and impacts on the West Coast, and expansion of such sources continues.

EJ-43

**Cumulatively Significant impacts of the Project include the following examples (but are not limited to these).** The Project adds both to existing high-levels in the region and to new projects (some of which are listed below):

- **VOC emissions including benzene** and others are already cumulatively significant in the area, and the Project significantly adds to this cumulative impact. For example, the WCWLB CERP found 2017 VOC emissions in this area at over 5,640 tons per year of VOCs with the majority from stationary and area sources. (These are even larger than the large mobile source emissions in the area). (p. Appendix 3b-2) This localized inventory does not include the underestimation of VOCs and benzene found in the studies documented earlier in my comments, which would make the cumulative VOCs, and the Project VOCs, even worse. There are many new Project approvals permitted in the area since 2017, which should be identified. **For example, the Marathon / Tesoro refinery received approval by SCAQMD late in 2019 to add 6 new crude oil storage tanks in this area, which must be**

evaluated cumulatively with the World Oil Project, as part of an adequate evaluation of cumulative impacts.<sup>55</sup>

EJ-43  
cont.

- **Cumulative H2S odor impacts in the ports area is particularly of concern, since the Ports have already been found as a source of significant and persistent H2S odors that took years for AQMD to locate.** (See my earlier comments regarding H2S.) Such impacts don't have to occur exactly simultaneously to be cumulatively significant; these sources are usually episodic in nature, but the presence of new sources mean the potential for more frequent episodes, adding to the community burden.
- **Other cumulative H2S impacts are potentially significant because of the extreme concentration of petroleum storage and processing in this area.** As discussed earlier, AQMD found accidental release of hazardous materials can occur due to earthquakes, mechanical failure, human error, or during transport including pipelines. Earthquakes in particular could cause multiple releases including H2S which could be cumulatively considerable, and which the Project adds to.
- **Diesel trucking emissions add to the already extremely heavy diesel emissions in this area to and from the ports.** The WCWLB CERP also found: “. . . *DPM [Diesel Particulate Matter] is the biggest contributor to the overall cancer risk in the community, followed by 1,3-butadiene, hexavalent chromium and benzene.*” (p. 3b-5) It is important that all these cancer-causing and other toxic emissions decrease, not increase, and that they be evaluated as cumulative, ongoing impacts.
- **Additional potentially high diesel emissions from portable diesel equipment** during temporary terminal activities previously described and not evaluated in the ND (e.g. Equilon) would add to already too-high local cumulative impacts.
- **Impacts due to cumulative hazards from fires and risks due to earthquakes, tsunami, and general industrial malfunctions, include explosions, spreading fires, spills, and heavy smoke causing high levels of PM2.5.** The City of Los Angeles also identified for the region that fire risk from earthquakes could cause spreading conflagrations, made worse by broken fire-fighting infrastructure such as water pipes, and gridlock.<sup>56</sup> The World Oil Project adds significantly to such cumulative hazards in the region, because such disasters can cause multiple fires and multiple demands on emergency resources, making individual project risks worse. Other new Projects (including the new Marathon crude oil tanks) must also be evaluated cumulatively for these risks.

EJ-44

EJ-45

EJ-46

<sup>55</sup> SCAQMD, Notice of Determination, Tesoro LARIC including storage tanks, Nov. 5, 2019, [https://www.aqmd.gov/docs/default-source/ceqa/notices/notices-of-decision-or-determination/2019/tesoro-laric---nod-\(october-2019\).pdf?sfvrsn=6](https://www.aqmd.gov/docs/default-source/ceqa/notices/notices-of-decision-or-determination/2019/tesoro-laric---nod-(october-2019).pdf?sfvrsn=6)

<sup>56</sup> For example, the City of LA, Emergency Operations Plan, Earthquake, Hazard Specific Annex, p. 12 [***F. Fire Following Earthquake: It is anticipated that earthquakes in urban areas may cause major fires. In areas of dense woodframe construction, these fires may grow quickly to involve tens or hundreds of City blocks, known as conflagrations. The fire risk will be exacerbated due to damage to the water distribution system and possibly by traffic gridlock and blocked or damaged roadways. Weather and building density will also play a factor in the rate with which fires spread following an earthquake. In particular, an earthquake during Red Flag conditions, can magnify the danger of conflagration. Tens and even hundreds of City blocks could potentially be lost to fire following earthquake.***”]  
<https://emergency.lacity.org/sites/g/files/wph496/f/Earthquake%20Annex%202018.pdf>



- **Since the new tanks are owned by World Oil, the potential throughput to the World Oil refinery in southeast Los Angeles must also be evaluated.** As stated earlier, no permit condition was identified limiting the overall Ribost (World Oil) terminal throughput. The new tanks' permitted throughput of 150,000 bbls/month would be additional feedstocks available to be utilized in the World Oil refinery (as well as by other refiners including Marathon / Tesoro). The Project needs to provide an evaluation regarding related projects in World Oil or other refineries which would entail increased refinery throughput using this crude oil. This would require evaluation of the new tanks as part of any larger refinery project.

EJ-47

**Greenhouse gas emissions (GHGs such as CO2 and others) are also cumulatively significant.**

These are already very high in this area due to extraction, transport, processing and combustion of hydrocarbons fossil fuels (crude oil, gasoline, diesel, etc.). The Project adds cumulatively to the already-high GHG impacts by allowing an additional 150,000 barrels per month of fossil fuel feedstock throughput (which is explicitly allowed by the AQMD permit, and which does not limit the overall terminal throughput). The ND states that terminal throughput would not increase, but identifies no permit requirement which would enforce this general statement. These Project tanks provide new infrastructure to accommodate fossil fuel feedstocks for the purpose of either refining them into products that will be combusted, or directly used as fuels that will be combusted. In either case, they will cause CO2 emissions, adding to the cumulative impacts in the region. Other new tanks and Projects in the region must also be evaluated cumulatively.

EJ-48

These emissions are not being reduced by the State's Cap and Trade program (see below), in fact, such permitting is expanding in the region despite the urgency of climate impacts. WCWLB includes 5 major oil refineries (Marathon / Tesoro's Wilmington and Carson refineries, Phillips 66's Wilmington and Carson refineries, and the Valero Wilmington refinery), many storage tank farms and terminals which provide the fossil fueled feedstocks, a major oil field (the Wilmington Oil Field), and the largest ports complex in the nation. This region represents the highest concentration of fossil fuel processing on the West Coast, and these facilities frequently expand. The cumulative impacts should be evaluated in the ND, notwithstanding the unusual pandemic year that temporarily reduced such permitting.

Alarming climate impacts are well-documented and urgent. One recent article published by Yale regarding NOAA and NASA reports showed five extreme weather events caused billion-dollar disasters globally in October alone this year, including disastrous wildfires, hurricanes, and flooding, as well as record temperatures.<sup>57</sup> (The billion-dollar description doesn't cover the human and environmental costs, it is only meant to illustrate that the economic scope is major.) Many scientists have warned that we must act soon to meet climate goals necessary to avoid the worst climate disasters, as ScienceNews has reported:<sup>58</sup>

... the United Nations' Intergovernmental Panel on Climate Change released a [report](#) describing what it would take to keep global temperatures from rising more than 1.5 degrees Celsius, a goal of the [Paris climate agreement](#). The report explained that countries would have to cut their anthropogenic carbon dioxide emissions ... to net zero by around 2050. **To reach that goal ... CO2 emissions would have to**

<sup>57</sup> Five global billion-dollar weather disasters in October <https://yaleclimateconnections.org/2020/11/october-2020-was-fourth-warmest-october-on-record-noaa-and-nasa-report/>

<sup>58</sup> Aug 27, 2019, <https://insideclimatenews.org/news/27082019/12-years-climate-change-explained-ipcc-science-solutions>



start dropping "well before 2030" and be on a **path** to fall by about 45 percent by around 2030 . . . (emphasis added)

But instead, the World Oil Project is adding new fossil fuel infrastructure without basic necessary evaluation on climate impacts. These cumulative impacts must receive due attention in the ND.

**Regarding the State’s main device for cutting overall industrial GHGs (Cap & Trade) – California has found its policy is not making progress.** Therefore local permitting and environmental review is even more essential, to prevent increased impacts. In the 2017-2018 budget of the State of California, the Legislative Analyst’s Office (LAO) LAO stated: *“The cap is likely not having much, if any, effect on overall emissions in the first several years of the program.”*<sup>59</sup> LAO found that the 2008 recession & other policies (for example, the State’s Renewable Portfolio Standard for electricity), were responsible for reducing Greenhouse Gases (GHGs), not Cap & Trade. Only Electricity had substantial emission cuts that were not related to the recession.

The updated GHG inventory published in 2020 (for 2018 data) showed the same problem - **no reduction in industrial GHGs** (as shown in CARB’s chart at right). Transportation emissions went down slightly compared to 2017, but were still significantly higher than previous years (2011- 2015). Once more, the electricity sector was the only one which showed substantial progress. Other sector emissions went up.

**The largest industrial sector contributing to GHGs in California is Oil Refining, which is inherently connected with the use of the World Oil storage tanks.**

California’s GHG inventory is available online. I reviewed and downloaded data from the CARB website for the WCWLB area, below.<sup>60</sup>

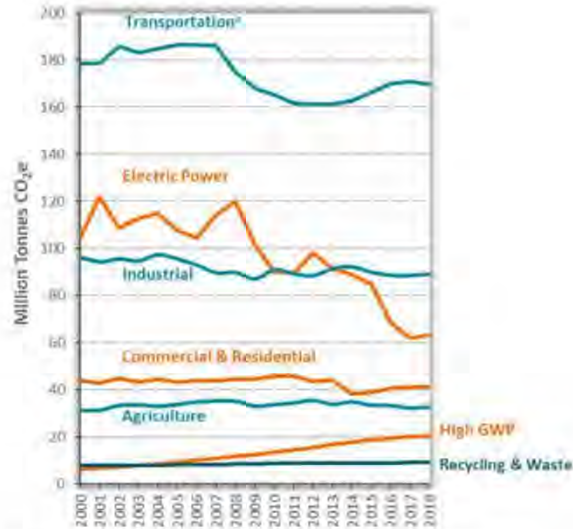


Figure 3. Trends in California GHG Emissions. This figure shows changes in emissions by Scoping Plan sector between 2000 and 2018. Emissions are organized by the categories in the AB 32 Scoping Plan.

**The top GHG emitters in the AQMD Air Basin are almost entirely in the WCWLB area, and are dominated by oil refining and related facilities** (which includes hydrogen production used in oil refining). Tesoro (now Marathon), which leases from World Oil, is notably the top emitter in the region (and also the top in the state). This sector (which includes the World Oil Project) heavily impacts regional and state GHG emissions; the Project needs cumulative impact analysis within this context.

<sup>59</sup> The 2017-2018 Budget, Cap and Trade, California LAO, <https://lao.ca.gov/Publications/Report/3553>

<sup>60</sup> Year 2018, industrial sources, Wilmington, Carson, Long Beach, Total GHGs, (This is filtered from all sites in the AQMD Basin, choosing the highest Total GHG emitters, in units of million metric tons per year).downloaded 11/17/2020 from [https://ww3.arb.ca.gov/ei/tools/pollution\\_map/](https://ww3.arb.ca.gov/ei/tools/pollution_map/)

EJ-48  
cont.

Facility	Primary Sector	Total GHG
Tesoro Refining & Marketing Company LLC - Carson / Wilm. (now Marathon)	Refinery	6,367,797
Chevron - El Segundo Refinery, 90245	Refinery	3,398,468
Torrance Refinery	Refinery	3,049,473
Phillips 66 Wilmington Refinery	Refinery	1,923,613
Ultramar Inc - Valero Wilmington	Refinery	1,070,130
Phillips 66 Carson Refinery	Refinery	936,704
Air Products Wilmington Hydrogen Plant	Hydrogen Plant	809,984
Air Products Carson Hydrogen Plant	Hydrogen Plant	729,776
Air Liquide El Segundo Hydrogen Plant	Hydrogen Plant	574,150
Tesoro Wilmington Calciner	Other Combustion Source	282,971
California Resources Production Corporation – Long Beach	Oil and Gas Production	276,431

EJ-48  
cont.

The WCWLB CERP also found that refineries are frequently the largest source of criteria pollutants, even though the area has extreme diesel trucking emissions, due to the Ports complex. These pollutants are emitted at the same time as GHGs. The CERP found regarding refineries and related petroleum marketing (including terminals):<sup>61</sup>

EJ-49

- **VOCs** – “The largest contribution to VOC emissions are from **petroleum production and marketing**, due to presence of several petroleum refineries in this community.” \*
- **PM2.5** – Fine particulate matter comes mostly from **industrial and petrochemical** process fuel combustion. (PM2.5 causes premature deaths for vulnerable people.)
- **NOx** – **Petroleum refinery operations are the 2nd largest source**, (including sulfur recovery and hydrogen plants). **Ocean-going vessels are the largest** (and these include many oil industry vessels delivering crude oil to refineries.)

Despite all of the above, the ND finds Cumulative Impacts are less than significant (page 4-65). I disagree with every statement in this paragraph, because of the problems which I list below.

Although the proposed project has impacts that were determined to be less than significant that may incrementally affect other resources, they are not considered cumulatively considerable due to the relatively nominal level and area of impact, highly developed industrial surroundings, and temporary nature of the proposed project. Generally, contributions to air quality and greenhouse gas emissions impacts are cumulative due to the regional and global nature of air pollution and climate change, respectively. . . . The proposed project, as well as all other current projects in the region, would comply with applicable SCAQMD standards, recommendations, and regulations, which are designed to limit air quality impacts within its jurisdiction, as well as State laws. As such, all potential cumulative impacts regarding air quality and greenhouse gas emissions would be limited and minimized. The construction activities are minor and would be completed within approximately 10 months. Operational activities would not substantially change. As such, the proposed project’s cumulative impacts are considered less than significant.

<sup>61</sup> SCAQMD air emissions inventory for the WCWLB [Community Emission Reduction Plan](#) , Sept. 2019, WCWLB CERP, VOCs: (p. 3b-6 ), PM2.5 (p. 3b-3), NOx (p. 3b-2)



First, the highly industrialized area of the ports is also surrounded by tens of thousands of residents very nearby in W. Long Beach and Wilmington, and as described earlier, the communities are heavily impacted by the cumulative impacts of industrial air pollution. I could document this through CalEnviroScreen populations on a census tract basis, but this is a basic fact which the environmental review itself should correct.

EJ-49  
cont.

Second, workers at other commercial operations in the area are also heavily impacted by cumulative pollution impacts.

Third, the ND focused on construction impacts and minimized the significance of operational emissions, which are significant and ongoing (not temporary).

Fourth, compliance with existing regulations and laws do not preclude a project causing significant emissions. If they did, the region would not be in extreme non-attainment with Clean Air Act health standards. Neither would this area include the high levels of cancer-causing air emissions which are cumulatively present. This is again basic information well known to the ports and AQMD. Environmental analysis provides an additional layer of protection, to identify the potential for deterioration due to new projects.

In addition, the Port itself lists a large number of Projects that should have been evaluated as part of a Cumulative Impacts analysis. They include at least the seven listed to the right, which is a screen capture from the Port of Long Beach website Environmental Documents page.<sup>62</sup> Normally a lead agency will identify other projects such as those to the right at the Ports, as well as others in the area (such as the Tesoro crude oil tanks identified above), which are part of significant new cumulative impacts in the region. I did not see any such list in the ND.

World Oil Tank Installation Project
Pier 400 Corridor Storage Tracks Expansion Project
Pier B On-Dock Rail Support Facility Project
Southern California Edison Transmission Tower Replacement Project
Long Beach Cruise Terminal Improvement Project
Port Master Plan Update Program EIR
Deep Draft Navigation Feasibility Study

**VI. Conclusion - The Negative Declaration is inadequate, potential impacts are significant and extensive, and detailed environmental assessment is necessary**

EJ-50

In conclusion, the ND does not establish that there would be no significant impacts from the Project, doesn't evaluate many key issues or inadequately evaluates others. The evidence shows that the Project has the potential for many significant impacts, requiring in depth evaluation.

<sup>62</sup> Port of Long Beach, screen capture, 11/17/2020. <https://www.polb.com/documents/#ceqa-nepa>



VIA: ELECTRONIC MAIL ONLY (ceqa@polb.com)

March 16, 2021

Matthew Arms  
Director of Environmental Planning  
Port of Long Beach  
415 W. Ocean Blvd  
Long Beach, California 90802

**RE: Addendum to Appendix G of November 20, 2020, Comments on the Draft Initial Study and Negative Declaration for the World Oil Tank Installation Project (SCH#2020100119)**

Dear Mr. Arms:

We are writing to provide updated information relating to the public comments submitted by the undersigned organizations to the Port of Long Beach on November 20, 2020, for the World Oil Tank Installation Project. Attached to this letter are charts from Appendix G of those public comments, which have been updated with additional details pertaining to the permits granted to storage tanks by the South Coast Air Quality Management District from 2010 to 2020. Thank you for your consideration of our comments.

EJ-51



## **Response to Comments – EJ**

Earthjustice

Kartik Raj, Oscar Espino-Padron, Lisa Fuhrman, Adrian Martinez – Earthjustice

Lauren Packard – Center for Biological Diversity

Chris Chavez – Coalition for Clean Air

Jennifer Ganata – Communities for a Better Environment

Taylor Thomas – East Yard Communities for Environmental Justice

October 20, November 20, 2020, and March 16, 2021

### **Response to Comment EJ-1**

The comment requests a 14-day extension for the public review period to end on November 19, 2020. The 30-day public review period for the Draft IS/ND began on October 7, 2020, was originally set to end on November 5, 2020. On October 28, 2020, based on comments received, the public review period was extended by 15 days ending on November 20, 2020, for a total of 45 days.

### **Response to Comment EJ-2**

The comment summarizes Earthjustice’s understanding of the proposed Project and the purpose of Earthjustice’s request for an extension of the public review period. No further response is necessary.

### **Response to Comment EJ-3**

Please refer to Response to Comment EJ-1.

### **Response to Comment EJ-4**

The comment contends that the IS/ND prepared by the Port fails to account for substantial evidence that the Project may have significant environmental effects, and that the IS/ND reveals multiple significant procedural defects that violate established guidelines for CEQA Review. Please see the Responses to Comments EJ-6 through EJ-51.

### **Response to Comment EJ-5**

The comment references substantial technical analysis and other evidence demonstrating that issuance of a negative declaration for the Project would be scientifically unsupported and in violation of CEQA. To the extent comments on the Draft IS/ND are raised in the supporting documents, responses are provided to the comments. Please see the Responses to Comments EJ-6 through EJ-51.

### **Response to Comment EJ-6**

The comment states that the IS/ND violates CEQA procedural requirements since the Project received a permit to construct from the SCAQMD for the two new tanks months prior to completion of the IS/ND. Since preparation of the Draft IS/ND, by POLB as the lead agency pursuant to CEQA in October 2020, World Oil’s permits to construct for the two new tanks issued by the SCAQMD in January 2020 lapsed, requiring World Oil to submit a new application for a permit to construct/operate for the two new proposed tanks. In consultation with SCAQMD, World Oil has submitted a new permit application for the two proposed tanks. The POLB coordinated and consulted with the SCAQMD (a responsible agency under CEQA) as part

of the IS/ND process. The new permits to construct will not be issued by the SCAQMD until after the IS/ND is adopted, the Project is approved, and a Harbor Development Permit is issued by the Board of Harbor Commissioners. This coordination and submittal of a new permit application to the SCAQMD addresses issues related to the SCAQMD stationary source permitting requirements, including but not limited to the following:

- Tank emissions calculations,
- Fugitive VOC emissions calculations,
- Hydrogen sulfide (H<sub>2</sub>S) emissions and health risk, and
- Benzene emissions and health risk.

### **Response to Comment EJ-7**

The comment states that the Draft IS/ND does not indicate whether the POLB consulted with SCAQMD, a responsible agency, or CDFW, a trustee agency, and therefore, the POLB failed to consult with these agencies to seek their recommendations as required by CEQA.

In parallel with submitting the Application for Harbor Development Permit to the POLB, World Oil submitted an initial Permit to Construct/Permit to Operate Application for the two additional storage tanks at the existing World Oil Terminal to SCAQMD. The POLB reviewed this information as part of the Draft IS/ND process. Additional consultation with agencies, including CDFW, occurred through the publication and request for agencies, organizations, and the public to review of the Draft IS/ND, which occurred between October 7, 2020 and November 20, 2020 (original review period was October 7 – November 5, 2020; extension to November 20, 2020 was issued on October 28, 2020).

The Notice of Intent to Adopt and Availability of a Draft IS/ND was sent to responsible agencies, trustee agencies, interested parties, organizations, and the public pursuant to Section 21092 and 21092.3 of the Public Resources Code and State CEQA Guidelines Section 15072. Furthermore, as shown in IS/ND Section 2.12 (Other Permits and Approvals), Table 2-5, the SCAQMD is identified as an agency from which permits are required. While CDFW is not identified as a permitting agency, as either no impacts or less than significant impacts to biological resources would occur, CDFW was notified as part of the notification process for the Draft IS/ND. To further support notification, the Governor’s Office of Planning and Research, State Clearinghouse, CEQANet Web Portal documents the notification process completed by the State Clearinghouse and lists agencies notified. The Air Resources Board and CDFW are listed as reviewing agencies, among others (<https://ceqanet.opr.ca.gov/2020100119/2>). Additionally, as part of the review process, the POLB provided detailed air quality calculations, including all source files, to the SCAQMD to facilitate their review process. No comments were received from SCAQMD or CDFW on the Draft IS/ND.

As part of the process in preparing responses to comments on the Draft IS/ND and to further engage the SCAQMD as a responsible agency for the permits to construct for the new tanks, the POLB and World Oil completed additional consultation with SCAQMD prior to finalization of the IS/ND. As a result of this consultation process, World Oil submitted a new Permit to Construct/Permit to Operate Application to SCAQMD in February 2021, as the previous permits to construct issued by the SCAQMD in January 2020 had expired (SCAQMD, 2021a).<sup>2</sup> The new permit application is currently under review by the SCAQMD

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<sup>2</sup> SCAQMD Rule 205 Expiration of Permits to Construct states “A permit to construct shall expire one year from the date of issuance unless an extension of time has been approved in writing by the Executive Officer”.

pending completion of the CEQA process. The POLB's consultant, Aspen Environmental Group air quality specialist and registered professional (chemical) engineer, Mr. Will Walters reviewed the calculations and coordinated with SCAQMD to ensure adequacy for their use in the IS/ND, as the SCAQMD is a responsible agency under CEQA for the issuance of permits to construct for the proposed new tanks. As part of the CEQA consultation process, POLB staff and SCAQMD staff also held a conference call on January 19, 2021 to discuss the proposed Project and comments received on the Draft IS/ND. Mr. Walters has also had communication with the SCAQMD permitting engineer. Based on this additional consultation and in response to comments received from agencies, organizations, and the public, the Draft IS/ND has been revised and finalized and a Notice of Intent to Adopt a Negative Declaration issued in accordance with State CEQA Guidelines Section 15072.

### **Response to Comment EJ-8**

The comment states that it is unclear if the Draft IS/ND properly identified and consulted with all responsible and trustee agencies, and the Notice of Intent and other documents provided to the public do not list the SCAQMD and CDFW, or any other responsible and trustee agencies. The comment concludes that this inadequate information suggests that these agencies did not receive sufficient notice of the Draft IS/ND. Please refer to Response to Comment EJ-7.

### **Response to Comment EJ-9**

The comment states that the proposed Project's VOC and benzene emissions are grossly underestimated due to the new tank emissions being estimated by the United States Environmental Protection Agency (U.S. EPA) TANKS model. The comment further quotes information from the SCAQMD sponsored "FluxSense study" and Journal of Air & Waste Management (JAWM) article to indicate potential magnitudes of this underestimate.

SCAQMD is the responsible agency for the assessment and approval of the emissions estimates for the issuance of the permits to construct/operate for the proposed Project's new tanks. As part of their engineering review of the new permit application, SCAQMD completed a revised emissions estimate for the proposed Project's tanks using the current USEPA AP-42 Section 7.1 Organic Liquid Storage Tanks (USEPA, 2020) methodology, assuming a Gasoline Reid Vapor Pressure (RVP) of 10, "average" paint condition, and August as the maximum monthly emissions (SCAQMD, 2021b, 2021c). The TANKS model was not used by SCAQMD to estimate emissions for the proposed Project. Fugitive emissions from components were also included. Final IS/ND Section 4.3 (Air Quality), Table 4.3-2, has been updated to reflect the updated operation emission estimate prepared by SCAQMD as part of its review of World Oil's new permit to construct/permit to operate application for the new tanks.

A similar comment regarding the "Fluxsense study" was made on another recent petroleum tank project's Title V Significant Permit Revision under the permitting authority of the SCAQMD (SCAQMD, 2020c). SCAQMD referred the POLB to the comment response it provided in June 2020 on this comment issue, which is still considered valid, relevant, and useful. Therefore, the POLB is providing that SCAQMD comment response again, slightly modified in the context of World Oil's proposed Project.

*The permits will require that the crude oil storage tanks will be properly maintained and kept in good operating conditions at all times. Additionally, three South Coast AQMD rules are applicable to the crude oil storage tanks which specifically focus on reducing VOC emissions from storage tanks and fugitive components. In particular, South Coast AQMD Rules 463 - Organic Liquid Storage and 1178 - Further Reductions of VOC Emissions from Storage Tanks at Petroleum*

*Facilities require semi-annual inspection of the rim seals (primary and secondary) of the floating roof, and deck fittings (e.g., roof leg socks, guide pole and float, hatches, vacuum breakers, and roof drains) and monitoring for VOC emissions in the space inside the dome above the floating roof. If a defect is found, the tank must be repaired within 72 hours of discovery. In addition, South Coast AQMD Rule 1173 - Control of Volatile Organic Compound Leaks and Releases from Components at Petroleum Facilities and Chemical Plants requires fugitive components to be monitored on a quarterly basis. If a leak is detected in a fugitive component, repairs must be made within one to seven calendar days, depending on the severity of the leak. Because the storage tanks are required to comply with BACT, the monitoring requirements of the permits will be more stringent than South Coast AQMD Rule 1173. For example, the pumps, valve, and flanges associated with the proposed crude oil storage tanks are required to be initially monitored monthly, which is more stringent than the quarterly monitoring required by South Coast AQMD Rule 1173. The BACT monitoring requirements will be included in a permit condition for the crude oil storage tanks.*

*U.S. EPA has not approved the use of solar occultation flux data (as used in the FluxSense study) in lieu of AP-42 emissions factors for air quality permitting or any other regulatory purpose. By contrast, the process for adopting AP-42 emissions factors used in the Tanks model is quite detailed, based on empirical measured data evaluated by the U.S. EPA and circulated for a 60-day public comment period before being finalized.*

*The FluxSense study, referenced in the comment, was not specific to a single source such as a tank, but instead was a research study designed for assessing facility-wide emissions over a limited time-period (only several days). The study also assessed emissions from a tank farm (i.e., a group of tanks) at the refinery over an eight-day period. South Coast AQMD is currently conducting additional work using FluxSense technology and determining appropriate uses for it. Also, emission estimates of an entire refinery or even a tank farm are not representative of individual pieces of equipment and cannot be used to calculate emissions from a specific tank let alone be used to permit that tank that has not yet been constructed. The FluxSense study was an initial effort by South Coast AQMD to improve understanding of optical remote sensing methods to quantify VOC, NO<sub>2</sub>, and SO<sub>2</sub> emissions and inferred benzene emissions from equipment for informational and potential future monitoring purposes. Its methodology is not suited for estimating potential future emissions from specific tanks or discreet fugitive sources because it is not capable of establishing emission factors for specific pieces of equipment.*

*The South Coast AQMD continues to evaluate this emerging technology and is involved in ongoing research projects to measure facility-wide emissions at all major refineries in the South Coast Air Basin on a quarterly basis (i.e. winter, spring, summer, fall) to understand seasonal variations in measurements. Optical Remote Sensing will also be used to measure emissions to establish baseline emissions of all refineries for purposes of the AB 617 Community Emission Reduction Plan for the Wilmington/Carson/West Long Beach community. As the South Coast AQMD continues to use this technology, we will also continue to consider how it can best be applied to refinery operations. But at this time, it is not ready to be used to establish emission limitations in a permit or to include permit conditions requiring its use for monitoring and enforcement.*

*The comment quotes a JAWM article. This JAWM article refers to a study conducted in Houston, Texas at a petroleum refinery/chemical plant complex using Differential Absorption Light Detection and Ranging (DIAL). While not included in the quote, the JAWM article describes factors*



*which create DIAL-based emissions rate uncertainties such as potential failures to accurately characterize the wind field. The Houston, Texas study included three tank sets (Tanks Sets 5, 6, and 9), all containing crude oils. The tanks were described as external floating roof tanks without any details about age, color, condition, number and type of fittings, or whether each tank is heated/unheated. In Emission Estimation Protocol for Petroleum Refineries, Version 3, April 2015, U.S. EPA states: "There are other direct measurement methods that have been used to measure emissions from storage tanks even when the emissions from the tank are not vented [i.e., DIAL (Differential Absorption LIDAR) techniques]; however, these methods do not provide continuous monitoring and have additional limitations (requiring consistent wind direction, etc.). Therefore, at the present time they are not recommended as primary techniques for annual emission estimation." Thus, while DIAL is another promising technology to measure VOC emissions, the Houston, Texas study information is not germane to the South Coast AQMD permitting process and to crude oil storage tanks in general or to the crude oil storage tanks in the proposed Title V permit. The new crude oil storage tanks in the proposed permit will be state-of-the-art, BACT-compliant, internal floating roof tanks.*

Therefore, the U.S. EPA-approved AP-42 Section 7.1 emissions calculations were used by SCAQMD to complete the operations emissions estimate for the proposed Project. The Fluxsense Study was not designed to be used for new tanks emissions estimating purposes and is not used by SCAQMD or any other air quality permitting agency for the purpose of new tank permit emission estimating.

### **Response to Comment EJ-10**

This comment states that the IS/ND analysis of VOC localized impacts on sensitive receptors is incomplete and flawed because it uses incorrect emissions thresholds and an incomplete health risk assessment completed by SCAQMD that does not evaluate other significant health risks posed by VOC emissions including the formation of ground level ozone. Additionally, this comment notes that the POLB's estimates of the proposed Project's VOC emissions are underestimated due to use of an unreliable methodology (i.e., U.S. EPA TANKS model), as previously noted in Comment EJ-9.

Both the health risk assessment associated with tank operation emissions, and the health risk analysis in the IS/ND for the Project-related construction activity emissions, were prepared in accordance with California Air Resources Board (CARB), Office of Environmental Health Hazard Assessment (OEHHA), and SCAQMD recommended methods and guidelines. The health risks associated with emissions from the proposed tanks were determined by identifying and analyzing the risk of the known air toxic air contaminants emissions that are part of the total tank VOC emissions.

The ozone precursor (VOC) emissions increase of 10.93 lbs/day associated with the proposed Project's operations (IS/ND Table 4.3-2, p. 4-10) is less than 0.0024 percent of CARB's 2020 VOC (as Reactive Organic Gases [ROG]) emissions estimate for the Los Angeles County portion of the South Coast Air Basin, and the Project's estimated operation NO<sub>x</sub> emissions increase of 0.81 lbs/day is less than 0.00022 percent of CARB's 2020 NO<sub>x</sub> emissions estimate for the Los Angeles County portion of the South Coast Air Basin (CARB, 2016). Therefore, the proposed Project would not create any numerically relevant direct increases in near-field ozone concentrations. Additionally, there are no agency-recommended methods or procedures to address direct health impacts from Project-level near-field ground level ozone impacts. As noted for the proposed Project, ground level ozone health impacts would be negligible.

Please also see the Responses to Comments EJ-6 and EJ-9.

### Response to Comment EJ-11

This comment states that the IS/ND did not analyze hydrogen sulfide (H<sub>2</sub>S) emissions from the new crude oil tanks and did not evaluate the proposed Project's H<sub>2</sub>S emissions impacts, including the cumulative impacts considering the Project area's numerous other H<sub>2</sub>S emissions sources.

Crude oil can contain a substantial amount of total sulfur, several percent by weight; however, most of this sulfur is bound to carbon atoms and crude oil does not normally contain a large amount of dissolved H<sub>2</sub>S. World Oil's new permit application for the two new tanks provides an assay value for the crude of 3.5 ppm H<sub>2</sub>S and provides an emissions and risk estimate for H<sub>2</sub>S emissions. The POLB coordinated with the SCAQMD to determine the adequacy of the H<sub>2</sub>S emissions estimate and impacts assessment contained in World Oil's revised permit to construct/permit to operate application for the proposed new tanks. SCAQMD performed independent calculations assuming a worst-case of 3 percent sulfur as H<sub>2</sub>S from the SDS Gas Oil, Virgin Tesoro product and August emissions due to warmer temperatures (SCAQMD, 2021b, 2021c). The annual H<sub>2</sub>S emissions are determined to be low (0.0116 pounds per year), and the combined air toxics emissions health risk is well below SCAQMD significance thresholds (SCAQMD, 2021b, 2021c). The IS/ND Section 4.3 (Air Quality) has been updated to include the emissions estimate and impact assessment for H<sub>2</sub>S emissions (checklist item b. discussion, just under Table 4.3-2), including providing additional H<sub>2</sub>S emissions odor impact evaluation (checklist item d. discussion). The proposed Project's H<sub>2</sub>S emissions would not create significant project-level or cumulative impacts.

### Response to Comment EJ-12

The comment states that it is unclear if the 10 percent increase in truck trips includes truck trips anticipated to transport maintenance and waste materials and for refinery crude balancing. IS/ND Section 2.11 (Project Description), Section 4.3 (Air Quality), and Section 4.17 (Transportation) have been revised to clarify that the crude oil balancing is expected to remain the same (approximately one truck per month) with implementation of the proposed Project. The 10 percent increase in truck trips has been analyzed as a worst-case scenario for the purposes of the CEQA analysis and represents an atypical operation condition when, for example, a pipeline is out of service.

### Response to Comment EJ-13

This comment states that the Draft IS/ND fails to consider the link between the Project's direct and life-cycle air pollution impacts and COVID-19. The comment cites several studies that assert that exposure to nitrogen dioxide, nitrogen oxide, ozone, carbon dioxide, carbon monoxide, and PM 2.5 is linked to higher risk of infection and mortality from COVID-19.

An analysis of the potential project-specific health impacts from air pollution emissions is required under CEQA. This analysis is presented in IS/ND Section 4.3 (Air Quality, Item c.), using health protective standards and significance thresholds to assess the worst-case health impacts, including the SCAQMD localized significance thresholds to assess criteria pollutants and SCAQMD health risk significance thresholds to address air toxic pollutants. The health risk assessment methods and assumptions account for sensitive receptors with health conditions, such as asthma, chronic pulmonary disease (COPD), and emphysema, and short-term acute diseases that can impact lung function such as the flu, common colds, or COVID-19. While conservative reference exposure levels are used to assess worst-case acute health risk, there are no responsible-agency recommended methods, procedures, or requirements to separately address project effects on specific short-term acute diseases like COVID-19, as the analysis is already designed to be health protective and addresses potential worst-case project impacts and baseline

receptor health conditions. Additionally, there are no requirements to address project life-cycle air quality impacts, such an analysis would be speculative at best..

### Response to Comment EJ-14

The comment states that the proposed Project's direct and indirect operation VOC emissions were not fully addressed in the IS/ND. The comment notes that the emissions from the new pipeline pump, pipeline cleaning, and tank dewatering wastewater treatment VOC emissions were not considered and included in the Project's total direct emissions. The comment also notes contradictory statements regarding indirect GHG emissions from fuel pumping.

The POLB, as the lead agency under CEQA, prepared the IS/ND for the issuance of a Harbor Development Permit. In accordance with State CEQA Guidelines Section 15096, the SCAQMD is a responsible agency under CEQA for the issuance of the permit to construct/permit to operate for the two tanks, and assisted the POLB, to ensure that the proposed Project's operations emissions estimates related to the new tanks' operation are consistent with the permit evaluation. Specifically, the following addresses the emissions sources noted in the comment:

Pipeline Pump. The POLB coordinated with the SCAQMD to ensure that all new piping component fugitive VOC emissions are included in the emissions estimate.

Pipeline Cleaning. The Project does not include the installation or use of any new pipelines. As such, there would be no increase in the frequency of emissions from pipeline cleaning. The IS/ND clearly identifies that the proposed Project would use existing pipelines and would not include the construction of new pipelines, except for approximately 40 linear feet of piping to connect the new tanks to existing pipe infrastructure (see IS/ND Section 2.9 [Project Overview]).

Tank Dewatering. The proposed Project includes the construction and operation of two new crude oil tanks. The new tanks would not cause an increase in crude throughput that would increase the throughput or wastewater treatment requirements for crude oil dewatering. Therefore, the Project would not affect VOC emissions related to tank dewatering and wastewater treatment.

Indirect Pumping GHG Emissions. The amount of any pumping electricity increase from the two proposed 25-horsepower pumps would not increase the indirect GHG emissions by a magnitude that would be significant. Given the low amount of total horsepower involved, where even if the pumps were to operate at 100 percent load 100 percent of the time, the indirect GHG emissions would be a small fraction of the SCAQMD GHG emissions significance threshold. Additionally, the new tanks are not designed to increase crude oil throughput, so the crude oil pumping energy requirement should not change, and any change in electricity use would be from the additional pumping resulting from the new use of the two existing tanks that will go into lease service. That new use for the two existing tanks is not known and cannot be reasonably estimated. However, to clearly demonstrate that the energy use from pumps of this size would not create substantial indirect GHG emissions, the following worst-case GHG emissions calculation is provided:

$$2 \times 25 \text{ horsepower (hp) pumps} \times 1 \text{ (100\% load)} \times 8,760 \text{ hours (h)/year} / 1,341 \text{ hp/Megawatt (MW)} = 327 \text{ MWh/year}$$
$$327 \text{ MWh/year} \times 0.181 \text{ MT CO}_2\text{e/MWh (SCE's 2019 delivered energy GHG emissions rate}^3) = 59 \text{ MT CO}_2\text{e/year}$$

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<sup>3</sup> SCE, 2020.

The actual expected pump use is a small fraction of 100 percent use at 100 percent load, well less than 10 percent of full time use, meaning the indirect emissions would be less than 10 MT CO<sub>2</sub>e/year and the SCAQMD GHG emissions significance threshold is 10,000 metric tons of CO<sub>2</sub>e/year, so the indirect emissions from pumping increase would be expected to be less than one tenth of one percent of this significance criteria and would clearly be a “minor amount of increased indirect GHG emissions” as stated in the IS/ND.

### Response to Comment EJ-15

The comment states that the analysis of the proposed Project’s cumulative impacts is improper and incomplete because it does not consider the operation of the tanks or generation of tank sludge over the Project’s lifetime. When assessing whether a cumulative effect requires an EIR, State CEQA Guidelines Section 15064(h)(1) states that a “lead agency shall consider whether the cumulative impact is significant and whether the effects of the project are cumulatively considerable.” Additionally, State CEQA Guidelines Section 15064(h)(4) states that “The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project’s incremental effects are cumulatively considerable”.

As summarized in the Draft IS/ND, Section 3.1 (Environmental Factors Potentially Affected), no potentially significant impacts have been identified for the World Oil Tank Installation Project. All impacts were determined to be either “No Impact” or “Less than Significant” because they would not exceed any project-specific significant thresholds. Based on these conclusions, incremental effects of the proposed Project would be minor and, therefore not considered to be cumulatively considerable as defined by State CEQA Guidelines §15064(h)(1). Since impacts from the proposed Project are not considered to be cumulatively considerable, the proposed Project has no potential for generating significant adverse cumulative impacts. As stated above, projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable.

SCAQMD’s guidance regarding cumulative impact assessment states the following:

*Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant (SCAQMD, 2003).*

Using the SCAQMD guidance for cumulative air quality impact assessment, projects that have impacts below all SCAQMD significance criteria can be considered to have less than significant cumulative air quality impacts. The proposed Project’s construction and operation emissions were found to be well below all SCAQMD emissions significance thresholds, and the health risk from the proposed Project was found to be below SCAQMD health risk significance thresholds. Therefore, evidence supports the determination that the proposed Project would not have cumulatively considerable air quality impacts.

Furthermore, the court affirmed based on the Leonoff decision (*Leonoff v. Monterey County Board of Supervisors (8/16/1990) 22 Cal. App. 3d 1337*) that absent substantial evidence that the project would have a considerable incremental effect...an in-depth study of potential cumulative impact was not a prerequisite to preparing an MND. Specifically, the Leonoff decision states, “Under other circumstances, County might be faulted for not elaborating further on the Initial Study’s conclusions of no significant cumulative effects. But where there is no substantial evidence of any individual potentially significant effect by this project, this conclusion appears reasonable.”



The comment also notes that the new tanks would generate approximately 15,000 barrels (bbl) of tank sludge over the course of the 50-year operational life. IS/ND Section 4.9 (Hazards and Hazardous Materials) and Section 4.21 (Mandatory Findings of Significance) have been revised to clarify that sludge tank bottom quantities would be disposed of at a permitted treatment, storage, and disposal facility (TSDF) such as U.S. Ecology waste facility. This waste is regulated by the State of California (non-Resource Conservation and Recovery Act (RCRA) hazardous waste). The closest U.S. Ecology waste facility is located in Vernon, California, approximately 17 miles from the project site. The U.S. Ecology Vernon RCRA Part B facility is capable of handling a high volume of waste, with a tank capacity of one million gallons with an additional 400,000-gallon equivalents of container storage (U.S. Ecology Vernon, 2021). Sludge tank bottom quantities are estimated to be approximately 1,500 bbl (63,000 gallons) every ten years. Over the approximate 50 years lifetime of the proposed Project, the sludge tank bottom quantities would be equal to 15,000 bbl. The amount of 1,500 bbl of sludge tank bottom quantity that is generated every ten years accounts for approximately 4.5 percent of the overall capacity of the U.S. Ecology Vernon facility. This amount of sludge tank bottom accounts for a small percentage of the overall capacity of the nearest U.S. Ecology waste facility. Thus, the proposed Project's contribution to cumulative impacts is determined to be less than significant.

### **Response to Comment EJ-16**

The comment states that the Draft IS/ND fails to consider the proposed Project's cumulative impacts in the context of the existing operations at the World Oil Terminal. As explained in Response to Comment EJ-15, projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable, and those that do not exceed the project-specific significance thresholds are not considered to be cumulatively considerable. The analysis in the Draft IS/ND found no significant impacts. Therefore, the analysis in the Draft IS/ND regarding cumulative impacts properly concluded that no significant adverse cumulative impacts would be expected as a result of the proposed Project.

### **Response to Comment EJ-17**

The comment states that the Draft IS/ND fails to consider closely related refining operations in the region as part of the cumulative impact analysis. Please see Response to Comment EJ-15. The proposed Project would not result in any significant impacts that would be cumulatively considerable. Furthermore, CEQA Guidelines Section 15064(h)(4) states that the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable. Therefore, CEQA does not require the IS/ND to identify cumulative projects, as the proposed Project would not have any cumulatively considerable impacts. As described in IS/ND Section 2.9 (Project Overview), the World Oil Terminal is an existing approved use that currently contains seven tanks. The proposed Project would add two tanks within the existing footprint of the facility and is consistent with the 1990 certified Port Master Plan Update (PMPU).

The Project site is a crude oil and petroleum product storage site, not a refinery. Refinery processing capacities are constrained by many factors including equipment design capacity, permit conditions, firing rates for combustion sources, and maintenance schedules of the various operating units within a refinery. Refinery processes are not influenced by storage capacity. Therefore, the proposed Project would not affect local refinery operations.

The comment states that it is unclear what "current projects" were considered in the IS/ND as part of the cumulative analysis. "Current projects" refer to similar ongoing or reasonably foreseeable future construction projects, which are not limited to "other storage tanks" or "petroleum refinery operations,"

which the comment references. IS/ND Section 4.21 (Mandatory Findings of Significance) has been revised to clarify that other storage tanks and petroleum refinery operations are existing, ongoing operations, not new construction projects or major modifications.

### Response to Comment EJ-18

The comment states that the Draft IS/ND fails to consider the cumulative impacts from hundreds of other petroleum storage tanks projects in the region.

The cumulative impact assessment was completed in accordance with SCAQMD guidance. As noted in Comment Response EJ-8, the POLB has coordinated with the SCAQMD in the review of World Oil’s revised permit application to ensure that the impact analysis in the IS/ND complies with all SCAQMD methods, guidance, and requirements necessary for the SCAQMD to issue the permit to construct/permit to operate for the two new tanks.

While this comment, with additional permit application data provided as an attachment to comment EJ-51, notes that there has been a very large number of tank permit applications submitted between 2010 and 2020 (1,010 total permit applications), a review of this information indicates very few of these applications were for construction of new petroleum product tanks. Most of these permit applications are for change of ownership (751), alteration/modification (135), and change of permit condition (39). Only 67 of these permit applications were for new construction, and of these only 31 were for above ground petroleum product storage tanks. The comment also does not identify tank sizes to determine how many are comparable in size to the proposed Project’s tanks and also does not provide the number of retired storage tanks for this same period. As such, this comment may provide the impression that air pollutant emissions and resultant health risk from petroleum products storage tanks has increased since 2010 due to the volume of permit applications; however, Reactive Organic Gases (ROG) emissions from the petroleum refining and marketing sector have declined since 2010, as estimated by CARB in Table EJ-18.

**Table EJ-18. Los Angeles County portion of South Coast Air Basin Petroleum Refining and Marketing ROG Emissions Estimate Comparison 2010 and 2020 (Tons/Day)**

Emissions Sector/Subcategory	2010	2020
Petroleum Production and Marketing <sup>1</sup>	28.95	15.11
Petroleum Refining	6.10	4.54
Petroleum Marketing	14.03	8.39

<sup>1</sup> – Not all subcategories are listed, so totals of subcategories will not match the Sector total.  
Source: CARB, 2016.

Given the large emissions decline in this sector, and relevant subcategories, there are no sector-wide cumulatively significant emissions increases, and the proposed Project’s small emissions increase of approximately 0.005 tons/day (11 lbs/day) ROG would not be cumulatively considerable in comparison with the sector emissions shown in Table EJ-18.

Also, please see Responses to Comment EJ-15 and EJ-17.

### Response to Comment EJ-19

The comment states that the Draft IS/ND Project Description fails to properly define the proposed Project because it does not account for the impacts of oil refining activities, which the comment asserts are a reasonably foreseeable consequence of the proposed Project. IS/ND Section 2.11 (Project Description)

has been revised to clarify the differences between the proposed Project activities and oil refinery activities, and that fuel and crude oil throughput at refineries is not influenced by the proposed Project's storage capacity. As described in the Draft IS/ND Project Description, oil refining activities are considered a separate action. Activities at refineries such as the Marathon Petroleum Carson Refinery and at terminals such as Glencore Long Beach Marine Terminal have permitting limits separate from the World Oil Terminal storage facility. Additionally, oil refineries are designed to allow for a limited quantity of oil to be refined during a given period and are not influenced by the amount of petroleum stored at separate facilities, and therefore, fuel oil throughput would not increase as a direct or indirect result of the proposed Project. Therefore, the Draft IS/ND complies with CEQA's requirements by accurately describing the proposed Project and providing evidence that fuel and crude oil throughput at refineries would not increase as a result of the installation of two new storage tanks.

### **Response to Comment EJ-20**

The comment states that the Draft IS/ND asserts without evidence that the proposed Project would not allow greater actual crude oil throughput.

As noted in Response to Comment EJ-19, this project would not increase the throughput capacity for the World Oil refinery, which is throughput constrained by many other factors, including air permit throughput or use limits. These new tanks provide storage only, they do not affect the downstream use and as correctly stated in the IS/ND would not allow greater actual crude oil throughput.

### **Response to Comment EJ-21**

This comment notes that the IS/ND fails to include foreseeable combustion of distributed oil products.

While the proposed Project increases petroleum product storage capacity by 50,000 barrels at the Project site, the proposed Project in and of itself would not increase the use of the stored petroleum products (crude oil or fuel oils) nor would the proposed Project create additional fuel oil consumers. There would be no way to determine how the proposed Project would affect existing fuel consumers and total fuel consumption; any estimate would not be foreseeable and would be pure conjecture, a speculative estimate at best<sup>4</sup>. Additionally, World Oil stores crude oil for use at its Southern California refinery that produces asphalt roofing, paving products, and distillates used in motor fuels, but does not directly produce motor fuels (World Oil Corp, 2021). Further, the proposed Project would provide more flexibility in the storage of fuels, as California Low Carbon Fuel Standard regulations require increasing the amount of renewable fuel production/use, and through vehicle electrification regulations. Therefore, the use of petroleum-based fuels, including petroleum-based marine fuels, will be reduced through the implementation forced by regulation to be reduced over time.

As stated in IS/ND Section 2 (Project Description) and Section 4.3 (Air Quality), as a worst-case assumption for the purposes of impact analysis, truck trips are estimated to increase 10 percent during proposed Project operations, which may occur during atypical operations such as when a pipeline is being serviced. The air quality analysis accounts for the air quality impacts associated with this increase in diesel fuel use in on-road heavy-duty trucks. This is the only normal daily increase in fossil fuel consumption that can be quantitatively directly attributed to the proposed Project.

Please also see Responses to Comment EJ-13 and EJ-15.

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<sup>4</sup> CEQA law does not require speculation; in fact, it discourages speculative analysis as noted in Article 10. Considerations in Preparing EIRs and Negative Declarations, Section 15145 Speculation.

### **Response to Comment EJ-22**

The comment states that the IS/ND fails to consider GHG emissions in the context of California's emissions reduction goals and the crisis of climate change and asserts that the IS/ND fails to analyze the potentially significant impacts of GHGs during all stages of oil development, including lifecycle and cumulative impacts.

The IS/ND Section 4.8 (Greenhouse Gas Emissions), under the Checklist item a. discussion, evaluates the GHG emissions in the context of the SCAQMD significant emissions thresholds for industrial sources and the proposed Project's conformance with GHG emissions reduction plans, policies, and regulations. The proposed Project was found to have a small increase in GHG emissions from construction and operation, an increase of less than 1/100th of the significance threshold. Operation GHG emissions were determined to be insignificant because leasing of the existing tanks would cause a minor increase in GHG emissions from electricity used to power the pipeline pumps and fugitive GHG emissions from crude oil storage and loading are negligible because the proposed Project would not cause an increase in crude oil throughput.

The IS/ND Section 4.8 (Greenhouse Gas Emissions), under the checklist item b. discussion, evaluates the proposed Project in terms of conformance with applicable agency adopted GHG emissions reduction plans, policies, or regulations, where it was determined that the proposed Project also conforms with applicable GHG emissions reduction measures.

The comment appears to overlook the State CEQA guidelines and SCAQMD significance thresholds and seeks to impose requirements for GHG emissions reductions and life-cycle impact analysis not required under CEQA or under State and local agency regulations. Life-cycle impact analysis would be speculative and speculative analysis is discouraged under CEQA law. Please see Responses to Comments EJ-13, EJ-14, EJ-19, EJ-20, EJ-21, and EJ-31 in relation to comments regarding life-cycle emissions and speculative analysis.

### **Response to Comment EJ-23**

This comment states that the IS/ND improperly relies on SCAQMD's outdated interim GHG threshold for significance. The IS/ND used the appropriate GHG emissions significance threshold, as determined by the local responsible agency, the SCAQMD, for the proposed Project's GHG emissions impact analysis.

The SCAQMD GHG emissions significance threshold of 10,000 metric tons per year for industrial projects is a published threshold that is provided with the other approved SCAQMD air quality significance thresholds (SCAQMD, 2019). The SCAQMD last revised their air quality significance thresholds list in 2019, therefore it is not considered outdated for industrial sources.

### **Response to Comment EJ-24**

The comment states that the Draft IS/ND fails to provide substantial evidence that earthquakes would not pose a risk of significant environmental impact. Located in Southern California, the proposed Project site is in a known seismically active region. The proposed Project would be subject to similar levels of impact as other development projects in Southern California and would not exacerbate seismic-related hazards relative to existing conditions. The Final IS/ND Section 4.7 (Geology and Soils) has been revised to clarify the design and construction, including site preparation and final engineering of the Project, shall incorporate all geotechnical recommendations provided in the Albus-Keefe & Associates geotechnical update report from 2018 (Albus-Keefe & Associates, Inc., 2018). The recommendation of a ground improvement system consisting of Geopiers or the equivalent rammed aggregate piers would reduce the



effects of static and seismic settlement at the project site (Albus-Keefe, 2018). Additionally, a mat-raft foundation system consisting of a mat supported by caissons/piles for the two tanks would reduce the potential for seismically induced damage to the new tanks from seismic shaking, liquefaction, or lateral spreading (Albus-Keefe, 2018). The proposed tanks would be designed and constructed in accordance with applicable State and building code requirements and standards, such as the California Building Codes, City of Long Beach building codes, and the Seismic Safety Element of the City of Long Beach. Compliance with these requirements and incorporation of all geotechnical recommendations provided in the geotechnical investigation report into the final design would reduce the potential for environmental impacts from earthquakes.

The comment also notes that earthquakes would leave the tanks vulnerable to fires, spills, and explosions. Engineering controls on the project site serve to prevent hazardous conditions, such as a fire or explosion. The project site contains fire extinguishing equipment, in addition to a deluge fire suppression system. The existing tanks are equipped with a foam fire suppression system. The new tanks would also be equipped with a foam fire suppression system. In the event of a large fire, the site operator is trained to stop ongoing operations, close all safety isolation valves, and report a fire to the Long Beach Fire Department. The foam fire suppression system allows first responders to pump aqueous film forming foam (AFFF) both into and onto a tank. The estimated response time of the Long Beach Fire Department would be less than ten minutes.

Compliance with risk reduction requirements is achieved through implementation of existing emergency contingency plans, which include precautions to minimize potential hazards and actions to take in the event of an emergency. Existing emergency contingency plans include the Emergency Response Action Plan, Facility Response Plan, Illness and Injury Prevention Plan, and Spill Prevention Control and Countermeasure Plan. The proposed Project requires all plans to be updated to reflect the new tanks. World Oil is not required to comply with California Accidental Release Prevention (CalARP) or any related risk reduction regulations. World Oil would continue to conduct annual trainings and quarterly/annual emergency drills, have evacuation plans, and shutdown procedures.

The proposed Project site is in an industrialized area, not an urban residential area. Any fire would be isolated at the Port. There is no history of fires at the project site. Construction and operation of the proposed Project is subject to in place emergency response and evacuation systems which are implemented by the POLB. The proposed Project is contained entirely within the POLB, and is serviced by the Long Beach Fire Department, the Long Beach Police Department, and the Port Harbor Patrol for fire protection, police protection, and emergency services. In the event of a fire, existing on- and off-site resources would put out petroleum fires quickly and not allow them to burn themselves out. The proposed Project would not exacerbate fire-related hazards relative to existing conditions.

As discussed in Section 2.9 (Project Overview) of the Draft IS/ND, the existing tanks at the project site are surrounded by a containment wall that varies between approximately 12.5 to 13-feet in height. The wall thickness tapers from approximately 1.5 feet wide at the base to 1 foot wide at the top. The wall includes a 12 to 12.5-foot-wide footing that is buried to a depth that runs from 1.5 feet below-grade at the outer edges of the wall to a depth of approximately 3 feet towards the center of the facility. The wall and its footing make a large "L" shape that is continuous around the site which prevents the wall from falling over in the event of a spill. The containment wall was designed to hold the largest tanks capacity (90,000 barrels) plus a 100-year storm event. The new tanks would be located within the containment wall such that any spills would be contained.

## Response to Comment EJ-25

The comment asserts that the Draft IS/ND includes studies that are inadequately cited or included in the administrative record and do not account for substantial evidence showing risks of significant environmental impacts from a tsunami.

This comment is unclear. Nevertheless, the citations throughout IS/ND Section 4.10(d) (Hydrology and Water Quality) have been updated to correct the spelling of the author of the 2007 *Tsunami Hazard Assessment for the Ports of Los Angeles and Long Beach Final Report* (Hazard Assessment), Moffatt & Nichol. The comment's footnotes (No. 174, 176, and 177) refer to Appendix A, Section V.A. of the comment letter. Appendix A, Section V.A focuses on potential cumulative impacts experienced by disadvantage communities in the general harbor area and does not provide evidence of, or relate to, potential significant environmental impacts from a tsunami.

As discussed in IS/ND Section 4.10(d) (Hydrology and Water Quality), the 2007 *Tsunami Hazard Assessment for the Port of Los Angeles and Port of Long Beach* prepared by Moffatt & Nichol concluded that large earthquakes (e.g., magnitude ~7.5) are very infrequent and have not occurred in the offshore area of California within historical times and that a large and locally generated tsunami would not likely occur more than once every 10,000 years (Moffatt & Nichol, 2007).

In 2010, the Joint Institute for the Study of the Atmosphere and Ocean (JISAO) and National Oceanic and Atmospheric Administration (NOAA)/Pacific Marine Environmental Laboratory (PMEL) investigated 322 possible distant source scenarios under which a magnitude (Mw) 9.3 earthquake could generate a tsunami with potential significant impact on the POLB (Uslu et al., 2010). Of the 322 scenarios investigated, it was determined that a Mw 9.3 earthquake originating from Alaska had the most potential to trigger a tsunami capable of having the most impact to the ports (i.e., worst case scenario). This magnitude of earthquake may potentially produce wave amplitudes up to approximately 6.5 feet and current velocities exceeding 4 meters per second ( $\approx 8$  knots or 9 miles per hour) in the ports of Los Angeles and Long Beach (Uslu et al., 2010). The potential tsunami would take approximately 2 to 7 hours to reach the Los Angeles tide station (Uslu et al., 2010).

As described in IS/ND Section 4.10(d) (Hydrology and Water Quality), the proposed Project would be constructed within the existing 12.5- to 13-foot-high concrete containment wall and would not be subject to significant damage from inundation or if struck by tsunami-borne debris. As described in the report by JISAO, NOAA, and PMEL, large tsunamis have historically caused heavy damage to waterfronts, vessels, moorings, piers, and docks (Uslu et al., 2010). No vessels or water-side activities are associated with existing or proposed operation of the World Oil Terminal, nor would they be associated with construction of the proposed Project. Additionally, the proposed Project is located within an inner channel that is considerably more inland than the southern portions of the Port. If a tsunami were to occur, the outermost portions of the coast and Port would be impacted first. Waves generated by a tsunami are likely to dissipate and weaken as they travel inland through the Port's channels.

Additionally, in the event of an emergency, World Oil would comply with risk reduction requirements through implementation of existing emergency contingency plans, which include precautions to minimize potential hazards and actions to take. Refer to Response to Comment EJ-24.

**Response to Comment EJ-26**

The comment states that the POLB must issue an EIR to comply with CEQA and that the Draft IS/ND ignores evidence that suggests that there are significant impacts. Please see Responses to Comments EJ-5 through EJ-25.

**Response to Comment EJ-27**

The comment is an introductory statement that the South Coast Air Quality Management District's Application Engineering Evaluation and Permit-to-Construct documents for the Project were reviewed. No further response is required.

**Response to Comment EJ-28**

The comment summarizes the commenter's understanding of the proposed Project and asserts that there are deficiencies in the Negative Declaration requiring detailed environmental analysis. Please see Responses to Comments EJ-30 through EJ-49 for specific responses to the stated deficiencies.

**Response to Comment EJ-29**

The comment states that the Draft IS/ND "makes unsupported conclusions, fails to include basic information necessary for public review, and leaves mitigation for later." This is introductory text, with detailed comments following this statement. Please see Responses to Comments EJ-30 through EJ-49.

**Response to Comment EJ-30**

This comment is from the Technical Appendix to the Comment Letter that provides additional details to support Comments EJ-9 and EJ-10. Please see Responses to Comments EJ-9 and EJ-10.

**Response to Comment EJ-31**

This comment states that the IS/ND should have included an assessment of cancer risk from the use of portable equipment used at the site.

Portable equipment use does not occur regularly at the Project site, where energy requirements for all ongoing activities is provided by public utility supplied electricity or natural gas. World Oil does not keep any portable equipment on site. Project-related portable equipment use would be rented or contractor-owned equipment where use would be limited to very low-frequency major maintenance events, such as for tank cleaning which would occur approximately every 10 years. The emissions from such limited use of portable equipment would be minimal and subject to CARB portable equipment registration program (PERP) or SCAQMD permitting regulations. Therefore, due to limited and periodic use (approximately every 10 years), the emissions from on-site portable equipment use would not substantially affect the long-term toxic air pollutant cancer risk from the project site.

**Response to Comment EJ-32**

This comment is from the Technical Appendix to the Comment Letter that provides additional details to support Comment EJ-11. Please see the Response to Comment EJ-11.

**Response to Comment EJ-33**

The comment asserts that there is a significant risk of increased and severe tsunami hazards due to the proposed Project. Please refer to Response to Comment EJ-25.

**Response to Comment EJ-34**

The comment states that the Draft IS/ND fails to provide substantial evidence that earthquakes would not pose a risk of significant environmental impact. Please refer to Response to Comment EJ-24.

**Response to Comment EJ-35**

This is a statement summarizing the experience of Julie May, Senior Scientist, CBE. No response is required.

**Response to Comment EJ-36**

This comment is from the Technical Appendix to the Comment Letter that provides additional details to support Comment EJ-9. Please see the response to Comment EJ-9.

**Response to Comment EJ-37**

This comment is from the Technical Appendix to the Comment Letter that provides additional details to support Comment EJ-11. Please see the response to Comment EJ-11.

**Response to Comment EJ-38**

The comment states that the proposed Project would result in significant impacts due to a tsunami or earthquake. Please refer to Response to Comment EJ-24 and EJ-25. The significance of the proposed Project's impacts is determined based on whether the additional tanks would substantially exacerbate existing conditions. As stated in IS/ND Section 4.10 (Hydrology and Water Quality), the proposed tanks would be constructed and installed within existing 12.5 to 13-foot-high containment wall that would continue to offer the same level of adequate tsunami protection for the proposed tanks as they do for the existing tanks. Construction of the new tanks would not change the level of protection that the containment wall provides.

**Response to Comment EJ-39**

The comment states that the Draft IS/ND fails to provide substantial evidence that earthquakes would not pose a risk of significant environmental impact. Please refer to Response to Comment EJ-24.

**Response to Comment EJ-40**

The comment provides reference to the California Coastal Commission's Environmental Justice Policy, the California Environmental Protection Agency *CalEnviroScreen* mapping tool which maps and scores concentrated environmental and socioeconomic burdens in California, including a screenshot of the residential areas surrounding the ports of Long Beach and Los Angeles. A screenshot of the Ribost Terminal identified as a "Toxic Release Facility" is also provided. Finally, the comment references the SCAQMD Community Emission Reduction Plan (CERP) for the Wilmington/Carson/West Long Beach (WCWLB). The commenter also notes that in addition to ports, related priorities in the CERP include the refineries (the World Oil terminal is not a refinery, rather refineries which use crude oil lease tanks at the



World Oil Terminal). The comment does not state a specific concern or question regarding the sufficiency of the analysis in the Draft IS/ND. As such, no response is required.

### **Response to Comment EJ-41**

The comment states that “[n]eighbors and community organizations in the Ports area WCWLB have long sought protective measures to slow the concentration of new polluting and hazardous sources and reduce pollution. This requires serious evaluation of cumulative impacts, rather than streamlining of permitting and environmental assessments, as in the ND’s cumulative impacts analysis.”

Because the proposed Project is located in the Harbor District, the POLB has the authority for the issuance of a Harbor Development Permit pursuant to Chapter 8 of the California Coastal Act and the certified PMPU, as amended. The commenter asserts that the IS/ND’s cumulative impacts analysis did not involve “serious evaluation” so as to streamline of permitting and environmental assessment. Issuance of a Harbor Development Permit by the POLB, as a public agency, requires compliance with CEQA. CEQA establishes a duty for public agencies to avoid or minimize environmental damage where feasible (State CEQA Guidelines Section 15021 (a)). Contrary to the assertion that the POLB “streamlined” permitting and environmental assessment without serious evaluation of the cumulative impacts associated with the proposed Project, the POLB’s assessment was prepared in accordance with State CEQA Guidelines Sections 15060 and 15063. The POLB conducted preliminary review of the proposed Project, and an Initial Study was prepared to determine if the proposed Project may have a significant effect on the environment. As summarized in the Draft IS/ND, Section 3.1 (Environmental Factors Potentially Affected), no potentially significant impacts have been identified for the World Oil Tank Installation Project. All impacts were determined to be either “No Impact” or “Less than Significant” because they would not exceed any project-specific significant thresholds. Based on these conclusions, incremental effects of the proposed Project would be minor and, therefore not considered to be cumulatively considerable as defined by State CEQA Guidelines §15064(h)(1). Since impacts from the proposed Project are not considered to be cumulatively considerable, the proposed Project has no potential for generating significant adverse cumulative impacts. Please also see Responses to Comments EJ-13 through EJ-16.

### **Response to Comment EJ-42**

The comment states that “environmental assessment before finalizing a permit is necessary and appropriate, but the Project received a permit even before the ND was published...instead of the especial importance of evaluating cumulative impacts in this area, the ND analysis is very inadequate, and would allow the Project to add hazards and pollution which are significant by themselves, but also cumulatively significant”.

It is unclear which permit the commenter is referring to. The POLB is the lead agency pursuant to CEQA for the proposed Project, as it is the agency responsible for the issuance of a Harbor Development Permit to World Oil for the proposed Project in accordance with Chapter 8 of the California Coastal Act and Section 1215 of the City of Long Beach Municipal Code. The SCAQMD has been identified as a responsible agency under CEQA because of its authority to issue permits to construct/operate under the Clean Air Act.

Presuming that the commenter is referring to World Oil’s previously issued permits to construct for the two new tanks in January 2020 by the SCAQMD, as discussed in Response to Comment EJ-6, since the issuance of the Draft IS/ND by the POLB, World Oil’s permits to construct issued in January 2020 have lapsed and are no longer valid. As a result, in consultation with SCAQMD, World Oil has submitted a new permit application for the two proposed tanks. The POLB has coordinated and consulted with the

SCAQMD as part of the IS/ND process in accordance with CEQA. The Harbor Development Permit will only be issued should the Board of Harbor Commissioners approve the project and adopt the IS/ND. As a responsible agency for issuance of permits to construct for the proposed Project, the SCAQMD would comply with CEQA by considering the IS/ND prepared by the POLB and reaching its own conclusions on whether and how to approve the Project (State CEQA Guidelines Section 15096(a)).

The analysis in the Draft IS/ND found no significant impacts. As described in Section 4.3 (Air Quality), daily construction and operation emissions would be well below the SCAQMD's significance thresholds for criteria air pollutants and are therefore less than significant. Therefore, the analysis in the Draft IS/ND regarding cumulative impacts properly concluded that no significant adverse cumulative impacts would be expected as a result of the proposed Project. Please refer to Response to Comment EJ-15 and EJ-17.

### **Response to Comment EJ-43**

The comment states that the VOC and benzene emissions are already cumulatively significant in the area and the Project significantly adds to this cumulative impact. Please see Response to Comment EJ-15.

### **Response to Comment EJ-44**

This comment infers that the proposed Project's H<sub>2</sub>S emissions impacts, both odor and health impacts, would be cumulatively significant. Please see Responses to Comments EJ-11 and EJ-15.

### **Response to Comment EJ-45**

This comment infers that the proposed Project's nominal increase in diesel truck trips and use of portable engines during tank maintenance events would create cumulatively significant health risk impacts. Please see Responses to Comments EJ-15 and EJ-31.

While the proposed Project will cause a small increase in diesel truck trips and use of portable equipment, the proposed Project's small amount of increased trucking and portable engine use would not create a cumulatively considerable increase to health risks. The increase in diesel particulate matter (DPM) emissions from this additional fuel trucking is estimated to be 0.014 pounds per day. The facility has no resident portable equipment. Rented or contractor-owned equipment would be used infrequently during major maintenance events, like tank cleaning (once every approximately 10 years), so emissions from portable equipment are intermittent and would be zero much of the time. The total amount of DPM emissions from these operation sources is negligible in the context of regional DPM emissions and existing ambient air health risk impacts.

### **Response to Comment EJ-46**

The comment states that the proposed Project would have significant cumulative impacts resulting from fires, earthquakes, and tsunamis. Please refer to Responses to Comments EJ-15 regarding cumulative air quality impacts, EJ-24 for earthquake and fire hazards, and EJ-25 for tsunami hazards.

The project site is not located in an area of "dense woodframe construction" as referred to in footnote 56 of the comment. The project site is in an industrial area, not an urban residential area. Fire suppression systems include fire extinguishing equipment, a deluge fire suppression system, and foam fire suppression system on the tanks. Fire suppression systems, engineering controls, and risk reduction requirements serve to reduce the proposed Project's contribution to cumulative impacts which are less than significant.

### **Response to Comment EJ-47**

The comment states that the throughput would be additional feedstocks to refineries, and as a result, the potential throughput must be evaluated. Please refer to Response to Comment EJ-19.

### **Response to Comment EJ-48**

The comment states that the proposed Project's GHG emissions are cumulatively significant. Please see Response to Comment EJ-15.

GHG emissions are by nature a cumulative impact issue. Unlike air pollutant impacts, there are no substantial direct downwind health or other impacts from GHG emissions sources. GHG emissions affect global climate change regionally in different ways and over long timeframes. The impacts of any one project would have negligible impacts on their own, without considering the overall global trend of GHG emissions, so their impacts are only important cumulatively. Therefore, no separate cumulative impact analysis for GHG emissions is required. The analysis performed determined that the proposed Project's GHG emissions are not cumulatively significant.

### **Response to Comment EJ-49**

This comment infers that the proposed Project would have cumulatively considerable impact because the project area has existing poor air quality, is highly industrialized, and is surrounded by affected residential and commercial areas. Additionally, this comment notes the following:

- The IS/ND focused on construction impacts and minimized the significance of operation emissions.
- Compliance with existing regulations do not preclude causing significant emissions.

Please see Response to Comment EJ-15 regarding cumulative impacts associated with the proposed Project.

The proposed Project is located within the South Coast Air Basin (SCAB), a region where state and federal air quality standards are often exceeded. The SCAQMD has adopted air quality significance thresholds for construction and operations that are protective of public health and would assist the SCAB attain state and federal air quality standards. As discussed in the IS/ND Section 4.3 (Air Quality), the proposed Project is not expected to exceed air quality significance thresholds for construction and operation. Therefore, air quality impacts are considered less than significant.

GHG and criteria pollutant emissions were analyzed using tools designed for use by local, state, and federal agencies. GHG and criteria pollutant emissions for construction activities were estimated using the latest SCAQMD-recommended California Emissions Estimator Model (CalEEMod) Version 2016.3.2. CalEEMod is a statewide emissions computer model developed for the California Air Pollution Officers Association in collaboration with the California Air Districts. The California Air Districts provided certain default emissions data to account for local requirements and conditions. The off-road equipment and on-road vehicle emissions factors used in CalEEMod are from CARB emissions factor models. The IS/ND evaluated criteria pollutant emissions assuming construction year 2021 using the CalEEMod estimated unmitigated fleet average emissions factors, which for off-road equipment during the construction year would be approximately the same as assuming Tier 3 diesel engine standards (not a mitigated Tier 4 fleet). The construction emission estimates for criteria pollutants were below SCAQMD emission significance thresholds; therefore, construction emissions were determined to have less-than-significant impacts.

Criteria pollutant emissions associated with operation of the new tanks were calculated by SCAQMD based on the information provided by World Oil using the calculations in U.S. EPA AP-42 Section 7.1 (also see Response to Comment EJ-9) to estimate emissions from fixed- and floating-roof storage tanks. The estimated increase in operation on-road criteria and GHG emissions were calculated separately using CARB fleet average emissions factors, and the related increase in loading rack emissions were calculated, and both are presented in IS/ND Appendix A. The calculation of worst-case operation indirect GHG emissions increase from the use of the new tank pumps has also been added to the emissions calculations provided in IS/ND Appendix A. The operation emission estimates for criteria pollutants were below SCAQMD emission significance thresholds; therefore, operation emissions were determined to have less than significant impacts.

The estimated GHG construction emissions were amortized over the SCAQMD-recommended life assumption of 30 years and added to the operations GHG emissions increase. The proposed Project's combined GHG emissions from construction and operation are below the GHG emissions significance threshold; therefore, GHG emissions were determined to have less than significant impacts.

Regarding the comment that compliance with existing regulation and laws does not preclude a project causing significant emissions, the commenter states "If they did, the region would not be in extreme non-attainment with Clean Air Act health standards." This comment disregards the substantial improvements made in air quality over the past several decades and the forecast continued improvement in air quality due to implementation of the existing air quality regulations and laws. If the Project's emissions or health risk is determined to exceed significance thresholds, regardless of whether the Project is in compliance with all regulations and laws, CEQA requires that all feasible mitigation measures be applied to eliminate or reduce the impacts to less than significant. Otherwise, the impacts are considered to be significant and unavoidable. However, as discussed in IS/ND Section 4.3 (Air Quality), the proposed Project would not exceed project-specific emissions or health risk thresholds and. Therefore, the project-level impacts would be less than significant and would not be considered cumulatively significant.

Also, please see Response to Comment CP-1.

### **Response to Comment EJ-50**

The comment states that the proposed Project has the potential to result in significant impacts, and the Draft IS/ND is inadequate and requires further evaluation. Please refer to Responses to Comment EJ-30 through EJ-46.

### **Response to Comment EJ-51**

The comment was received by the Port on March 16, 2021, after the close of the public review period which ended on November 20, 2020. It provides updated charts from Appendix G to include additional details ("Application Type", "Updated Status", "Issue Date", and "Estimated Construction Date"), pertaining to the permits granted to storage tanks by the SCAQMD from 2010 to 2020. This updates the attachment to Comment EJ-18. Please see Response to Comment EJ-18. No further response is required.



## GBKN – Gabrieleno Band of Mission Indians – Kizh Nation

Email: World Oil Tank Installation Project Team

**From:** [Gabrieleno Administration](#)  
**To:** [Blanchard, Jennifer](#)  
**Subject:** World Oil Tank installation Project Port of Long Beach  
**Date:** Wednesday, October 28, 2020 1:38:06 PM

---

Hello Jennifer Blachard

Can you please provide a project map regarding the above project?

Thank you

Sincerely,

Brandy Salas  
Admin Specialist  
Gabrieleno Band of Mission Indians - Kizh Nation  
PO Box 393  
Covina, CA 91723  
Office: 844-390-0787  
website: [www.gabrielenoindians.org](http://www.gabrielenoindians.org)



*The region where Gabrieleno culture thrived for more than eight centuries encompassed most of Los Angeles County, more than half of Orange County and portions of Riverside and San Bernardino counties. It was the labor of the Gabrieleno who built the missions, ranchos and the pueblos of Los Angeles. They were trained in the trades, and they did the construction and maintenance, as well as the farming and managing of herds of livestock. "The Gabrieleno are the ones who did all this work, and they really are the foundation of the early economy of the Los Angeles area". "That's a contribution that Los Angeles has not recognized--the fact that in its early decades, without the Gabrieleno, the community simply would not have survived."*

GBKN-1

## **Response to Comments – GBKN**

Gabrieleno Band of Mission Indians – Kizh Nation

Brandy Salas

Admin Specialist

October 28, 2020

### **Response to Comment GBKN-1**

The comment requests a map of the proposed Project. Jennifer Blanchard, POLB Environmental Specialist Associate, provided the requested project map via email on October 28, 2020. No further comment was received from the tribe.

## SFERCA – Safe Fuel and Energy Resources California

### ADAMS BROADWELL JOSEPH & CARDOZO

DANIEL L. CARDOZO  
CHRISTINA M. CARO  
THOMAS A. ENSLOW  
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October 9, 2020

### Via Email and U.S. Mail

Matthew Arms  
Director of Environmental Planning  
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415 W. Ocean Blvd  
Long Beach, CA 90802  
Email: [ceqa@polb.com](mailto:ceqa@polb.com)

Jennifer Blanchard  
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Port of Long Beach  
415 W. Ocean Blvd  
Long Beach, CA 90802  
Email: [Jennifer.blanchard@polb.com](mailto:Jennifer.blanchard@polb.com)

### Via Email Only

Leah Douglas, EA Board of Directors  
Email: [leah.douglas@polb.com](mailto:leah.douglas@polb.com)


### **Re: Request for Mailed Notice of CEQA Actions and Public Hearings for the World Oil Tank Installation Project (SCH2020100119)**

Dear Mr. Arms, Ms. Blanchard, and Ms. Douglas:

We are writing on behalf of Safe Fuel and Energy Resources California (“SAFER CA”) to request mailed notice of the availability of any environmental review document, prepared pursuant to the California Environmental Quality Act, related to the World Oil Tank Installation Project, SCH 2020100119 (“Project”), proposed by Ribost Terminal LLC dba World Oil Terminals (“Applicant”).

We also request mailed notice of any and all hearings and/or actions related to the Project. These requests are made pursuant to Public Resources Code Sections 21092.2, 21080.4, 21083.9, 21092, 21108 and 21152 and Government Code Section 65092, which require local agencies to mail such notices to any person who has filed a written request for them with the clerk of the agency’s governing body.

4943-005pae

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SFERCA-1

October 8, 2020  
Page 1

Please send the above requested items by email and U.S. Mail to our South San Francisco Office as follows:

**U.S. Mail**

Paul Encinas  
Adams Broadwell Joseph & Cardozo  
601 Gateway Boulevard, Suite 1000  
South San Francisco, CA 94080-7037

**Email**

[pencinas@adamsbroadwell.com](mailto:pencinas@adamsbroadwell.com)

SFERCA-1  
cont.

Please call me at (650) 589-1660 if you have any questions. Thank you for your assistance with this matter.

Sincerely,



Paul Encinas  
Legal Assistant

PAE:pae

4943-005ae



ADAMS BROADWELL JOSEPH & CARDOZO

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RACHAEL E. KOSS  
NIRIT LOTAN  
WILLIAM C. MUMBY

MARC D. JOSEPH  
Of Counsel

\*Admitted in Colorado

October 9, 2020

**Via Email and U.S. Mail**

Matthew Arms  
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Long Beach, CA 90802  
Email: [cega@polb.com](mailto:cega@polb.com)

Jennifer Blanchard  
Environmental Specialist Associate  
Port of Long Beach  
415 W. Ocean Blvd  
Long Beach, CA 90802  
Email: [Jennifer.blanchard@polb.com](mailto:Jennifer.blanchard@polb.com)

**Re: Request for Immediate Access to Public Records – World Oil Tank Installation Project (SCH2020100119)**

Dear Mr. Arms and Ms. Blanchard:

We are writing on behalf of Safe Fuel and Energy Resources California (“SAFER California”) to request ***immediate access*** to all public records related to the World Oil Tank Installation Project, SCH 2020100119 (“Project”), proposed by Ribost Terminal LLC dba World Oil Terminals (“Applicant”). This request includes, but is not limited to, any and all materials, correspondence, resolutions, memos, notes, analysis, electronic mail messages, files, maps, charts, and/or any other documents related to the Project.

SFERCA-2

The Applicant proposes to construct the World Oil Tank Installation Project, which would include the construction and operation of two new 25,000-barrel petroleum storage tanks within the existing World Oil Terminal, privately-owned by Ribost Terminal LLC, located at the Port of Long Beach, 1405 Pier C Street, Berth C73, Long Beach, CA 90813.

SFERCA-3

This request is made pursuant to the California Public Records Act. (Government Code §§ 6250, et seq.) This request is also made pursuant to Article I, section 3(b) of the California Constitution, which provides a Constitutional right of access to information concerning the conduct of government. Article I, section 3(b) provides that any statutory right to information shall be broadly construed to

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4943-002pae

October 9, 2020

Page 3

provide the greatest access to government information and further requires that any statute that limits the right of access to information shall be narrowly construed.

We request ***immediate access*** to review the above documents pursuant to section 6253(a) of the Public Records Act, which requires public records to be “open to inspection at all times during the office hours of the state or local agency” and provides that “every person has a right to inspect any public record.”<sup>1</sup> Therefore, the 10-day response period applicable to a “request for a copy of records” under Section 6253(c) does not apply to this request.

We request access to the above documents, including any electronic documents, in their original form, as maintained by the Port of Long Beach (“Port”).<sup>2</sup> Pursuant to Government Code Section 6253.9, if the requested documents are in electronic format and are 10 MB or less (or can be easily broken into sections of 10 MB or less), please email them to me as attachments. We request that the Port provide records in a readily-accessible electronic format such as .pdf. “Readily-accessible” means text-searchable and OCR-formatted. Additionally, please provide the records either in (1) load-ready format with a CSV file index or excel spreadsheet, or if that is not possible; (2) in .pdf format, without any “profiles” or “embedded files.” Profiles and embedded files within files are not readily-accessible. Please do not provide the records in a single, or “batched,” .pdf file.

If the Port is unable to provide access to the records in electronic format, we will pay for any direct costs of duplication associated with filling this request up to \$200. However, please contact me with a cost estimate before copying/scanning the materials.

My contact information is:

**U.S. Mail**

Paul Encinas  
Adams Broadwell Joseph & Cardozo  
601 Gateway Boulevard, Suite 1000  
South San Francisco, CA 94080-7037

<sup>1</sup> Gov. Code § 6253, subd. (a).

<sup>2</sup> Gov. Code § 6253.9, subd. (a)(1); see *Sierra Club v. Super. Ct.* (2013) 57 Cal.4th 157, 161 (holding that electronic database files are subject to disclosure); *Citizens for Open Government v. City of Lodi* (2012) 205 Cal.App.4th 296, 309–311 (electronic correspondence is part of CEQA administrative record).

4469-003pae

October 9, 2020  
Page 3

**Email**

[pencinas@adamsbroadwell.com](mailto:pencinas@adamsbroadwell.com)

Please email me or call me at (650) 589-1660 if you have any questions.  
Thank you for your assistance with this matter.

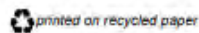
Sincerely,



Paul Encinas  
Legal Assistant

PAE:pae

4469-003pae





ADAMS BROADWELL JOSEPH & CARDOZO

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October 9, 2020

**Via Email and U.S. Mail**

Matthew Arms  
Director of Environmental Planning  
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Jennifer Blanchard  
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415 W. Ocean Blvd  
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Email: [Jennifer.blanchard@polb.com](mailto:Jennifer.blanchard@polb.com)

**Re: Requests for *Immediate Access* to Documents Referenced in the Initial Study/Negative Declaration – World Oil Tank Installation Project (SCH2020100119)**

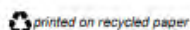
Dear Mr. Arms and Ms. Blanchard:

We are writing on behalf of Safe Fuel and Energy Resources California (“SAFER CA”) to request ***immediate access*** to any and all documents referenced, relied upon, and incorporated by reference in the Initial Study/Draft Negative Declaration Report (“IS/ND”) for the World Oil Tank Installation Project, SCH 2020100119 (“Project”), proposed by Ribost Terminal LLC dba World Oil Terminals (“Applicant”). This request also includes, but is not limited to, any and all materials, correspondence, resolutions, memos, notes, analysis, electronic mail messages, files, maps, charts, and/or any other documents related to the Project. This request excludes the IS/ND itself, which we have already obtained.

Our request for all documents referenced, relied upon, and incorporated by reference in the IS/ND is made pursuant to the California Environmental Quality Act (“CEQA”), which requires that all documents referenced in an environmental review document be made available to the public for the entire comment period.<sup>1</sup>

<sup>1</sup> See Pub. Resources Code, § 21092, subd. (b)(1) (“all documents referenced in the . . . negative declaration” must be “available for review”); 14 Cal. Code Reg. § 15072, subd. (g)(4) (“documents incorporated by reference in the proposed negative declaration” must be “available for review”).

4943-001pae



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October 9, 2020

Page 2

This request is also made pursuant to the California Public Records Act,<sup>2</sup> and pursuant to Article I, section 3(b) of the California Constitution, which provides a Constitutional right of access to information concerning the conduct of government. Article I, section 3(b) provides that any statutory right to information shall be broadly construed to provide the greatest access to government information and further requires that any statute that limits the right of access to information shall be narrowly construed.

We request *immediate access* to review the above records pursuant to section 6253(a) of the Public Records Act, which requires public records to be “open to inspection at all times during the office hours of the state or local agency” and provides that “every person has a right to inspect any public record.”<sup>3</sup> Therefore, the ten-day response period applicable to a “request for a copy of records” under Section 6253(c) does not apply to this request. We request access to the documents in the existing form maintained by the Port of Long Beach (“Port”).<sup>4</sup> The Port is therefore directed not to take any action to reorganize or modify the requested documents.

Pursuant to Government Code Section 6253.9, if the requested records are in electronic format, please send them using a file transfer project such as Dropbox. If the records are 10 MB or less (or can be easily broken into sections of 10 MB or less), please email them to me at [pencinas@adamsbroadwell.com](mailto:pencinas@adamsbroadwell.com) as attachments. If any of the requested items are available on the Internet, we request that the Port direct us to the appropriate electronic link(s) for accessing the documents.

My contact information is:

**U.S. Mail**

Paul Encinas  
Adams Broadwell Joseph & Cardozo  
601 Gateway Boulevard, Suite 1000  
South San Francisco, CA 94080-7037

---

<sup>2</sup> Government Code §§ 6250, et seq.

<sup>3</sup> Gov. Code § 6253(a).

<sup>4</sup> Gov. Code § 6253.9(a)(1); see *Sierra Club v. Super. Ct.* (2013) 57 Cal. 4th 157, 161 (holding that electronic database files are subject to disclosure); *Citizens for Open Government v. City of Lodi* (2012) 205 Cal.App.4th 296, 309–311 (electronic correspondence is part of CEQA administrative record).

4943-001pae

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cont.

October 9, 2020  
Page 2

**Email**

[pencinas@adamsbroadwell.com](mailto:pencinas@adamsbroadwell.com)

I will be calling you to arrange for duplication/transmission of the responsive records. If you have any questions, please email me or call our South San Francisco office at (650) 589-1660. Thank you for your assistance with this matter.

Sincerely,



Paul Encinas  
Legal Assistant

PAE:pae

4943-001pae

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\*Admitted in Colorado

October 29, 2020

**Via Email and U.S. Mail**

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Jennifer Blanchard  
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Long Beach, CA 90802  
Email: [Jennifer.blanchard@polb.com](mailto:Jennifer.blanchard@polb.com)

**Re: Request for Outstanding Documents Referenced in the Initial Study/Negative Declaration for the World Oil Tank Installation Project (SCH2020100119)**

Dear Mr. Arms and Ms. Blanchard:

On behalf of Safe Fuel and Energy Resources California ("SAFER CA"), we respectfully request that the Port of Long Beach ("Port") provide the remaining documents referenced in the Initial Study/Negative Declaration ("IS/ND") prepared for the World Oil Tank Installation Project, proposed by Ribost Terminal LLC dba World Oil Terminals ("Applicant"). This request is made pursuant to Public Resources Code section 21092(b)(1) and CEQA Guidelines section 15072(g)(4), which require that "all documents referenced" or "incorporated by reference" in a proposed negative declaration be "available for review."<sup>1</sup>

Given the closure of the Port's Administrative Building in response to COVID-19, the public does not have access to "the address where copies of the . . . negative declaration, and all documents referenced in the . . . negative declaration" are available for public review as required by CEQA.<sup>2</sup> SAFER CA and other

<sup>1</sup> See Pub. Res. Code § 21092, subd. (b)(1) ("all documents referenced in the . . . negative declaration" must be "available for review"); 14 C.C.R. § 15072, subd. (g)(4) ("documents incorporated by reference in the proposed negative declaration" must be "available for review").

<sup>2</sup> Pub. Res. Code § 21092, subd. (b)(1); see Notice of Intent to Adopt and Availability of An Initial Study/Negative Declaration (Oct. 7, 2020), p. 1 ("To slow the community spread of the Coronavirus

4943-006aep



SFERCA-6



October 29, 2020

Page 2

members of the public must therefore rely entirely on the Port's electronic disclosure of these public records.

On October 9, 2020, SAFER CA submitted a letter to the Port ("IS/ND References Request"), requesting "*immediate access* to any and all documents referenced, relied upon, and incorporated by reference" in the IS/ND ("References Request").<sup>3</sup> This References Request, along with a general request for records related to the Project under the Public Records Act ("PRA") were assigned request numbers C008842-100920 and C008958-102020. We subsequently sought to clarify specific documents within the scope of our References Request in a non-exhaustive list.<sup>4</sup> A partial set of documents responsive to our References Request was produced on October 20, 2020, but multiple reference documents have not been provided.<sup>5</sup> The documents that are still missing include:

- Certificates for Emissions Reduction Credits ("ERC") approved by South Coast Air Quality Management District to address VOC emissions from the tanks (IS/ND, pp. 4-9–4-10 & Table 4.3-2, footnote 1)
  - Specifically, ERC Certificate #AQ015118 which is cited in November 20, 2019 correspondence between SCAQMD and Applicant that was provided to us by the City of Long Beach
- Native format modeling input and output files and unlocked Excel spreadsheets supporting the health risk calculations conducted by SCAQMD for the Project's operational VOC and TAC emissions (IS/ND, p. 4-12.)

Without access to these critical IS/ND reference documents during the public comment period on the IS/ND, SAFER CA and other members of the public are precluded from having the meaningful opportunity to comment on the IS/ND that is required by CEQA. Without having access to these and other documents, SAFER CA and other members of the public are unable to fully evaluate the accuracy of the Port's air quality and health risk analyses and conclusions.

(COVID-19), the Port of Long Beach Administrative Building is currently closed to the public; therefore printed, hard copies of the IS/ND are not readily available to the general public at this time.").

<sup>3</sup> **Exhibit A:** Letter from Adams Broadwell Joseph & Cardozo to Port re Requests for Immediate Access to Documents Referenced in the Initial Study/Negative Declaration – World Oil Tank Installation Project (Oct. 9, 2020) ("References Request").

<sup>4</sup> **Exhibit B:** Email Correspondence from October 14–20, 2020 re Port Record Requests C008842-100920, C008958-102020.

<sup>5</sup> *Id.*

4943-006acp

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cont.



October 29, 2020  
Page 3

Although we appreciate the Port's decision to extend the comment deadline to November 20, 2020, we still require the materials listed above immediately to enable SAFER CA to review them and address them in our comments. Please make the remaining reference documents available to Paul Encinas at [pencinas@adamsbroadwell.com](mailto:pencinas@adamsbroadwell.com).

Please feel free to email me at [wnumby@adamsbroadwell.com](mailto:wnumby@adamsbroadwell.com) with any questions. Thank you for your prompt attention and response.

Sincerely,



William Mumby

WM:acp  
Attachments

SFERCA-6  
cont.

4943-006acp

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SFERCA-7

# EXHIBIT A

ADAMS BROADWELL JOSEPH & CARDOZO

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MARC D. JOSEPH  
*Of Counsel*

*\*Admitted in Colorado*

October 9, 2020

**Via Email and U.S. Mail**

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Port of Long Beach  
415 W. Ocean Blvd  
Long Beach, CA 90802  
Email: [Jennifer.blanchard@polb.com](mailto:Jennifer.blanchard@polb.com)

**Re: Requests for Immediate Access to Documents Referenced in the Initial Study/Negative Declaration – World Oil Tank Installation Project (SCH2020100119)**

Dear Mr. Arms and Ms. Blanchard:

We are writing on behalf of Safe Fuel and Energy Resources California (“SAFER CA”) to request ***immediate access*** to any and all documents referenced, relied upon, and incorporated by reference in the Initial Study/Draft Negative Declaration Report (“IS/ND”) for the World Oil Tank Installation Project, SCH 2020100119 (“Project”), proposed by Ribost Terminal LLC dba World Oil Terminals (“Applicant”). This request also includes, but is not limited to, any and all materials, correspondence, resolutions, notes, analysis, electronic mail messages, files, maps, charts, and/or any other documents related to the Project. This request excludes the IS/ND itself, which we have already obtained.

Our request for all documents referenced, relied upon, and incorporated by reference in the IS/ND is made pursuant to the California Environmental Quality Act (“CEQA”), which requires that all documents referenced in an environmental review document be made available to the public for the entire comment period.<sup>1</sup>

<sup>1</sup> See Pub. Resources Code, § 21092, subd. (b)(1) (“all documents referenced in the . . . negative declaration” must be “available for review”); 14 Cal. Code Reg. § 15072, subd. (g)(4) (“documents incorporated by reference in the proposed negative declaration” must be “available for review”).

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This request is also made pursuant to the California Public Records Act,<sup>2</sup> and pursuant to Article I, section 3(b) of the California Constitution, which provides a Constitutional right of access to information concerning the conduct of government. Article I, section 3(b) provides that any statutory right to information shall be broadly construed to provide the greatest access to government information and further requires that any statute that limits the right of access to information shall be narrowly construed.

We request *immediate access* to review the above records pursuant to section 6253(a) of the Public Records Act, which requires public records to be “open to inspection at all times during the office hours of the state or local agency” and provides that “every person has a right to inspect any public record.”<sup>3</sup> Therefore, the ten-day response period applicable to a “request for a copy of records” under Section 6253(c) does not apply to this request. We request access to the documents in the existing form maintained by the Port of Long Beach (“Port”).<sup>4</sup> The Port is therefore directed not to take any action to reorganize or modify the requested documents.

Pursuant to Government Code Section 6253.9, if the requested records are in electronic format, please send them using a file transfer project such as Dropbox. If the records are 10 MB or less (or can be easily broken into sections of 10 MB or less), please email them to me at [pencinas@adamsbroadwell.com](mailto:pencinas@adamsbroadwell.com) as attachments. If any of the requested items are available on the Internet, we request that the Port direct us to the appropriate electronic link(s) for accessing the documents.

My contact information is:

**U.S. Mail**

Paul Encinas  
Adams Broadwell Joseph & Cardozo  
601 Gateway Boulevard, Suite 1000  
South San Francisco, CA 94080-7037

---

<sup>2</sup> Government Code §§ 6250, et seq.

<sup>3</sup> Gov. Code § 6253(a).

<sup>4</sup> Gov. Code § 6253.9(a)(1); see *Sierra Club v. Super. Ct.* (2013) 57 Cal. 4th 157, 161 (holding that electronic database files are subject to disclosure); *Citizens for Open Government v. City of Lodi* (2012) 205 Cal.App.4th 296, 309–311 (electronic correspondence is part of CEQA administrative record).

4943-001pae



October 9, 2020  
Page 2

**Email**  
[pencinas@adamsbroadwell.com](mailto:pencinas@adamsbroadwell.com)

I will be calling you to arrange for duplication/transmission of the responsive records. If you have any questions, please email me or call our South San Francisco office at (650) 589-1660. Thank you for your assistance with this matter.

Sincerely,



Paul Encinas  
Legal Assistant

PAE:pae

4943-001pae

SFERCA-8

## **EXHIBIT B**

**Paul A. Encinas**

---

**Subject:** FW: 4943 - World Oil: Public Records Request - C008842-100920

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**From:** Cruz, Jose <[jose.cruz@polb.com](mailto:jose.cruz@polb.com)>  
**Sent:** Wednesday, October 14, 2020 4:21 PM  
**To:** Paul A. Encinas <[pencinas@adamsbroadwell.com](mailto:pencinas@adamsbroadwell.com)>  
**Subject:** RE: Public Records Request - C008842-100920

Hi Paul,

Staff is reviewing your request and will respond within 10 days from the day of the request to notify you if there are responsive records, or if an extension is necessary to determine if responsive records exist. I anticipate if records do exist that it will be filled in that time frame. All notifications will be done through the GovQa system.

Best,

**Cruz, Jose**

PRA Coordinator  
Human Resources/Records Center  
Port of Long Beach

562.283.7525 (office)  
415 W. Ocean Blvd., Long Beach, CA 90802  
[jose.cruz@polb.com](mailto:jose.cruz@polb.com)  
[www.polb.com](http://www.polb.com)



---

**From:** Paul A. Encinas <[pencinas@adamsbroadwell.com](mailto:pencinas@adamsbroadwell.com)>  
**Sent:** Wednesday, October 14, 2020 4:09 PM  
**To:** Cruz, Jose <[jose.cruz@polb.com](mailto:jose.cruz@polb.com)>  
**Subject:** Public Records Request - C008842-100920

Hello Jose,

I was provided your contact information regarding my PRA request and I wanted to know when I will receive these docs. Thank you.

Paul Encinas

---

CONFIDENTIALITY NOTE: This email message and its attachments contain work product or other information which is privileged, confidential and/or protected from disclosure. This information is intended only for the use of the individual or entity named above. If you think that you have received this message in error,

**Paul A. Encinas**

---

**Subject:** RE: Public Records Request - C008842-100920

---

**From:** Paul A. Encinas <[pencinas@adamsbroadwell.com](mailto:pencinas@adamsbroadwell.com)>  
**Sent:** Thursday, October 15, 2020 4:59 PM  
**To:** [jose.cruz@polb.com](mailto:jose.cruz@polb.com) <[jose.cruz@polb.com](mailto:jose.cruz@polb.com)>  
**Subject:** Re: Public Records Request - C008842-100920

Hello Jose,

I am just following up on our request for production of documents. The documents requested below are referenced in the IS/ND under the Public Resources Code 21092 and CEQA Guidelines 15072(g)(4). We still expect documents responsive to our entire request, but we would like to prioritize production of these materials as soon as possible given the approaching comment deadline for the IS/ND.

- South Coast Air Quality Management Permit to Construct, Application 614274. Approved 1/2/20 (referenced on IS/ND, pp. 4-8, 7-4).
  - Please provide the Permit Application, Engineering Analysis, and Permit itself;
- South Coast Air Quality Management Permit to Construct, Application 614275. Approved 1/2/20 (referenced on IS/ND, pp. 4-8, 7-4).
  - Please provide the Permit Application, Engineering Analysis, and Permit itself;
- South Coast Air Quality Management District Applications Evaluations and Calculations, Permit to Construct Evaluation, Application 614274. Approved 8/5/19 (referenced on IS/ND, pp. 4-9, 4-10, 7-4.);
- All Inputs and Outputs used to Calculate VOC Emissions using U.S. EPA TANKS program (referenced on IS/ND, p. 4-9 & Table 4.3-2.)
- All inputs for CalEEMod model, including Engine Tiers for all construction equipment (this information is missing from Appendix A of the IS/ND);
- Supporting data for emissions in Tables 4.3-2 and 4.3-4 of the IS/ND; and
- Copy of the unlocked excel spreadsheets for all of the requested modeling files.

I appreciate your help. Thank you very much.

Paul Encinas

---

**From:** Cruz, Jose <[jose.cruz@polb.com](mailto:jose.cruz@polb.com)>  
**Sent:** Wednesday, October 14, 2020 4:21 PM  
**To:** Paul A. Encinas <[pencinas@adamsbroadwell.com](mailto:pencinas@adamsbroadwell.com)>  
**Subject:** RE: Public Records Request - C008842-100920

Hi Paul,



Staff is reviewing your request and will respond within 10 days from the day of the request to notify you if there are responsive records, or if an extension is necessary to determine if responsive records exist. I anticipate if records do exist that it will be filled in that time frame. All notifications will be done through the GovQa system.

Best,

**Cruz, Jose**

PRA Coordinator  
Human Resources/Records Center  
Port of Long Beach

562.283.7525 (office)  
415 W. Ocean Blvd., Long Beach, CA 90802  
[jose.cruz@polb.com](mailto:jose.cruz@polb.com)  
[www.polb.com](http://www.polb.com)



**Paul A. Encinas**

---

**Subject:** FW: 4943 - World Oil: Public Records Request :: C008842-100920

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**From:** Long Beach Public Records Center <[longbeachca@mycusthelp.net](mailto:longbeachca@mycusthelp.net)>

**Sent:** Monday, October 19, 2020 7:36 AM

**To:** Paul A. Encinas <[pencinas@adamsbroadwell.com](mailto:pencinas@adamsbroadwell.com)>

**Subject:** Public Records Request :: C008842-100920

--- Please respond above this line ---



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RE: Public Records Request Reference Number: C008842-100920

Thank you for submitting your request for public records. Occasionally, we experience a delay in searching for records. Consequently, pursuant to Government Code 6253 (c), the City of Long Beach is extending the time within which to identify responsive documents by fourteen (14) calendar days.

The City will make every effort to provide responsive records in a reasonable time. You will be notified by November 02, 2020 of the following:

- Whether the City has records responsive to your request, and the page count and required payment, if applicable, to produce copies of such records, and/or
- Whether the City has records responsive to your request, but which are exempt from disclosure and the reasons for exemption.

If you have any questions, please contact the Records Coordinator Office at (562) 570-6711.

Jose Cruz



**William Mumby**

---

**From:** William Mumby  
**Sent:** Monday, October 19, 2020 10:04 AM  
**To:** jose.cruz@polb.com  
**Cc:** Paul A. Encinas; Christina Caro  
**Subject:** World Oil: Public Records Request: C008842-100920  
**Attachments:** 4943 - World Oil: Public Records Request :: C008842-100920

Hi Jose,

I am following up on the attached correspondence between you and Paul Encinas regarding our Public Records Requests (Reference Number: C008842-100920). Our requests include a general request for public records related to the World Oil Tank Installation Project and a request for documents referenced in the negative declaration for the Project.

While we recognize that the Port may need extra time to identify all of the records responsive to our records requests, we have provided you a short list of specific records referenced in the negative declaration we would like produced as soon as possible. For ease of reference, I have reproduced the list of records to be made available to us below:

- South Coast Air Quality Management Permit to Construct, Application 614274. Approved 1/2/20 (referenced on IS/ND, pp. 4-8, 7-4).
  - Please provide the Permit Application, Engineering Analysis, and Permit itself
- South Coast Air Quality Management Permit to Construct, Application 614275. Approved 1/2/20 (referenced on IS/ND, pp. 4-8, 7-4).
  - Please provide the Permit Application, Engineering Analysis, and Permit itself
- South Coast Air Quality Management District Applications Evaluations and Calculations, Permit to Construct Evaluation, Application 614274. Approved 8/5/19 (referenced on IS/ND, pp. 4-9, 4-10, 7-4.)
- All Inputs and Outputs used to Calculate VOC Emissions using U.S. EPA TANKS program (referenced on IS/ND, p. 4-9 & Table 4.3-2.)
- All inputs for CalEEMod model, including Engine Tiers for all construction equipment (this information is missing from Appendix A of the IS/ND)
- Supporting data for emissions in Tables 4.3-2 and 4.3-4 of the IS/ND
- Copy of the unlocked excel spreadsheets for all of the requested modeling files.

The Port's response does not establish a basis for a 14-day extension under Government Code section 6253(c). That provision requires the agency's notification of extension to "set[] forth the reasons for the extension" and the reasons must include at least one of the "unusual circumstances" identified in Government Code section 6253(c)(1)-(4). The attached email does not establish any of the facts required for an extension under section 6253(c); it merely says that "[o]ccasionally, we experience a delay in searching for records." This boilerplate response does not support a 14-day extension.

Moreover, you have provided no justification for extending the response time to "identify" the records listed above when we have already identified them in the follow-up to our initial request. Please provide these records as soon as possible and on a rolling basis as they are located.

Thank you,

William C. Mumby  
Adams Broadwell Joseph & Cardozo  
601 Gateway Boulevard, Suite 1000

South San Francisco, CA 94080  
(650) 589-1660  
[wmumby@adamsbroadwell.com](mailto:wmumby@adamsbroadwell.com)

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cont.



**William Mumby**

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**From:** William Mumby  
**Sent:** Tuesday, October 20, 2020 12:24 PM  
**To:** jennifer.blanchard@polb.com  
**Cc:** Paul A. Encinas; Christina Caro  
**Subject:** World Oil Tank Installation Project Request for Documents Referenced Under CEQA

Hi Ms. Blanchard,

I left a voicemail message for you at the Port's Environmental Planning Division and I just wanted to follow up by email as well. I am following up on our firm's October 9 letter requesting immediate access to documents referenced in the negative declaration for the World Oil Tank Installation Project under CEQA. Given the November 5 comment deadline for the negative declaration, we are hoping to receive access to those documents as soon as possible.

In particular, we would like to prioritize production of the following documents referenced in the negative declaration:

- South Coast Air Quality Management Permit to Construct, Application 614274. Approved 1/2/20 (referenced on IS/ND, pp. 4-8, 7-4).
  - Please provide the Permit Application, Engineering Analysis, and Permit itself
- South Coast Air Quality Management Permit to Construct, Application 614275. Approved 1/2/20 (referenced on IS/ND, pp. 4-8, 7-4).
  - Please provide the Permit Application, Engineering Analysis, and Permit itself
- South Coast Air Quality Management District Applications Evaluations and Calculations, Permit to Construct Evaluation, Application 614274. Approved 8/5/19 (referenced on IS/ND, pp. 4-9, 4-10, 7-4.)
- All Inputs and Outputs used to Calculate VOC Emissions using U.S. EPA TANKS program (referenced on IS/ND, p. 4-9 & Table 4.3-2.)
- All inputs for CalEEMod model, including Engine Tiers for all construction equipment (this information is missing from Appendix A of the IS/ND)
- Supporting data for emissions in Tables 4.3-2 and 4.3-4 of the IS/ND
- Copy of the unlocked excel spreadsheets for all of the requested modeling files.

If you could please provide an update as to the status of our references request that would be greatly appreciated.

Thank you,  
Wil

William C. Mumby  
Adams Broadwell Joseph & Cardozo  
601 Gateway Boulevard, Suite 1000  
South San Francisco, CA 94080  
(650) 589-1660  
[wmumby@adamsbroadwell.com](mailto:wmumby@adamsbroadwell.com)

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**William Mumby**

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**From:** Long Beach Public Records Center <longbeachca@mycusthelp.net>  
**Sent:** Tuesday, October 20, 2020 1:32 PM  
**To:** Paul A. Encinas  
**Cc:** William Mumby  
**Subject:** Public Records Request :: C008842 100920

--- Please respond above this line ---



RE: Public Records Request Reference Number: C008842-100920

Hi William,

Thank you for submitting your request for public records. Due to the COVID-19 pandemic and the furloughs of City and Port employees scheduled through the 2020-2021 fiscal year, we are experiencing a delay in searching for and locating potentially responsive records. Consequently, pursuant to Government Code 6253 (c), the City of Long Beach is extending the time within which to identify responsive documents by fourteen (14) calendar days.

The City will make every effort to provide responsive records in a reasonable time. You will be notified by November 02, 2020 of the following:

- Whether the City has records responsive to your request, and the page count and required payment, if applicable, to produce copies of such records, and/or
- Whether the City has records responsive to your request, but which are exempt from disclosure and the reasons for exemption.

The City will prioritize producing the specific records requested. For further inquires please use the GovQA system.

If you have any questions, please contact the Records Coordinator Office at (562) 570-6711.

Best,

Jose Cruz



To monitor the progress or update this request please log into the [Long Beach Public Records Center](#)



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cont.

**Paul A. Encinas**

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**Subject:** FW: 4943 - World Oil - Public Records Request :: C008958-102020

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**From:** Long Beach Public Records Center <[longbeachca@mycusthelp.net](mailto:longbeachca@mycusthelp.net)>

**Sent:** Tuesday, October 20, 2020 4:01 PM

**To:** Paul A. Encinas <[pencinas@adamsbroadwell.com](mailto:pencinas@adamsbroadwell.com)>

**Subject:** Public Records Request :: C008958-102020

Dear Paul Encinas:

**NOTICE:** Public records requests and transparency remain of utmost importance, and we are continuing to respond to requests under California Government Code guidelines. However, you may experience delays in response times as we are focusing on handling high priority issues related to COVID-19 (Coronavirus).

*Pursuant to Government Code section 6253(c) there may be delays due to unusual circumstances.*

Thank you for submitting a request for public records to the City of Long Beach. Pursuant to California Government Code § 6253, staff will review your request and respond within 10 days to notify you if there are responsive records, or if an extension is necessary to determine if responsive records exist.

If your request was received after business hours or on a weekend or holiday, the next business day will be considered the date of receipt. The 10-day response period starts with the first calendar day after the date of receipt (Ca. Civ. Code, § 10.).

You may be contacted by a City staff member if there are questions regarding your request.

Thank you again for contacting the City of Long Beach. You may track the status of your request here [My Request Center](#).





**Paul A. Encinas**

---

**Subject:** 4943 - World Oil: Public Records Request :: C008958-102020

---

**From:** Long Beach Public Records Center <[longbeachca@mycusthelp.net](mailto:longbeachca@mycusthelp.net)>

**Sent:** Tuesday, October 20, 2020 4:16 PM

**To:** Paul A. Encinas <[pencinas@adamsbroadwell.com](mailto:pencinas@adamsbroadwell.com)>

**Subject:** Public Records Request :: C008958-102020

--- Please respond above this line ---



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RE: Public Records Request Reference Number: C008958-102020

In response to your request for public records received on 10/12/2020 7:30:00 AM, tracked as PRA # C008958-102020, the City of Long Beach has produced the appropriate responsive records.

PRA Request # C008958-102020 is now closed.

Please click here to log in and view/download your responsive records:

<https://LONGBEACHCA.govqa.us/WEBAPP/rs/RequestEdit.aspx?rid=12106&coid=>

Thank you for contacting the City of Long Beach. If you have any questions, please contact the Records Coordinator Office at (562) 570-6711.

Jose Cruz



*Note:* If you are unable to open and view your records you may need to disable your pop-up blocker. Please follow this link for instructions on how to do so:

[Disable Pop-Up Blocker](#)

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To monitor the progress or update this request please log into the [Long Beach Public Records Center](#)



**Paul A. Encinas**

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**Subject:** 4943 - World Oil: Public Records Request :: C008842-100920

---

**From:** Long Beach Public Records Center <[longbeachca@mycusthelp.net](mailto:longbeachca@mycusthelp.net)>

**Sent:** Wednesday, October 21, 2020 10:04 AM

**To:** Paul A. Encinas <[pencinas@adamsbroadwell.com](mailto:pencinas@adamsbroadwell.com)>

**Subject:** Public Records Request :: C008842-100920

--- Please respond above this line ---



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RE: Public Records Request Reference Number: C008842-100920

Thank you for submitting your request for public records. After reviewing your request, we have determined that additional or more detailed information is needed to appropriately search for records.

I am confirming that **Public Records Request / C008958-102020** has been produced. For the rest we are asking to refine the scope to resolutions, memos, notes, analysis, files, maps, charts. Understanding the time sensitive nature of your request will allow us to expedite this request.

While the Public Records Act (PRA) provides members of the public with access to public records, it is not unlimited in its scope. California courts have acknowledged that members of the public may request documents from municipalities pursuant to the PRA even if they are unable to precisely identify the documents sought, but the request must still reasonably describe the information contained in the records sought such that the municipality can locate the records with "reasonable effort". [Cal. First Amend. Coalition v. Superior Court (1998) 67 Cal.App.4th 159.]

The request must be focused and specific [Rogers v. Superior Court (1993) 19 Cal.App.4th 469.] and clear enough so that the agency can decipher what record or records are being sought. Moreover, the City is not required by law to create a record or list from an existing record.

The City will wait for your response before proceeding with this request. If we do not hear back from you within 10 calendar days, the PRA request will be closed.

Thank you for contacting the City of Long Beach. If you have any questions, please contact the Records Coordinator Office at (562) 570-6711.

Jose Cruz

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cont.

City of  
LONG BEACH

To monitor the progress or update this request please log into the [Long Beach Public Records Center](#)



ADAMS BROADWELL JOSEPH & CARDOZO

A PROFESSIONAL CORPORATION

ATTORNEYS AT LAW

801 GATEWAY BOULEVARD, SUITE 1000  
SOUTH SAN FRANCISCO, CA 94080-7037

TEL: (650) 589-1660  
FAX: (650) 589-5062

wmumby@adamsbroadwell.com

SACRAMENTO OFFICE

520 CAPITOL MALL, SUITE 350  
SACRAMENTO, CA 95814-4721

TEL: (916) 444-6201  
FAX: (916) 444-6209

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THOMAS A. ENSLOW  
ANDREW J. GRAF  
TANYA A. GULESSERIAN  
KENDRA D. HARTMANN\*  
KYLE C. JONES  
RACHAEL E. KOSS  
NIRIT LOTAN  
WILLIAM C. MUMBY

MARC D. JOSEPH  
*Of Counsel*

\*Admitted in Colorado

November 20, 2020

**Via Email & Overnight Mail:**

Matthew Arms  
Director of Environmental Planning  
Port of Long Beach  
415 W. Ocean Blvd.  
Long Beach, CA 90802  
Email: [ceqa@polb.com](mailto:ceqa@polb.com)

**Re: Comments on the Initial Study/Negative Declaration for World Oil Tank Installation Project (SCH: 2020100119)**

Dear Mr. Arms:

On behalf of Safe Fuel and Energy Resources California (“SAFER CA”), we submit these comments on the Initial Study/Draft Negative Declaration (“IS/ND”) for the World Oil Tank Installation Project (“Project”)<sup>1</sup> prepared pursuant to the California Environmental Quality Act (“CEQA”)<sup>2</sup> by the Port of Long Beach (“Port”). The Project is proposed by Ribost Terminal, LLC dba World Oil Terminals (“Applicant”) and seeks to construct two new 25,000-barrel petroleum storage tanks at the existing World Oil Terminal owned by Applicant located at the Port.<sup>3</sup>

The terminal is 261,000 square feet (about 6 acres) and contains seven existing petroleum tanks of various sizes totaling a capacity of 502,000 barrels.<sup>4</sup> Three tanks contain crude oil and serve World Oil Refinery through the terminal loading rack, while the other four tanks are leased to Marathon Petroleum and

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<sup>1</sup> Aspen Environmental Group, Draft Negative Declaration/Application Summary Report, World Oil Tank Installation Project (October 2020) (“IS/ND”).

<sup>2</sup> Pub. Res. Code § 21000 *et seq.*; 14 Cal. Code Regs. (“C.C.R.”) §§ 15000 *et seq.*

<sup>3</sup> IS/ND, p. 2-1.

<sup>4</sup> IS/ND, p. 1.



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Page 2

Glencore for the purpose of storing fuel oil received and shipped via pipeline.<sup>5</sup> The new tanks would be installed in the northwest corner of the existing petroleum bulk station and terminal.<sup>6</sup> Construction is estimated to start in January 2021 and last approximately 10 months.<sup>7</sup>

The two tanks would provide additional storage capacity of petroleum for refining and distribution and could make more existing tanks available for lease by third-party vendors.<sup>8</sup> The IS/ND estimates a 10 percent increase in truck trips, as well as an increase in average barrel throughput of fuel oil, but not of crude oil.<sup>9</sup>

This letter contains the comments of SAFER CA and its technical consultant based on an initial review of the IS/ND and available IS/ND reference documents. Based on our preliminary review of the IS/ND, we have concluded that it fails to comply with CEQA. The IS/ND suffers from an incomplete and misleading Project description. The Project poses significant impacts to air quality and health risk. Furthermore, the Project is inconsistent with applicable plans, local regulations, and the California Coastal Act, which preclude the Port from approving the Project as proposed.

These comments were prepared with the assistance of environmental health and air pollution expert Phyllis Fox, Ph.D., P.E. Comments and curriculum vitae of Dr. Fox are attached to this letter as Attachment A.<sup>10</sup> Attachment A is fully incorporated herein and submitted to the Port herewith. Therefore, the Port must separately respond to the technical comments in Attachment A.

For the reasons discussed herein, and in the attached expert comments, SAFER CA urges the Port to remedy the deficiencies in the IS/ND by preparing a legally adequate EIR and circulating it for public review and comment.<sup>11</sup>

<sup>5</sup> IS/ND, p. 2-3.

<sup>6</sup> IS/ND, p. 2-4.

<sup>7</sup> IS/ND, p. 2-6.

<sup>8</sup> IS/ND, p. 2-4.

<sup>9</sup> IS/ND, p. 2-8.

<sup>10</sup> **Attachment A:** Comments on the Initial Study & Negative Declaration for the World Oil Tank Installation Project by Phyllis Fox (Nov. 20, 2020) (“Fox Comments”).

<sup>11</sup> We reserve the right to supplement these comments at later hearings related to this Project. (Gov. Code § 65009(b); Pub. Res. Code § 21177(a); *Bakersfield Citizens for Local Control v. Bakersfield* (2004) 124 Cal.App.4th 1184, 1199–1203 (explaining exhaustion of administrative remedies under CEQA); see *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal.App.4th 1109, 1121 (“As we read section 21177, any alleged grounds for noncompliance with CEQA provisions may be raised by

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cont.

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## I. STATEMENT OF INTEREST

SAFER CA advocates for safe processes at California refineries and fuel transport and distribution facilities to protect the health, safety, standard of life and economic interests of its members. For this reason, SAFER CA has a strong interest in enforcing environmental laws, such as CEQA, which require the disclosure of potential environmental impacts of, and ensure safe operations and processes for, California's fuel production, storage, and transport projects. Failure to adequately address the environmental impacts of renewable or traditional fuel and other refinery product transport, storage, and refining processes poses a substantial threat to the environment, worker health, surrounding communities and the local economy.

Refineries and fuel transport, storage, and distribution facilities are uniquely dangerous and capable of generating significant fires and the emission of hazardous and toxic substances that adversely impact air quality, water quality, biological resources, and public health and safety. Absent adequate disclosure and mitigation of hazardous materials and processes, refinery and fuel terminal workers and surrounding communities may be subject to chronic health problems and the risk of bodily injury and death. Additionally, rail transport of fuel and other refinery products has been involved in major explosions, causing vast economic damage, significant emissions of air contaminants and carcinogens and, in some cases, severe injuries and fatalities.

SAFER CA supports the sustainable development of fuel resources in California. However, poorly planned refinery and fuel distribution facility projects can adversely impact the economic wellbeing of people who perform construction and maintenance work in refineries, port terminals, fuel distribution facilities, and the surrounding communities. Plant and terminal shutdowns caused by accidental toxic releases and infrastructure breakdowns have caused prolonged work stoppages. Such nuisance conditions and catastrophic events impact local communities and the natural environment and can jeopardize future jobs by making it more difficult and more expensive for businesses to locate and people to live in the area. The participants in SAFER CA are also concerned about projects that carry serious environmental risks and public service infrastructure demands

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any person prior to the close of the public hearing on the project before the issuance of the notice of determination.”.)

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without providing countervailing employment and economic benefits to local workers and communities.

The members represented by the participants in SAFER CA live, work, recreate and raise their families in Los Angeles County, including the City of Long Beach. Accordingly, these people would be directly affected by the Project's adverse environmental impacts. The members of SAFER CA's participating unions may also work on the Project itself. They will, therefore, be first in line to be exposed to any hazardous materials, air contaminants, and other health and safety hazards, that exist onsite.

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cont.

## II. LEGAL BACKGROUND

### A. CEQA

CEQA is intended to provide the fullest possible protection to the environment. CEQA requires that a lead agency prepare and certify an EIR for any discretionary project that may have a significant adverse effect on the environment.<sup>12</sup> In order to set an accurate foundation for the analysis, an EIR must include a description of the "existing physical conditions in the affected area."<sup>13</sup> CEQA requires analysis of the "whole of an action," including the "direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment."<sup>14</sup> "Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions before they are made. Thus, the EIR protects not only the environment but also informed self-government."<sup>15</sup>

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### B. An EIR is Required

"At the heart of CEQA is the requirement that public agencies prepare an EIR for any project that may have a significant effect on the environment."<sup>16</sup> A negative declaration is improper, and an EIR must be prepared, whenever it can be

<sup>12</sup> Pub. Res. Code §§ 21002.1(a), 21100(a), 21151(a); 14 C.C.R. §§ 15064(a)(1), (f)(1), 15367.

<sup>13</sup> *Communities for a Better Env't v. South Coast Air Quality Mgmt. Dist.* (2010) 48 Cal.4th 310, 319–322; 14 C.C.R. § 15125.

<sup>14</sup> Pub. Res. Code § 21065; 14 C.C.R. § 15378(a).

<sup>15</sup> *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564 (internal quotations omitted).

<sup>16</sup> *Friends of College of San Mateo Gardens v. San Mateo County Community College Dist.* (2016) 1 Cal.5th 937, 944 (internal citations and quotations omitted).

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fairly argued on the basis of substantial evidence that the project may have a significant environmental impact.<sup>17</sup> “[S]ignificant effect on the environment” is defined as “a substantial, or potentially substantial, adverse change in the environment.”<sup>18</sup> An effect on the environment need not be “momentous” to meet the CEQA test for significance; it is enough that the impacts are “not trivial.”<sup>19</sup> Substantial evidence, for purposes of the fair argument standard, includes “fact, a reasonable assumption predicated upon fact, or expert opinion supported by fact.”<sup>20</sup>

In very limited circumstances, an agency may avoid preparing an EIR by issuing a negative declaration, a written statement briefly indicating that a project will have no significant impact. Because “[t]he adoption of a negative declaration . . . has a terminal effect on the environmental review process” by allowing the agency to dispense with the duty to prepare an EIR, negative declarations are allowed only in cases where there is not even a “fair argument” that the project will have a significant environmental effect.<sup>21</sup>

An agency’s decision to rely on a negative declaration under CEQA is reviewed by a court for abuse of discretion under the fair argument standard.<sup>22</sup> To determine if there has been an abuse of discretion, a court reviews the agency’s factual conclusions de novo.<sup>23</sup>

Under the fair argument standard, a reviewing court may not uphold an agency’s decision to not prepare an EIR because of substantial evidence that the project would not have a significant environmental impact.<sup>24</sup> The reviewing court’s function is to determine whether substantial evidence supports the agency’s conclusion as to whether the prescribed fair argument could be made.<sup>25</sup> If there is substantial evidence that the proposed project might have a significant impact, evidence to the contrary is not sufficient to support a decision to dispense with

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<sup>17</sup> *Id.* at 957.

<sup>18</sup> Pub. Res. Code § 21068; 14 C.C.R. § 15382; *County Sanitation Dist. No. 2 v. County of Kern* (2005) 127 Cal.App.4th 1544, 1581.

<sup>19</sup> *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 83 fn. 16.

<sup>20</sup> Pub. Res. Code § 21080(e)(1) (emphasis added); *Citizens for Responsible Equitable Environmental Development v. City of Chula Vista* (2011) 197 Cal.App.4th 327, 331 (“*CREED*”).

<sup>21</sup> *Citizens of Lake Murray v. San Diego* (1989) 129 Cal.App.3d 436, 440; Pub. Res. Code §§ 21064, 21100.

<sup>22</sup> *Save the Agoura Cornell Knoll v. City of Agoura Hills* (2020) 46 Cal.App.5th 665, 675 (“*STACK*”).

<sup>23</sup> *Id.*

<sup>24</sup> *Id.*

<sup>25</sup> *Id.*

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cont.



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preparation of an EIR and adopt a negative declaration.<sup>26</sup> Neither the lead agency nor a court may “weigh” conflicting substantial evidence to determine whether an EIR must be prepared in the first instance.<sup>27</sup> “The fair argument standard thus creates a low threshold for requiring an EIR, reflecting the legislative preference for resolving doubts in favor of environmental review.”<sup>28</sup>

Where experts have presented conflicting evidence on the extent of the environmental effects of a project, the agency must consider the effects to be significant and prepare an EIR.<sup>29</sup> In short, when “expert opinions clash, an EIR should be done.”<sup>30</sup> “It is the function of an EIR, not a negative declaration, to resolve conflicting claims, based on substantial evidence, as to the environmental effects of a project.”<sup>31</sup> Where substantial evidence is presented, “evidence to the contrary is not sufficient to support a decision to dispense with preparation of an EIR and adopt a negative declaration, because it could be ‘fairly argued’ that the project might have a significant environmental impact.”<sup>32</sup>

In certain circumstances, a project with potentially significant impacts can be modified by the adoption of mitigation measures to reduce the impacts to a level of insignificance. In such cases, an agency may satisfy its CEQA obligation by preparing a mitigated negative declaration.<sup>33</sup> A mitigated negative declaration, however, is also subject to the fair argument standard. Thus, an MND is also inadequate, and an EIR is required, whenever substantial evidence in the record supports a “fair argument” that significant impacts may occur even with the imposition of mitigation measures.

As described below, substantial evidence is present here that the Project may cause a significant effect on the environment. In particular, these comments show that the Project may result in significant air quality and health risk impacts. Thus, the Port is required under CEQA to take a closer look at the potentially significant environmental impacts of the Project in a legally adequate EIR.

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<sup>26</sup> *Id.*

<sup>27</sup> *Id.* at 689.

<sup>28</sup> *Id.* at 676.

<sup>29</sup> *Pocket Protectors v. City of Sacramento* (2004) 124 Cal.App.4th 903, 935; *Sierra Club v. County of Sonoma* (1992) 6 Cal.App.4th 1307, 1317–1318; CEQA Guidelines § 15064(f)(5).

<sup>30</sup> *Pocket Protectors*, 124 Cal.App.4th at 928; *Sierra Club*, 6 Cal.App.4th at 1317–1318.

<sup>31</sup> *Pocket Protectors*, 124 Cal.App.4th at 935.

<sup>32</sup> *Sundstrom*, 202 Cal.App.3d at 310 (citation omitted).

<sup>33</sup> Pub. Res. Code § 21064.5; 14 C.C.R. § 15064(f)(2).

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### III. THE IS/ND FAILS TO PROVIDE A COMPLETE AND ACCURATE PROJECT DESCRIPTION

CEQA requires that a project be described with enough particularity that its impacts can be assessed.<sup>34</sup> Without a complete project description, the environmental analysis under CEQA is impermissibly limited, thus minimizing the project's impacts and undermining meaningful public review.<sup>35</sup> "CEQA places the burden of environmental investigation on government rather than the public. If the local agency has failed to study an area of possible environmental impact, a fair argument may be based on the limited facts in the record. Deficiencies in the record may actually enlarge the scope of fair argument by lending a logical plausibility to a wider range of inferences."<sup>36</sup>

An IS/ND must present a complete and accurate description of the project under consideration.<sup>37</sup> "The scope of the environmental review conducted for the initial study must include the entire project. . . . [A] correct determination of the nature and scope of the project is a critical step in complying with the mandates of CEQA."<sup>38</sup> A negative declaration is "inappropriate where the agency has failed either to provide an accurate project description or to gather information and undertake an adequate environmental analysis. An accurate and complete project description is necessary for an intelligent evaluation of the potential environmental impacts of the agency's action. Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental cost, consider mitigation measures, assess the advantage of terminating the proposal . . . and weigh other alternatives in the balance."<sup>39</sup> For purposes of the description, "Project" means the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment."<sup>40</sup>

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<sup>34</sup> *Laurel Heights Improvement Assn. v. Regents of the Univ. of Cal.* (1988) 47 Cal.3d 376, 403–405.

<sup>35</sup> *Id.*

<sup>36</sup> *Sundstrom*, 202 Cal.App.3d at 311.

<sup>37</sup> See 14 C.C.R. § 15063(d)(1) (requiring an initial study to include a description of the project); *City of Redlands v. County of San Bernardino* (2002) 96 Cal.App.4th 398, 406 (explaining that a negative declaration must be supported by a complete and accurate project description).

<sup>38</sup> *Nelson v. County of Kern* (2010) 190 Cal.App.4th 252, 267 (internal quotations and citations omitted).

<sup>39</sup> *Center for Sierra Nevada Conservation v. County of El Dorado* (2012) 202 Cal.App.4th 1156, 1171 (quotations and citations omitted).

<sup>40</sup> 14 C.C.R. § 15378(a).

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In *Communities for a Better Environment v. City of Richmond* (“*CBE v. Richmond*”), the Court of Appeal held that an EIR failed as an informational document because inconsistencies in the project description obscured the degree to which the project would enable the refinery to process heavier crude oil.<sup>41</sup> In certain parts of the EIR, it claimed that the project would allow flexibility in refining heavier crude oil, but elsewhere the EIR denied the project would allow heavier crude refining.<sup>42</sup> The stark contradictions led the Court to disapprove the EIR because it failed as an informational document under CEQA.<sup>43</sup>

Here, the IS/ND fails to accurately reflect all potential sources of emissions and therefore does not provide a complete and accurate description of the Project. Claims in the IS/ND that the Project would “not increase the permitted crude oil throughput for the crude oil loading racks or tanker truck transportation requirements for crude oil” are contradicted by other evidence that suggests a possible increase in crude throughput that could yield an increase in emissions from oil refining.<sup>44</sup> The Permits to Construct for each tank have conditions that operator shall limit tank throughput to no more than 75,000 barrels in any given calendar month, without specifying the type of oil.<sup>45</sup> The Harbor Development Permit (“HDP”) Application for the Project says that 70,000 barrels of crude/month and 50,000 barrels of fuel oil/month will be stored at the site.<sup>46</sup> Moreover, Tables 2-3 and 2-4 of the IS/ND show increases in loading rack truck traffic and the number of barrels of crude oil transported upon Project completion.<sup>47</sup> This information contradicts the statement purporting to describe the Project as not affecting the amount of crude oil throughput in the facility.

Indeed, as explained by Dr. Fox, “[a]n increase in storage generally implies an increase in crude oil throughput at the supported refinery and hence, an increase in refinery emissions.”<sup>48</sup> The internal inconsistencies in the IS/ND and the

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<sup>41</sup> *Communities for a Better Environment v. City of Richmond* (“*CBE v. Richmond*”) (2010) 184 Cal.App.4th 70, 89.

<sup>42</sup> *Id.* at 83.

<sup>43</sup> *Id.* at 89.

<sup>44</sup> IS/ND, p. 4-7.

<sup>45</sup> SCAQMD Permit to Construct for Tank No. TK-1, Application No. 614274, ID 111238 (Jan. 2, 2020); SCAQMD Permit to Construct for Tank No. TK-2, Application No. 614275, ID 111238 (Jan. 2, 2020).

<sup>46</sup> Application of Ribost Terminal, LLC for HDP or CEQA Determination, HDP No. 19-066 (Received Aug. 14, 2019) (“HDP Application”), p. 7.

<sup>47</sup> IS/ND, p. 2-8.

<sup>48</sup> Fox Comments, p. 6.

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contradictory information from supporting permits and applications obfuscates the true nature of the Project's impacts on crude oil throughput and thereby masks how high emissions related to the Project could be.<sup>49</sup>

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cont.

These inconsistencies in the description of crude oil throughput are akin to the contradictions that proved fatal to the EIR in *CBE v. Richmond*.<sup>50</sup> Similar to how the EIR in that case presented divergent visions of the project's role in allowing refining of heavier crude oil, the IS/ND and its supporting documentation provide a confusing and misleading picture of whether crude oil throughput, and consequently refining emissions, will increase.<sup>51</sup> Just as the Court of Appeal held that the EIR failed as an informational document, the IS/ND violates CEQA and must be revised to accurately and consistently describe the Project's impacts on crude oil production at the Port and how this will influence emissions from the World Oil Refinery.<sup>52</sup>

In addition, the IS/ND explains that the construction of the new tanks will free up other tanks to be leased to third parties, but it is unclear what third-parties will do with the existing tanks once they are leased out.<sup>53</sup> As explained by Dr. Fox, the Project description is inadequate for failing to "disclose information about the future use of the repurposed existing tanks required to estimate the change in emissions from their new use."<sup>54</sup> Depending how these tanks are utilized and what substances are stored in them, they could produce fugitive emissions and feed additional indirect refining emissions if they use heavier crude or other materials requiring more intensive refining.<sup>55</sup>

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Furthermore, Dr. Fox explains that the information provided to the consultant that prepared the IS/ND by the Applicant did not "contain enough information to quantitatively estimate emission increases from operation of the new tanks."<sup>56</sup> "Specifically, the throughput is not known, the specific liquid to be stored is not known, and the effects to ground and marine transportation aren't known."<sup>57</sup> For the IS/ND to serve its role as an informational document under CEQA, the

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<sup>49</sup> Fox Comments, p. 6.

<sup>50</sup> *CBE v. Richmond*, 184 Cal.App.4th at 83, 89.

<sup>51</sup> *Id.*

<sup>52</sup> *Id.* at 89.

<sup>53</sup> IS/ND, pp. 2-1, 4-3.

<sup>54</sup> Fox Comments, p. 2.

<sup>55</sup> Fox Comments, pp. 2, 6-7, 23, 28.

<sup>56</sup> Fox Comments, p. 6.

<sup>57</sup> Fox Comments, pp. 6-7.



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Project description must provide more information regarding how the Project may influence operational emissions.

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cont.

#### **IV. SUBSTANTIAL EVIDENCE SUPPORTS A FAIR ARGUMENT THAT THE PROJECT MAY RESULT IN POTENTIALLY SIGNIFICANT AIR QUALITY IMPACTS**

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An agency cannot conclude that an impact is less than significant unless it produces rigorous analysis and concrete substantial evidence justifying the finding.<sup>58</sup> The failure to provide information required by CEQA is a failure to proceed in the manner required by law.<sup>59</sup>

As explained below, the IS/ND fails to acknowledge potentially significant air quality impacts likely to stem from the Project. Therefore, the Port's conclusions that there will be no significant environmental impacts are unsupported and there is a fair argument of significant impacts requiring preparation of an EIR.

##### **A. There is Substantial Evidence Supporting a Fair Argument that the Project Will Produce Significant Levels of Construction Emissions Which the IS/ND Fails to Disclose**

The IS/ND concludes that construction emissions will be less than significant.<sup>60</sup> However, the Port reaches this determination using CalEEMod modeling that assumes the use of Tier Final 4 engines, the most stringent low-emission construction equipment available, without a binding commitment to use this equipment for the Project and without disclosing how high emissions would be if less efficient equipment is used.<sup>61</sup> As a result, the IS/ND discloses only mitigated construction emissions, and does not disclose unmitigated emissions, in violation of CEQA.

Under CEQA, it is improper to attempt to disguise mitigation measures as part of the project's design if this obfuscates the potential significance of

<sup>58</sup> *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 732.

<sup>59</sup> *Sierra Club v. State Bd. Of Forestry* (1994) 7 Cal.4th 1215, 1236.

<sup>60</sup> IS/ND, pp. 4-8-4-9.

<sup>61</sup> Pages 1 and 13 of the document "20180914\_RIBOST\_CalEEMod\_ALL\_ATT 1.PDF" provided to us by the Port in response to our records requests state that the Port requires Tier 4 engines for off-road equipment, but the CalEEMod Air Quality Analysis in Appendix A of the IS/ND contains no such language.

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environmental impacts.<sup>62</sup> In *Lotus v. Department of Transportation*, an EIR prepared by the California Department of Transportation (“CalTrans”) contained measures to help minimize potential stress on redwood trees during highway construction, such as restorative planting, invasive plant removal, watering, and use of an arborist and specialized excavation equipment.<sup>63</sup> The Court of Appeal held that the EIR improperly compressed the analysis of impacts and mitigation measures into a single issue because the EIR did not designate the measures as mitigation and concluded that because of the measures, no significant impacts were anticipated.<sup>64</sup> The Court explained that a significance determination must be made independent of mitigation first, then mitigation can be incorporated, and the effectiveness of those measures can be evaluated.<sup>65</sup> “Absent a determination regarding the significance of the impacts to the root systems of the old growth redwood trees, it is impossible to determine whether mitigation measures are required or to evaluate whether other more effective measures than those proposed should be considered.”<sup>66</sup>

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By contrast, in *Mission Bay Alliance v. Office of Community Investment & Infrastructure*, the Court of Appeal distinguished *Lotus* and held that certain project features are inherent in the project design and need not be identified as mitigation measures.<sup>67</sup> Petitioners had challenged certification of an EIR for a basketball arena, arguing in part that inclusion of a special event transit service plan (“TSP”) as part of the Transportation Management Plan (“TMP”) without calling it a transportation mitigation measure precluded consideration of alternative feasible mitigation measures.<sup>68</sup> According to the Court of Appeal, the characterization of the TSP as part of the project rather than as a mitigation measure did not interfere with the identification of significant impacts or analysis of measures to mitigate those consequences, as was the case in *Lotus*.<sup>69</sup> “Unlike the situation in *Lotus*, the environmental impacts of the project on vehicle traffic and

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<sup>62</sup> *Lotus v. Department of Transportation* (2014) 223 Cal.App.4th 645, 658 (compression of mitigation measures into project design without acknowledging potentially significant impact if effects were not mitigated violates CEQA)

<sup>63</sup> *Id.* at 650.

<sup>64</sup> *Id.* at 656.

<sup>65</sup> *Id.* at 654–656.

<sup>66</sup> *Id.* at 656.

<sup>67</sup> *Mission Bay Alliance v. Office of Community Investment & Infrastructure* (2016) 6 Cal.App.5th 160, 185.

<sup>68</sup> *Id.* at 184.

<sup>69</sup> *Id.* at 185.



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transit are fully disclosed in the FSEIR.”<sup>70</sup> Because the FSEIR included analysis of transit impacts both with and without the TSP, the FSEIR was upheld.<sup>71</sup>

Here, the IS/ND assumes the use of lower-emitting Tier 4 Final engines for the Project’s construction equipment without explicitly committing to using this equipment for the Project or disclosing how high emissions would be in the absence of the equipment.<sup>72</sup> Unlike port cargo handling equipment, which was required to meet Tier 4 Final standards by December 2017,<sup>73</sup> Tier 4 construction equipment is not currently mandated for 100 percent of construction use. Rather, Tier 4 equipment (interim and final) is required to be phased into to all California construction fleets over several years pursuant to EPA’s “Control of Emissions of Air Pollution from Nonroad Diesel Engines and Fuel; Final Rule.”<sup>74</sup> Tier 1 engines will not be fully phased out until 2029; Tier 2 and Tier 3 engines may remain in use in limited supply even after 2029.<sup>75</sup>

As Dr. Fox explains, without specific requirements in the CEQA document for the engine tier for all construction equipment stated in the IS/ND, the Applicant is “free to use the cheapest, highest emitting, Tier 1 equipment to build the Project.”<sup>76</sup> Given that Tier 1 construction equipment would yield much higher levels of pollution than Tier 4 equipment, with NO<sub>x</sub> emissions increased 35 times and PM<sub>10</sub> emissions increased 15 times compared to Tier 4 equipment, it is improper for the Port to fail to disclose the likely significant levels of unmitigated emissions.<sup>77</sup> In fact, assuming the Applicant uses Tier 1 equipment instead of Tier 4, NO<sub>x</sub> emissions

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cont.

<sup>70</sup> *Id.*

<sup>71</sup> *Id.*

<sup>72</sup> Fox Comments, pp. 3–4; pages 1 and 13 of the document “20180914\_RIBOST\_CalEEMod\_ALL\_ATT 1.PDF” provided to us by the Port in response to our records requests state that the Port requires Tier 4 engines for off-road equipment, but the CalEEMod Air Quality Analysis in Appendix A of the IS/ND contains no such language.

<sup>73</sup> 13 C.C.R. § 2479(e).

<sup>74</sup> Vol. 69, No. 124 Fed. Reg. pp. 38957–39273, June 29, 2004; 13 C.C.R. § 2423 (Exhaust Emission Standards and Test Procedures - Off-Road Compression-Ignition Engines); see CARB In-Use Off-Road Diesel-Fueled Fleets Regulation Overview, Revised October 2016 (“CARB Off-Road Fact Sheet”), available at [https://ww3.arb.ca.gov/msprog/ordiesel/faq/overview\\_fact\\_sheet\\_dec\\_2010-final.pdf](https://ww3.arb.ca.gov/msprog/ordiesel/faq/overview_fact_sheet_dec_2010-final.pdf) (last visited 11/20/20).

<sup>75</sup> CARB Off-Road Fact Sheet, pp. 5–7.

<sup>76</sup> Fox Comments, pp. 2–4.

<sup>77</sup> Fox Comments, pp. 2–4.

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would be a whopping 1060.5 lb/day, well in excess of the significance threshold of 100 lb/day.<sup>78</sup>

By failing to make a significance determination about air quality impacts independent of mitigation before incorporating emissions reductions measures into the calculations, the IS/ND commits the same fatal error critiqued by the Court of Appeal in *Lotus*. Just as use of specialized equipment and practices to limit impacts to the roots of redwood trees should have been classified as mitigation measures, not design features in *Lotus*, the use of off-road construction equipment with Tier 4 engines and other best practices to reduce emissions are mitigation measures that should have been acknowledged as such in the IS/ND.<sup>79</sup> The Port's failure to acknowledge the higher levels of construction emissions without the mitigation measures obscures the significance of air quality impacts and prevents the public from properly evaluating the effectiveness of the mitigation measures proposed.<sup>80</sup>

The Port cannot plausibly claim the choice of construction equipment and practices are inherent features of project design as was done in *Mission Bay*. As explained above, specialized equipment and mitigating practices are more analogous to the measures deemed mitigation measures in *Lotus* than they are to the TSP in *Mission Bay*, which was a plan to handle traffic during special events, an inherent feature of a sports arena.<sup>81</sup> Moreover, the agency in *Mission Bay* fully disclosed transit impacts in its CEQA document so there were no issues in comprehending the significance of impacts.<sup>82</sup> Here, not only did the IS/ND fail to disclose the level of construction emissions in the absence of cleaner equipment, it failed to even clearly reveal its intentions to use such equipment in its discussion of air quality impacts from construction.

Furthermore, while the HDP Application suggests that Tier 4 engines will be used for construction equipment, there is no commitment to do so in the IS/ND in the form of a legally binding mitigation measure.<sup>83</sup> In fact, the term "Tier 4" does not appear in the IS/ND at all, so it is improper to assume emissions reductions from construction equipment with cleaner engines. As Dr. Fox explains, the

<sup>78</sup> Fox Comments, p. 4. Dr. Fox multiplied the 30.3 lb/day calculated in the IS/ND by 35 to show how much the use of dirtier equipment could impact the emissions levels from construction. (*Id.*)

<sup>79</sup> *Lotus*, 223 Cal.App.4th at 650, 654–656.

<sup>80</sup> *Id.* at 654–656.

<sup>81</sup> *Mission Bay*, 6 Cal.App.5th at 184.

<sup>82</sup> *Id.* at 185.

<sup>83</sup> HDP Application, p. 3.

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cont.



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Applicant has a financial incentive to use cheaper, higher polluting equipment, so if there is no compulsory condition of Project approval that construction will occur using Tier 4 equipment or other equipment with retrofits with similarly effective emissions controls, it is not reasonable to assume the emissions reductions will occur.<sup>84</sup>

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cont.

The IS/ND's reliance on Tier 4 Final equipment in the CalEEMod modeling without demonstrating feasibility and including it as a binding mitigation measures violates key principles of CEQA that mitigation measures be both effective and enforceable through legally binding instruments.<sup>85</sup> An EIR must be prepared to disclose the Project's unmitigated construction emissions and incorporate effective and binding mitigation measures into the Project to reduce construction emissions impacts to below significant impacts.

### **B. There is Substantial Evidence Supporting a Fair Argument that the Project Will Produce Significant Levels of Operational VOC Emissions**

SFERCA-25

Dr. Fox shows that there will be potentially significant impacts from VOC emissions by pointing to several major problems with the IS/ND's VOC emissions analysis, including inaccurate modeling, an incorrect significance threshold, failure to include all emissions sources, and improper mitigation.<sup>86</sup>

#### **i. The IS/ND's Reliance on the U.S. EPA TANKS Program Model Yields Underestimated VOC Emissions**

Dr. Fox discusses numerous studies demonstrating that the U.S. EPA TANKS Program model used to calculate fugitive VOC emissions from oil tanks consistently and substantially underestimates these emissions.<sup>87</sup> In particular, the TANKS model does not accommodate tanks that receive warmer-than-ambient stock—which potentially includes the Project—and do not accurately capture variations in vapor pressure or fugitive emissions from internal floating roof tanks, or decreased tank performance.<sup>88</sup> Dr. Fox explains that the TANKS 4.09 model

<sup>84</sup> Fox Comments, pp. 2–4.

<sup>85</sup> 14 C.C.R. § 15126.4(a)(2); *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 727–728.

<sup>86</sup> Fox Comments, pp. 5–6.

<sup>87</sup> Fox Comments, pp. 6–17.

<sup>88</sup> Fox Comments, pp. 6–7.

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used by the Applicant is based on algorithms developed by the American Petroleum Institute for “ideal new installations,” and does not account for variations during operation or degradations in tank performance which occur over time.<sup>89</sup>

For these reasons, the TANKS model is recognized as unreliable and U.S. EPA no longer recommends using it to calculate tank emissions.<sup>90</sup> Its website includes a disclaimer that the software supporting the TANKS model is now outdated and the model should only be used “at your own risk.”<sup>91</sup> Dr. Fox explains that the FluxSense Report, study of refinery tank emissions commissioned by the South Coast Air Quality Management District (“SCAQMD”), concluded that VOC emissions were underestimated by an average factor of 6.2, compared to emissions levels reported to SCAQMD in emissions inventories.<sup>92</sup> Studies of floating roof tanks, which as proposed for the Project, found VOC emissions underestimated by a factor of 121.<sup>93</sup> Some other studies have shown that TANKS can underestimate VOC emissions by as much as a factor of 132.<sup>94</sup>

Applying these well-supported underestimation factors as a multiplier to the IS/ND’s estimate of 9.7 lb/day of VOC emissions yields significant levels of emissions. Dr. Fox initially selected an underestimation factor of 67—a midpoint in the range of factors uncovered by various studies—and calculated that VOC emissions from the Project would be about 650 lb/day.<sup>95</sup> Assuming an underestimation by a factor of 121, as occurred in studies of internal floating roof tanks, as proposed for the Project, the VOC emissions would reach 1,174 lb/day.<sup>96</sup> Finally, “even assuming a more modest underestimation factor of 6.2—the average factor found by the FluxSense study commissioned by SCAQMD—VOC emissions from the tanks would be 60 lb/day.”<sup>97</sup> All three of these emissions levels exceed the SCAQMD significance threshold of 55 lb/day for operational VOC emissions.<sup>98</sup>

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<sup>89</sup> Fox Comments, p. 8.

<sup>90</sup> Fox Comments, pp. 6–8.

<sup>91</sup> EPA, TANKS Emissions Estimation Software, Version 4.09D; <https://www3.epa.gov/ttnchie1/software/tanks/>.

<sup>92</sup> Fox Comments, pp. 16–17.

<sup>93</sup> Fox Comments, pp. 10–11.

<sup>94</sup> Fox Comments, pp. 9–10.

<sup>95</sup> Fox Comments, pp. 17–18.

<sup>96</sup> Fox Comments, p. 18.

<sup>97</sup> Fox Comments, p. 18.

<sup>98</sup> Fox Comments, p. 18. Dr. Fox notes that the IS/ND incorrectly uses a threshold of 75 lb/day, which is the threshold for VOC construction emissions, not operational emissions. (*Id.*; IS/ND, p. 4-10;

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cont.



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Therefore, there is substantial evidence supporting a fair argument that VOC emissions from the tanks will be highly significant, which the IS/ND fails to disclose or mitigate. The Port must prepare an EIR to accurately analyze and mitigate these significant air quality impacts.

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cont.

## **ii. The IS/ND Omits Numerous Sources of VOC Emissions and Fails to Consider Indirect Emissions**

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In addition to the serious underestimation of emissions from reliance on the TANKS model, numerous sources of VOC emissions from the Project were not even included in the model and were not otherwise disclosed in the IS/ND. As a result, VOC emissions are likely to be even more significant than explained above. The omitted sources of emissions include roof landing, degassing, cleaning, water draw, truck loading rack disconnect, and valve and connector leaks.<sup>99</sup>

As Dr. Fox explains, the Project will use two internal floating roof storage tanks, meaning that the roofs of the tanks will float on the surface of the liquid inside the tank.<sup>100</sup> Evaporative losses can occur when the contents of the tank reach the level where the roof sits on deck legs near the bottom of the tank.<sup>101</sup> These losses occur when the floating roof has landed on the deck legs and stands idle while oil vapor is lost through a breather vent.<sup>102</sup> Losses also occur through the breather vent while the tank is being refilled until the liquid in the tank rises to the level of the roof being refloated on the liquid's surface.<sup>103</sup>

Dr. Fox explains that the TANKS model does not account for roof landings and the IS/ND did not conduct any supplemental analysis to calculate these additional sources of VOC emissions.<sup>104</sup> Given that roof landing losses “are large typically comprising about a quarter . . . of total tank emissions,” the omission of analysis of these evaporative losses seriously undermines the IS/ND’s VOC emissions analysis.<sup>105</sup>

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SCAQMD, South Coast AQMD Air Quality Significance Thresholds, <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>.)

<sup>99</sup> Fox Comments, pp. 18–23.

<sup>100</sup> Fox Comments, pp. 18–20.

<sup>101</sup> Fox Comments, pp. 18–20.

<sup>102</sup> Fox Comments, pp. 18–20.

<sup>103</sup> Fox Comments, pp. 18–20.

<sup>104</sup> Fox Comments, pp. 20–21.

<sup>105</sup> Fox Comments, p. 21.

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Losses in the form of VOC emissions also occur during tank inspection and cleaning. Dr. Fox explains that degassing and cleaning losses are “essentially uncontrolled tank emissions and can be larger than normal operating emissions.”<sup>106</sup> The IS/ND fails to disclose these emissions and does not commit to any special degassing equipment during tank cleaning that could help reduce these emissions.<sup>107</sup>

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cont.

In addition, Dr. Fox explains that crude oil storage facilities typically have a filtration system to remove water that accumulates in the crude oil.<sup>108</sup> This water draw is often transferred from the storage tanks into a smaller water draw surge tank for processing prior to disposal.<sup>109</sup> However, over time, layers of crude oil can form in the water draw surge tank which then emits VOCs and other hazardous air pollutants.<sup>110</sup> Because the IS/ND does not disclose or estimate emissions from any of these sources—in addition to probable leaks in valves or during loading or unloading of the tanks—the IS/ND greatly underestimates emissions and fails as an informational document under CEQA.<sup>111</sup>

The IS/ND also omitted emissions from repurposed tanks, which will be leased out to third parties. As explained with respect to the inadequate Project description, the IS/ND fails to consider indirect emissions resulting from potential changes to management of the repurposed tanks and the expansion of crude oil storage that would likely impact emissions from the World Oil Refinery.

There is more than a fair argument all these aggregated omissions of emission sources combined with the underestimation from TANKS modeling yields a highly significant air quality impact from VOC emissions. The Port must prepare an EIR which discloses these impacts, and provides specific mitigation measures to reduce impacts to the greatest extent feasible.

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<sup>106</sup> Fox Comments, p. 22.

<sup>107</sup> Fox Comments, p. 22.

<sup>108</sup> Fox Comments, p. 23.

<sup>109</sup> Fox Comments, p. 23.

<sup>110</sup> Fox Comments, p. 23.

<sup>111</sup> Fox Comments, p. 23.



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### iii. The IS/ND Improperly Relies on Emissions Offsets to Reduce VOC Emissions

As explained above, there is a fair argument that VOC emissions from the Project will be highly significant. The IS/ND claims to address VOC emissions with emissions reduction credits (“ERC”).<sup>112</sup> There are two problems with this approach. First, the offsets are intended to reduce the impacts of the Project’s VOC emissions due to exceedances of SCAQMD’s New Source Review Rule. As the IS/ND explains, “[t]he facility’s existing potential to emit is above the SCAQMD New Source Review Rule VOC offset threshold of 4 tons per year; therefore, the new tank emissions were required to be offset.”<sup>113</sup> VOC emissions from the Project’s new tanks will exacerbate the existing potential for excess VOC emissions and further exceed SCAQMD’s offset threshold, resulting in a significant impact.<sup>114</sup> The ERCs for the Project are proposed as mitigation to address the impact. Mitigation cannot be included in an IS/ND. The Port must include any proposed mitigation to reduce VOC emissions in an EIR.

Second, emissions offsets such as this are not valid mitigation for VOC emissions under CEQA and could not be claimed as mitigation in a revised CEQA document.<sup>115</sup> Dr. Fox explains that historically banked ERCs only reflect emissions reductions in the past and do nothing to reduce emissions at the time and location where the air quality impacts are occurring.<sup>116</sup> Thus, ERCs are more appropriately considered part of the existing baseline of air quality conditions in the region.<sup>117</sup> Project emissions in the near future, regardless of whether they are covered by historically banked ERCs, constitute a deviation from that baseline and an exacerbation of existing air pollution.

Here, the ERCs proposed to offset VOC emissions were issued December 14, 1993, 27 years ago.<sup>118</sup> Consequently, relying on the ERCs does nothing to actually mitigate the serious air quality concerns in the region in the present day.<sup>119</sup> VOC

<sup>112</sup> See IS/ND, p. 4-8–4-9, Table 4.3-1 .

<sup>113</sup> IS/ND, p. 4-9.

<sup>114</sup> 14 C.C.R. § 15126.2(a).

<sup>115</sup> IS/ND, p. 4-9, Table 4.3-2; Fox Comments, p. 23.

<sup>116</sup> Fox Comments, pp. 23–24.

<sup>117</sup> Fox Comments, pp. 23–24.

<sup>118</sup> SCAQMD, Certificate of Proof for Registered Emission Reduction Credit, Certificate No. AQ001032, Reissued to Ribost Terminal, LLC, Issued December 5, 2019.

<sup>119</sup> Fox Comments, pp. 23–24.

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emissions will increase in the Project area and currently nothing will be done to reduce those impacts.<sup>120</sup> CEQA prohibits reliance on ineffective mitigation measures such as the ERCs proposed in the IS/ND.<sup>121</sup>

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cont.

Therefore, even with ERCs, the VOC emissions from the Project would still be significant when they are adjusted for all the flaws identified by Dr. Fox above. Even if adequate and effective mitigation could be adopted, a mitigated negative declaration would be necessary to comply with CEQA in lieu of the IS/ND. In the absence of mitigation, an EIR is required.

#### **V. SUBSTANTIAL EVIDENCE SUPPORTS A FAIR ARGUMENT THAT THE PROJECT WILL PRODUCE CUMULATIVELY CONSIDERABLE AIR QUALITY IMPACTS**

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CEQA requires analysis of cumulative impacts, defined as “two or more individual effects which, when considered together, are considerable.”<sup>122</sup> Such impacts may “result from individually minor but collectively significant projects taking place over a period of time.”<sup>123</sup> Cumulatively considerable means that “the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.”<sup>124</sup>

CEQA Guidelines section 15130(b)(1) provides two options for analyzing cumulative impacts: (A) list “past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or” (B) summarize “projection contained in an adopted local, regional or statewide plan, or related planning document that describes or evaluates conditions contributing to the cumulative effect.”<sup>125</sup> “When relying on a plan, regulation or program, the lead agency should explain how implementing the particular requirements in the plan, regulation or program ensure that the project’s

<sup>120</sup> Fox Comments, pp. 23–24.

<sup>121</sup> *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 727–728.

<sup>122</sup> 14 C.C.R. § 15355.

<sup>123</sup> 14 C.C.R. § 15355(b).

<sup>124</sup> 14 C.C.R. § 15064(h)(1).

<sup>125</sup> 14 C.C.R. § 15130(b)(1).



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incremental contribution to the cumulative effect is not cumulatively considerable.”<sup>126</sup>

In *Communities for a Better Environment v. California Resources Agency* (“*CBE v. CRA*”), the Court of Appeal rejected now nonexistent provisions of the CEQA Guidelines that allowed agencies to dismiss the potential for cumulative impacts if the Project’s contribution to a cumulative problem was “de minimis.”<sup>127</sup> The case relied heavily on *Kings County Farm Bureau v. City of Hanford* to conclude that even individually minor contributions to an environmental problem can produce cumulatively considerable impacts requiring careful analysis under CEQA.<sup>128</sup> As a result, controlling CEQA law was inconsistent with CEQA Guidelines sections 15064(i)(4) and 15130(a)(4) as they existed at the time because “they measure a proposed project’s de minimis incremental impact relative to the existing cumulative impact, rather than focus on the combined effects of these impacts.”<sup>129</sup>

In *Kings County Farm Bureau*, the City of Hanford prepared an EIR for a 26.4-megawatt coal-fired cogeneration plant.<sup>130</sup> Notwithstanding the fact that the EIR found that the project region was out of attainment for PM<sub>10</sub> and ozone, the City failed to incorporate mitigations for the project’s cumulative air quality impacts from project emissions because it concluded that the Project would contribute “less than one percent of area emissions for all criteria pollutants.”<sup>131</sup> The Court held that it was an error for the City to not take into account the nonattainment with air quality standards.<sup>132</sup> Regarding ozone, the Court reasoned that “[t]he relevant question to be addressed in the EIR is not the relative amount of [ozone] precursors emitted by the project when compared with preexisting emissions, but whether any additional amount of precursor emissions should be considered significant in light of the serious nature of the ozone problems in this air basin.”<sup>133</sup> In addition, the Court generally held that the EIR improperly sidestepped

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<sup>126</sup> *Id.*; see *id.* § 15130(a) (stating that the lead agency shall describe its basis for concluding that an incremental effect is not cumulatively considerable).

<sup>127</sup> *Communities for a Better Environment v. California Resources Agency* (“*CBE v. CRA*”) (2002) 103 Cal.App.4th 98, 121, disapproved of on other grounds in *Berkeley Hillside Preservation v. City of Berkeley* (2015) 60 Cal.4th 1086, 1098.

<sup>128</sup> *Id.* at 118–121.

<sup>129</sup> *Id.* at 121.

<sup>130</sup> *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 706.

<sup>131</sup> *Id.* at 719.

<sup>132</sup> *Id.* at 718–721.

<sup>133</sup> *Id.* at 718.

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the cumulative impacts analysis when it “focused on the individual project’s relative effects and omitted facts relevant to an analysis of the collective effect this and other sources will have upon air quality.”<sup>134</sup>

The IS/ND fails to conduct a proper cumulative air quality impacts analysis as it does not list “past, present, and probable future projects producing related or cumulative impacts” or explain compliance with a local, regional, or statewide plan that would ensure that air quality impacts would not be cumulatively considerable, as required by CEQA.<sup>135</sup> Rather, the IS/ND cursorily claims that the Project would not contribute to cumulatively considerable impacts because of “the relatively nominal level and area of impact, highly developed industrial surroundings, and temporary nature of the proposed project.”<sup>136</sup>

This justification is strikingly similar to the “de minimis” approach to cumulative impacts analysis that the Court of Appeal rejected in *CBE v. CRA*.<sup>137</sup> The provision of the CEQA Guidelines that permitted agencies to conclude air emissions would be cumulatively insignificant because they are small in the grand scheme of things has been struck down by the Courts. Indeed, as was recognized in *CBE v. CRA* and *Kings County Farm Bureau*, the relevant analysis is not the relative amount of emissions from the Project compared with other emissions, but “whether any additional amount of precursor emissions should be considered significant in light of the serious nature of the ozone problems in this air basin.”<sup>138</sup> Just as the City of Hanford violated CEQA when it did not consider nonattainment with air quality standards, the Port has violated CEQA by fixating on the individually small amount of emissions it claims are attributable to the Project without evaluating the existing air quality problems and the collective effect of this Project and other nearby projects on these issues.<sup>139</sup>

In any event, Dr. Fox explains that SCAQMD’s own cumulative impact guidance says that cumulative impacts are considerable where a project’s individual emissions exceed significance thresholds.<sup>140</sup> SCAQMD’s guidance also specifically

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<sup>134</sup> *Id.* at 721.

<sup>135</sup> 14 C.C.R. § 15130(b)(1).

<sup>136</sup> IS/ND, p. 4-65.

<sup>137</sup> *CBE v. CRA*, 103 Cal.App.4th at 121.

<sup>138</sup> *Id.* at 118–121; *Kings County Farm Bureau*, 221 Cal.App.3d at 718.

<sup>139</sup> *Kings County Farm Bureau*, 221 Cal.App.3d at 718–721.

<sup>140</sup> Fox Comments, p. 28.

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rejects the de minimus approach.<sup>141</sup> Dr. Fox has made a fair argument that VOC emissions will exceed SCAQMD's operational emissions significance threshold.<sup>142</sup> Therefore, cumulative impacts are significant and an EIR must be prepared.<sup>143</sup>

Furthermore, the South Coast Air Basin is in extreme nonattainment of National Ambient Air Quality Standards for 1-hour and 8-hour ozone and in nonattainment for California Ambient Air Quality Standards for both types of ozone as well.<sup>144</sup> Dr. Fox explains that zip code 90802, where the Project is located, has the highest levels of ozone pollution in the country.<sup>145</sup> In fact, the Los Angeles-Long Beach area has topped the American Lung Association's ("ALA") worst ozone pollution list for 20 out of the 21 years in its annual State of the Air Report.<sup>146</sup> Ozone pollution has serious health effects, especially for children and teens, anyone 65 or older, people with existing lung diseases, or people who frequently work or exercise outdoors.<sup>147</sup> ALA estimates that, in 2020, 10 million people with pre-existing conditions were at risk from ozone pollution in the Los Angeles-Long Beach area, plus another 15 million otherwise sensitive individuals.<sup>148</sup> Dr. Fox further details in her comments serious public health impacts of ozone, including premature death, developmental harm, reproductive harm, lung irritation, asthma, increased susceptibility to respiratory infection, and cardiovascular harm.<sup>149</sup>

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<sup>141</sup> SCAQMD, White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution, Appendix D – Cumulative Impact Analysis Requirements Pursuant to CEQA, August 2003, p. D-2, available at <http://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper-appendix.pdf> (last visited 11/20/20).

<sup>142</sup> Fox Comments, p. 28.

<sup>143</sup> Fox Comments, p. 28.

<sup>144</sup> National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) Attainment Status for South Coast Air Basin, available at <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf>

<sup>145</sup> Fox Comments, p. 30; American Lung Association, State of the Air (2020), p. 22, available at <https://www.stateoftheair.org/assets/SOTA-2020.pdf>; see also <https://www.stateoftheair.org/city-rankings/most-polluted-cities.html> (ranking of most polluted cities); <https://www.stateoftheair.org/city-rankings/states/california/los-angeles.html> (annual weighted average number of high ozone days in the Los Angeles area).

<sup>146</sup> American Lung Association, State of the Air (2020), p. 7, available at <https://www.stateoftheair.org/assets/SOTA-2020.pdf>.

<sup>147</sup> Fox Comments, pp. 30–33.

<sup>148</sup> Fox Comments, pp. 30–33.

<sup>149</sup> Fox Comments, pp. 30–33.

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Underestimated VOC and NO<sub>x</sub> emissions could yield cumulatively considerable air quality impacts because they are ozone precursor emissions that react in the presence of sunlight to produce even more ozone and exacerbate already dangerous ozone pollution in the region.<sup>150</sup> Analysis of cumulative effects of precursor emissions is particularly critical given the close proximity of residences, elementary schools, and parks to the Project site.<sup>151</sup> To comply with CEQA, the Port's cumulative impacts analysis must draw the connection between individually small emissions and potentially considerable collective impacts.

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cont.

Dr. Fox considered a variety of other nearby projects and concluded that the cumulative air quality impacts appear highly significant. The Los Angeles International Airport ("LAX") expansion projects—including terminal upgrades, runaway rehabilitation, bus yard and other transit construction, various water pipelines, and other miscellaneous improvements—is estimated to produce significant air quality impacts on its own.<sup>152</sup> Given that the Project and the LAX projects will both occur in the South Coast Air Basin, the Port should have considered the cumulative air quality impacts of these Projects on regional air quality. The failure to do so renders the IS/ND's air quality analysis deficient.

There is a fair argument of cumulatively considerable air quality impacts requiring the preparation of an EIR.

## **VI. SUBSTANTIAL EVIDENCE SUPPORTS A FAIR ARGUMENT THAT THE PROJECT MAY RESULT IN POTENTIALLY SIGNIFICANT HEALTH RISK IMPACTS**

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A lead agency's significance determination must be supported by accurate scientific and factual data.<sup>153</sup> An agency cannot conclude that an impact is less than significant unless it produces rigorous analysis and concrete substantial evidence justifying the finding.<sup>154</sup>

These standards apply to an agency's analysis of public health impacts of a project under CEQA. In *Sierra Club v. County of Fresno*, the California Supreme Court affirmed CEQA's mandate to protect public health and safety by holding that

<sup>150</sup> Fox Comments, p. 29.

<sup>151</sup> Fox Comments, p. 31.

<sup>152</sup> Fox Comments, p. 28.

<sup>153</sup> 14 C.C.R. § 15064(b).

<sup>154</sup> *Kings County Farm Bureau*, 221 Cal.App.3d at 732.



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an EIR fails as an informational document when it fails to disclose the public health impacts from air pollutants that would be generated by a development project.<sup>155</sup> In *Sierra Club*, the Supreme Court held that the EIR for the Friant Ranch Project—a 942-acre master-planned, mixed-use development with 2,500 senior residential units, 250,000 square feet of commercial space, and open space on former agricultural land in north central Fresno County—was deficient as a matter of law in its informational discussion of air quality impacts as they connect to adverse human health effects.<sup>156</sup> As the Court explained, “a sufficient discussion of significant impacts requires not merely a determination of whether an impact is significant, but some effort to explain the nature and magnitude of the impact.”<sup>157</sup> The Court concluded that the County’s EIR was inadequate for failing to disclose the nature and extent of public health impacts caused by the project’s air pollution. As the Court explained, the EIR failed to comply with CEQA because after reading the EIR, “the public would have no idea of the health consequences that result when more pollutants are added to a nonattainment basin.”<sup>158</sup> CEQA mandates discussion, supported by substantial evidence, of the nature and magnitude of impacts of air pollution on public health.<sup>159</sup>

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cont.

Furthermore, in *Berkeley Jets*, the Court of Appeal held that a CEQA document must analyze the impacts from human exposure to toxic substances.<sup>160</sup> In that case, the Port of Oakland approved a development plan for the Oakland International Airport.<sup>161</sup> The EIR admitted that the Project would result in an increase in the release of toxic air contaminants (“TACs”) and adopted mitigation measures to reduce TAC emissions, but failed to quantify the severity of the Project’s impacts on human health.<sup>162</sup> The Court held that mitigation alone was

<sup>155</sup> *Sierra Club*, 6 Cal.5th at 518–522.

<sup>156</sup> *Id.* at 507–508, 518–522.

<sup>157</sup> *Id.* at 519, citing *Cleveland National Forest Foundation v. San Diego Assn. of Governments* (2017) 3 Cal.5th 497, 514–515.

<sup>158</sup> *Id.* at 518. CEQA’s statutory scheme and legislative intent also include an express mandate that agencies analyze human health impacts and determine whether the “***environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly.***” (Public Resources Code § 21083(b)(3) (emphasis added).) Moreover, CEQA directs agencies to “take immediate steps to identify any critical thresholds for the ***health and safety of the people*** of the state and take all coordinated actions necessary to prevent such thresholds being reached.” (Public Resources Code § 21000(d) (emphasis added).)

<sup>159</sup> *Sierra Club*, 6 Cal.5th at 518–522.

<sup>160</sup> *Berkeley Jets*, 91 Cal.App.4th at 1369–1371.

<sup>161</sup> *Id.* at 1349–1350.

<sup>162</sup> *Id.* at 1364–1371.

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insufficient, and that the Port had a duty to analyze the health risks associated with exposure to TACs.<sup>163</sup> As the CEQA Guidelines explain, “[t]he EIR serves not only to protect the environment but also to demonstrate to the public that it is being protected.”<sup>164</sup>

The IS/ND discusses a screening health risk assessment (“HRA”) done for construction DPM emissions and SCAQMD’s operational HRA conducted for TACs and concluded that the combined health risk would be “well below the SCAQMD health risk CEQA significance thresholds.”<sup>165</sup> Relying on the SCAQMD HRA, the IS/ND concluded that cancer risk at the closest residential receptor from TAC emissions from the tanks was  $1.85 \times 10^{-7}$  or 0.185 in one million.<sup>166</sup> While the IS/ND provides the results of those analyses, the actual modeling was not provided with the IS/ND and had to be obtained separately from the Port in response to our public record requests for documents referenced under CEQA, rendering the IS/ND legally deficient in addition to being factually inaccurate.<sup>167</sup>

Moreover, as explained by Dr. Fox, the HRA underestimates the degree of health risk posed by the Project in several ways. VOC emissions are underestimated, which by extension means that emissions of hazardous air pollutants (“HAPs”)/TACs are also underestimated.<sup>168</sup> Assuming VOC emissions were underestimated by a factor of 121 would yield a cancer risk of 22 in one million, which exceeds the significance threshold of 10 in one million.<sup>169</sup> Assuming that VOC emissions were underestimated by a factor of 67 would yield an estimated cancer risk of about 12 in one million, also a significant impact.<sup>170</sup>

Dr. Fox further explains that the FluxSense Report concluded that benzene emissions (a TAC/HAP) were underestimated by an average factor of 34.<sup>171</sup> Assuming increased benzene emissions coupled with VOC emissions

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<sup>163</sup> *Id.*

<sup>164</sup> 14 C.C.R. § 15003(b).

<sup>165</sup> IS/ND, pp. 4-10–4-12.

<sup>166</sup> IS/ND, p. 4-12

<sup>167</sup> See *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 442 (“information scattered here and there in EIR appendices or a report buried in an appendix is not a substitute for a good faith reasoned analysis.”), citing *California Oak*, 133 Cal.App.4th at 1239 (internal quotations omitted).

<sup>168</sup> Fox Comments, p. 24.

<sup>169</sup> Fox Comments, pp. 25–26.

<sup>170</sup> Fox Comments, pp. 25–26.

<sup>171</sup> Fox Comments, pp. 25–26.

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underestimated by a factor of 121 yields a highly significant 810 in one million cancer risk.<sup>172</sup>

These significant health impacts are currently undisclosed and warrant deeper analysis in an EIR. Indeed, the failure to analyze the substantial health risks from VOC and benzene emissions commit the same mistakes as the EIRs in *Sierra Club* and *Berkeley Jets*. As with the County of Fresno in *Sierra Club*, the Port here failed to evaluate the full nature and magnitude of the health impact of air pollution associated with the Project.<sup>173</sup> CEQA requires a discussion of the health consequences of the Project to properly inform the public of significant impacts.<sup>174</sup>

Furthermore, just as the Port of Oakland in *Berkeley Jets* could not get away with its failure to quantify the severity of the impacts of TACs on human health, the Port here cannot neglect to fully and accurately analyze the impacts of VOCs and benzene emissions on the health of nearby receptors.<sup>175</sup> The Port here did not even acknowledge the significance of these emissions or attempt to mitigate them, meaning that the Port here has committed an even more egregious violation of CEQA.<sup>176</sup>

The IS/ND also failed to accurately evaluate impacts to all the sensitive receptors in the vicinity of the Project.<sup>177</sup> Dr. Fox explains that the Permit To Construct Application which contains the HRA relied on by the IS/ND assumed the closest residential receptor was about 925 meters or 0.6 miles away.<sup>178</sup> However, the IS/ND indicates the nearest residence is 0.5 miles away.<sup>179</sup> Furthermore, Dr. Fox explains that while the IS/ND identified elementary school receptors near the Project site, her search revealed additional undisclosed receptors that could be at risk from the Project's emissions such as Golden Park, Cesar E. Chavez Park, Drake Park, Drake Park Soccer Field, Edison Child Development Center, and numerous

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<sup>172</sup> Fox Comments, pp. 25–26.

<sup>173</sup> *Sierra Club*, 6 Cal.5th at 518–522.

<sup>174</sup> *Id.*

<sup>175</sup> *Berkeley Jets*, 91 Cal.App.4th at 1364–1371.

<sup>176</sup> *Id.*

<sup>177</sup> Fox Comments, pp. 25, 31.

<sup>178</sup> Fox Comments, p. 25.

<sup>179</sup> IS/ND, p. 4-10.

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additional homes.<sup>180</sup> These errors and omissions undermine the reliability of the IS/ND's HRA and require an updated analysis to comply with CEQA.

In addition, the HRA failed to evaluate health impacts from increases in ozone concentrations in the vicinity of the Project due to increases in emissions of VOCs and other ozone precursors.<sup>181</sup> Especially when considered in light of other nearby emitting projects and the serious ozone pollution problems in the Los Angeles-Long Beach area, as discussed above, this omission results in a serious underestimation of health risk.<sup>182</sup> As Dr. Fox explains, recent EIRs, including two in the South Coast Air Basin, have assessed the human health impacts from significant emissions of ozone precursors, meaning that the Port has no excuse to do so here.<sup>183</sup>

This is again like the situation in *Sierra Club*, where a failure to make an effort to connect the dots between the project pollution, poor existing air quality, and public health of local community rendered the EIR deficient as an informational document under CEQA.<sup>184</sup> The IS/ND echoes those flaws by turning a blind eye to its contributions to the air basin's severe ozone problem and the repercussions this has for public health. Dr. Fox's analysis constitutes evidence supporting a fair argument of significant health risk impacts to nearby residents. Unless the Port commits to adequate mitigation, an EIR must be prepared.

## VII. SUBSTANTIAL EVIDENCE SUPPORTS A FAIR ARGUMENT THAT THE PROJECT MAY PRODUCE POTENTIALLY SIGNIFICANT LAND USE IMPACTS

Under CEQA, a significant environmental impact results if there is a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.<sup>185</sup> Under State Planning and Zoning Law, a project cannot be found consistent with a general plan if it conflicts with a general plan policy that is "fundamental, mandatory, and clear," regardless of whether it is

<sup>180</sup> Fox Comments, p. 31.

<sup>181</sup> Fox Comments, p. 24.

<sup>182</sup> Fox Comments, pp. 29–33.

<sup>183</sup> Fox Comments, p. 32.

<sup>184</sup> *Sierra Club*, 6 Cal.5th at 518–522.

<sup>185</sup> *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 783–784 (Project's inconsistencies with local plans and policies constitute significant impacts under CEQA).

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consistent with other general plan policies.<sup>186</sup> Any subordinate land use action that is not consistent with a city's general plan is similarly "invalid at the time it is passed."<sup>187</sup> This consistency requirement applies to permits because "the validity of the permit process derives from compliance with this hierarchy of planning laws."<sup>188</sup> "[A] building permit for a proposed project may not be approved unless it complies with . . . the general plan."<sup>189</sup>

The Harbor Development Permit ("HDP") required for this Project is a combination of a Coastal Development Permit ("CDP") required under the California Coastal Act and a building permit.<sup>190</sup> Therefore, the consistency requirement for subordinate land use actions like approval of a building permit applies to the HDP sought for this Project.<sup>191</sup> The potential for significant environmental impacts discussed above renders the Project inconsistent with the City's General Plan and the Port's Master Plan such that the Port must address these impacts before it may approve it.

#### **A. The Project is Inconsistent with the City's General Plan**

The Land Use Element of the City's General Plan says that it is a policy of the City to work with California, the Ports of Long Beach and Los Angeles, and other agencies and organizations to improve air quality around the ports and reduce vessel, truck, rail and other equipment emissions from Port operations.<sup>192</sup>

As demonstrated above, absent effective mitigation the Project will produce significant construction and operational emissions and contribute to severe cumulative impacts on air quality in a region that already suffers from the worst ozone pollution in the country. Relatedly, these emissions will drive significant increases in health risk to local residences, schools, and parks. Because the Port is

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<sup>186</sup> *Id.* at 782–783; see also *Families Unafraid to Uphold Rural El Dorado County v. Bd. of Supervisors* (1998) 62 Cal.App.4th 1332, 1341–1342 (holding that project was clearly inconsistent with fundamental policy within land-use element of Draft General Plan).

<sup>187</sup> *Leshar Communications, Inc. v. City of Walnut Creek* (1990) 52 Cal.3d 531, 544; see Gov. Code § 65860 (requiring consistency with general plan).

<sup>188</sup> *Neighborhood Action Group for the Fifth District v. County of Calaveras* (1984) 156 Cal.App.3d 1176, 1184.

<sup>189</sup> *Collier v. City & County of San Francisco* (2007) 151 Cal.App.4th 1326, 1341.

<sup>190</sup> Port of Long Beach, Draft Port Master Plan Update 2020 (July 2019), p. 8-1.

<sup>191</sup> See *Collier v. City & County of San Francisco* (2007) 151 Cal.App.4th 1326, 1341 ("[A] building permit for a proposed project may not be approved unless it complies with . . . the general plan.")

<sup>192</sup> General Plan, p. 121 (LU Policy 16-4).

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failing in its duty to grapple with air quality and related health impacts of this Project, the Project runs afoul of the General Plan.

### **B. The Project is Inconsistent with the Port's Master Plan**

The Port's Master Plan includes environment and sustainability goals to reduce environmental and health impacts from Port operations; preserve and enhance natural resources at the Port so that all communities may benefit from them; and mitigate the potential impacts on coastal resources from proposed developments.<sup>193</sup>

There is a fair argument that the Project's air quality and health risk impacts make the Project inconsistent with each of the goals listed above. The IS/ND fails to acknowledge the significant impacts to air quality and public health posed by the Project. Unless the Port takes measures to reduce these impacts to below significant levels, the Project will fail to comply with the goal to reduce environmental and health impacts from Port operations. Relatedly, the Port's goals of preserving natural resources and mitigating impacts to those resources are flouted by the Project's clear negative impacts on already bad air quality. Public enjoyment of coastal resources is inhibited by poor air quality. The Port has a duty to do more to mitigate the significant health impacts from the Project's significant contributions to local air pollution.

In addition, the Project is inconsistent with the Master Plan's permitting policies.<sup>194</sup> Per section 1215 of the Long Beach City Charter, no person may construct a structure within the Harbor District without first applying for and securing from the Board of Harbor Commissioners a permit to do so. The Board of Harbor Commissioners approves HDPs, which are a consolidation of a building permit and Coastal Development Permit under the California Coastal Act.<sup>195</sup>

Level I Permits are for developments occurring within the Harbor District that are emergency, administrative, or minor and expected to have insignificant impacts on the Port or surrounding environment.<sup>196</sup> These include projects with:

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<sup>193</sup> Master Plan Update, p. 5-5 (Environment and Sustainability Goals 1, 2, and 6).

<sup>194</sup> Master Plan Update, pp. 8-1–8-4.

<sup>195</sup> Master Plan Update, p. 8-1.

<sup>196</sup> Master Plan Update, pp. 8-2–8-3.

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- Minimal capital resources
- Development costs at or below those established by Port for minor projects
- No major change in land and/or water use
- Minimal changes in density or intensity of use
- No significant adverse environmental impacts

Level II Permits are for development of new Port facilities such as marine terminals; modification of structures for recreational purposes; creation of new landfills; dredging of water areas not presently used for navigation, maneuvering, or berthing; and in general major or minor alterations that are not exempt.<sup>197</sup> Level II development projects include those with:

- Capital expenditures greater than Level I limits;
- Potential minor or major environmental impacts that can be mitigated;
- Potential unavoidable adverse impacts that cannot be mitigated; and
- Potential changes in land and water use.

The Master Plan explains that “[a]ny vote on an application may be taken only at a properly noticed public hearing, after the requirements of the California Environmental Quality Act (CEQA) have been met, and following completion of staff reports and recommendations.”<sup>198</sup> Regardless of the permit level, this Project presents significant environmental impacts that must be mitigated. As a result, the requirements of CEQA have not been met and the Board of Harbor Commissioners may not approve an application for the HDP.

## **VIII. APPROVAL OF THE PROJECT WOULD VIOLATE THE CALIFORNIA COASTAL ACT**

Section 30708 of California Coastal Act requires all Port-related developments to minimize substantial adverse environmental impacts.<sup>199</sup> Under section 30715, “[d]evelopments for storage, transmission, and processing liquefied natural gas and crude oil in such quantities as would have a significant impact on the oil and gas supply of the state and/or nation” can be appealed to the California Coastal Commission prior to approval by the Board of Harbor Commissioners

<sup>197</sup> Master Plan Update, p. 8-3.

<sup>198</sup> Master Plan Update, p. 8-4.

<sup>199</sup> Pub. Res. Code § 30708(a).

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("BHC").<sup>200</sup> Per section 30715.5, BHC shall not approve or grant an application for a permit for any development within the Harbor District unless a determination has been made by the Board that either (i) the development conforms with the certified Port Master Plan or (ii) the development is exempt from the Coastal Act.<sup>201</sup>

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cont.

In contravention of the policies of the Coastal Act, the Project fails to minimize substantial adverse environmental impacts by failing to acknowledge and mitigate significant negative impacts to air quality and public health.<sup>202</sup> The deficiencies in the IS/ND's Project description discussed above also obscure the significance of impacts of the Project on state oil supplies which is pertinent to whether there are grounds to appeal the development to the California Coastal Commission prior to approval by the BHC.<sup>203</sup> Finally, in violation of section 30715.5, the Project does not conform with the Port Master Plan as explained above. Moreover, no exemption in section 30610 applies to the Project, so the BHC is forbidden from granting HDP application.<sup>204</sup> Unless adequate mitigation measures can be adopted to reduce impacts below significant levels, an EIR must be prepared to evaluate the severity of those impacts on coastal resources before any permit may be approved.

## IX. CONCLUSION

For the reasons discussed above, the IS/ND for the Project is wholly inadequate under CEQA. It must be thoroughly revised and recirculated as an EIR to provide legally adequate analysis of, and mitigation for, all the Project's potentially significant impacts. These revisions will necessarily require that the CEQA document be recirculated for additional public review. Until the Port has

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<sup>200</sup> Pub. Res. Code § 30715.

<sup>201</sup> Pub. Res. Code § 30715.5, Exemptions from Coastal Development Permits include: improvements to existing single-family residences; improvements to any structure other than a single-family residence or a public works facility that does not involve a risk of adverse environmental effect, adverse public access effect, or change in use contrary to Coastal Act policies; maintenance dredging of existing navigation channels; repair or maintenance that do not result in addition or enlargement of activities; any category of development in a specific area exempted by two-thirds vote of appointed members of Commission; the installation, testing, or replacement of any necessary utility connection between an existing service facility and any development approved pursuant to this division; and replacement of structure destroyed by disaster. (Pub. Res. Code. § 30610.)

<sup>202</sup> Pub. Res. Code § 30708(a).

<sup>203</sup> Pub. Res. Code § 30715.

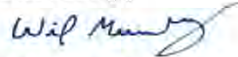
<sup>204</sup> Pub. Res. Code §§ 30610, 30715.5.

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complied with these requirements for revision and recirculation as described herein, the Port may not lawfully approve the Project.

Thank you for your attention to these comments. Please include them in the record of proceedings for the Project.

Sincerely,



William Mumby

WM:acp

Attachment

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cont.



# ATTACHMENT A

**Comments**

**on the**

**Initial Study/Negative Declaration**

**for the**

**World Oil Terminal**

**Long Beach, California**

November 20, 2020

By

Phyllis Fox, PhD, PE

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## 1. INTRODUCTION

The World Oil Terminal is located at 1405 Pier C Street at the Port of Long Beach (POLB) in Long Beach, California. The Terminal is privately owned by Ribost Terminal LLC. The Terminal is a 6-acre site that contains seven existing petroleum tanks with a total storage capacity of 502,000 barrels (bbl). Three of the existing tanks store crude oil and serve the World Oil Refinery through the terminal truck loading rack. The remaining four tanks are leased to Marathon Petroleum and Glencore and store fuel oil received and shipped by pipeline.

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The Applicant, Ribost Terminal, LLC, doing business as World Oil Terminals (World Oil), has proposed to construct and operate two new internal floating roof 25,000-bbl crude oil tanks at the Terminal. The new tanks would replace the Terminal's existing tanks that supply crude oil to the World Oil Refinery. The new tanks will be able to transfer product to and from an existing pipeline and also receive product from upstream oil production facilities. Tank contents will include a combination of gas oil, atmospheric gas oil, heavy vacuum gas oil, light vacuum gas oil, fuel oil, crude oil, and petroleum distillates.<sup>1</sup> The three existing tanks that currently supply World Oil will become available for leasing to third-party vendors. The Port of Long Beach (POLB), the CEQA lead agency, has prepared an Initial Study/Negative Declaration (IS/ND) for the Project.<sup>2</sup>

I have reviewed the IS/ND and supporting documents obtained from the Port of Long Beach and the South Coast Air Quality Management District (SCAQMD) via Public Record Act (PRA) requests. In my opinion, the IS/ND has failed to identify and mitigate significant environmental impacts. As demonstrated below, the Project description in the IS/ND is incomplete and impacts unsupported, which required filing several Public Record Act Requests (PRAs) to obtain sufficient information to evaluate the Project. The Project as described in IS/ND and supporting documents is incomplete and will result in significant environmental impacts, including:

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- Construction impacts are unsupported.
- Construction NOx emissions are significant and unmitigated.

<sup>1</sup> York Engineering, LLC, Permit to Construct/Permit to Operate: Two Additional Petroleum Storage Tanks, Prepared for Ribost Terminal, LLC, SCAQMD Facility ID: 111238, June 2019 (PTC Application), p. 8, Exhibit 1.

<sup>2</sup> Aspen Environmental Group, Draft Negative Declaration/Application Summary Report, World Oil Tank Installation Project, Port of Long Beach (IS/ND), October 2020; [https://files.ceqanet.opr.ca.gov/265083-2/attachment/UezPRXh\\_26SMuyRNTyTeid8myaWksQmqp1fDBYq35LEvO\\_TT1v0THwdAwZw2yP80GCPPHU0o85\\_ijZ4d0](https://files.ceqanet.opr.ca.gov/265083-2/attachment/UezPRXh_26SMuyRNTyTeid8myaWksQmqp1fDBYq35LEvO_TT1v0THwdAwZw2yP80GCPPHU0o85_ijZ4d0).

- Operational volatile organic compound (VOC) emissions from the new tanks are significant and unmitigated.
- Operational hazardous air pollutants (HAPs) from the tanks will result in significant cancer impacts, which are unmitigated.
- Cumulative VOC impacts are significant and unmitigated.
- The Project description is inadequate for failing to include all sources of emissions and for failing to disclose information about the future use of the repurposed existing tanks required to estimate the change in emissions from their new use.

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cont.

Thus, an Environmental Impact Report (EIR) must be prepared.

My resume is included in Exhibit 3 to these Comments. I have over 40 years of experience in the field of environmental engineering, including air emissions and air pollution control; greenhouse gas (GHG) emission inventory and control; water quality and water supply investigations; hazardous waste investigations; hazard investigations; risk of upset modeling; environmental permitting; nuisance investigations (odor, noise); health risk assessments; EIRs; and litigation support. I have reviewed and commented on hundreds of CEQA documents and air permit applications, including for tank farms, refineries, and other industrial facilities. I have MS and PhD degrees in environmental engineering from the University of California at Berkeley. I am a licensed professional engineer (chemical) in California. My work has been cited in two published CEQA opinions: (1) *Berkeley Keep Jets Over the Bay Committee, City of San Leandro, and City of Alameda et al. v. Board of Port Commissioners* (2001) 111 Cal. Rptr. 2d 598 and *Communities for a Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal. 4th 310 and has supported the record in many other CEQA cases.

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## 2. CONSTRUCTION IMPACTS ARE SIGNIFICANT AND UNSUPPORTED

The IS/ND estimated construction emissions using the California Emissions Estimator Model (CalEEMod) and concluded that all emissions were less than significant.<sup>3</sup> When construction emissions are estimated using the CalEEMod model, as here, it is standard practice to support the emissions by including CalEEMod input and output files in an appendix to the CEQA document. Appendix A to the IS/ND contains the CalEEMod output files but not the input files.

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The IS/ND does not contain any of the information required to evaluate the IS/ND's construction emissions or to make an independent estimate of construction emissions. Specifically, the IS/ND lacks a construction schedule, construction equipment engine tiers, construction equipment engine horsepower ratings, and hours

<sup>3</sup> IS/ND, Table 4.3-1, pdf 33.



of use for all construction equipment.<sup>4</sup> Thus, the IS/ND fails as an informational document under CEQA for failing to support the Project’s construction emissions.

A PRA was filed, requesting all of the CalEEMod files, specifically inputs including information on engine tiers for construction equipment. Instead, an Excel spreadsheet<sup>5</sup> was provided that summarized input values. However, without the actual CalEEMod inputs, as generated by the model itself, one cannot be certain that the model was run using the values in the Excel summary spreadsheet. It is standard practice to provide the complete CalEEMod run, including all CalEEMod inputs and outputs from the model itself. Otherwise, there is no proof that the values summarized in the spreadsheet were actually modeled. The information provided in the Excel spreadsheet supplied in response to our PRA is summarized as follows:

ConstMitig	FuelType	Tier	NumberOf	TotalNum	DPF	OxidationCatalyst
Aerial Lifts	Diesel	Tier 4 Final	1	1	No Chang	0
Air Compr	Diesel	Tier 4 Final	1	1	No Chang	0
Bore/Drill	Diesel	Tier 4 Final	1	1	No Chang	0
Cement ar	Diesel	No Change	0	0	No Chang	0
Cranes	Diesel	Tier 4 Final	4	4	No Chang	0
Excavator	Diesel	Tier 4 Final	1	1	No Chang	0
Forklifts	Diesel	No Change	0	0	No Chang	0
Graders	Diesel	Tier 4 Final	1	1	No Chang	0
Pavers	Diesel	No Change	0	0	No Chang	0
Rollers	Diesel	No Change	0	0	No Chang	0
Tractors/L	Diesel	Tier 4 Final	4	4	No Chang	0
Welders	Diesel	Tier 4 Final	2	2	No Chang	0

This is not the CalEEMod input but rather a summary of it. Without the actual input file, it is impossible to determine whether these values were actually evaluated in the CalEEMod run for this Project without redoing the analysis from scratch. Further, while the tier is disclosed for most of the equipment in the Excel spreadsheet, it is omitted for others (cement and mortar mixers, forklifts, pavers, rollers), which are designated as “no change,” raising the issue of “no change” from what?

The emissions from construction equipment are determined by the “tier” of the engine in each piece of equipment. The engine tier is essential information required to evaluate construction air quality impacts because it directly determines emissions from construction equipment. Assuming the Excel spreadsheet in Exhibit 2 accurately summarizes the inputs to the CalEEMod analysis, the CalEEMod inputs assumed Tier 4

<sup>4</sup> While a list of construction equipment is included in Table 4.13-3 with respect to noise analysis, other details about the equipment, including engine tiers, needed to be obtained via a separate request for records.

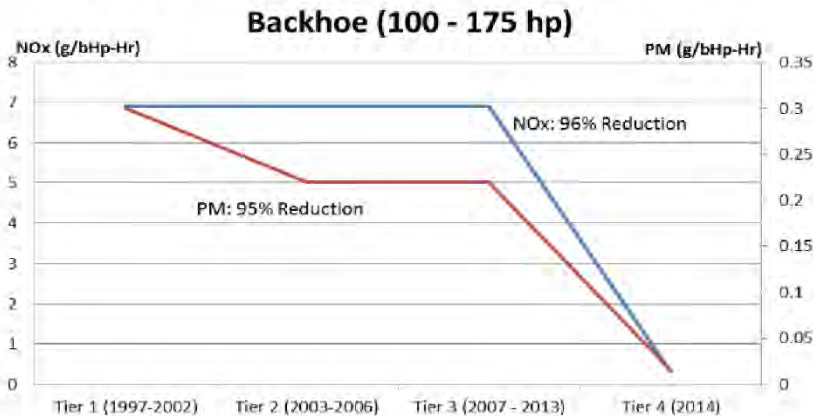
<sup>5</sup> CalEEMod Input File Excel Spreadsheet, Exhibit 2.

construction equipment for most equipment. However, the IS/ND does not impose mitigation specifically requiring the use of Tier 4 engines in all equipment. Therefore, the Applicant will be free to use equipment with lower tier engines, which are substantially cheaper and have higher emissions, thus significantly increasing construction emissions and construction health impacts. Comment 2.1. The IS/ND does not specify the engine tier or require the use of construction equipment with the engine tiers assumed in the air quality analysis as summarized in Exhibit 2.

### 2.1. Construction NOx Emissions Are Significant

The amount of pollution from construction equipment is categorized using a system of “engine tiers.” The higher the tier, the lower the emissions.<sup>6</sup> For example, for a typical backhoe, four of which will be used to construct the Project,<sup>7</sup> the emissions of NOx and PM in grams per brake horsepower hour (g/bHp-Hr) as a function of engine tier are shown in Figure 1.<sup>8</sup>

**Figure 1: PM and NOx Emission by Tier for a Backhoe<sup>9</sup>**



This figure shows that NOx exhaust emissions would be about 35 (7/0.2) times higher if all Tier 1 construction equipment were used instead of Tier 4 equipment. Similarly, this figure shows that PM exhaust emissions would be about 15 (0.3/0.02)

<sup>6</sup> See, e.g., DieselNet, Emission Standards: Nonroad Diesel Engines; <https://dieselnet.com/standards/us/nonroad.php>. See also: DieselNet, Emission Standards, Nonroad Diesel Engines; <https://dieselnet.com/standards/us/nonroad.php#tier4>.

<sup>7</sup> Exhibit 2, tab: “tblConstEquipMitigation.”

<sup>8</sup> See also EPA, Nonroad Compression-Ignition Engines: Exhaust Emission Standards (March 2016), <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockkey=P100OA05.pdf>.

<sup>9</sup> Ibid. Power appears in kW in the EPA table but has been converted to hp here.



times higher if all Tier 1 equipment were used instead of Tier 4 equipment. It is standard practice to disclose the construction fleet (type/number of equipment) and construction equipment engine tier in CEQA documents. This IS/ND fails to identify the specific pieces of construction equipment with their engine tiers, thus failing as an informational document under CEQA.

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cont.

Without specific requirements for the engine “tier” of all construction equipment that will be used to build the Project, the applicant is free to use the cheapest, highest emitting, Tier 1 equipment to build the Project. Tier 1 construction equipment would emit over 35 times more NOx and 15 times more PM10 than the most efficient Tier 4 construction equipment. The applicant has a significant financial incentive to use lower tier, higher polluting equipment as it is much cheaper than the newer, better controlled Tier 4 construction equipment. Thus, unmitigated increases in NOx, ROG, and PM10 from construction equipment could exceed the SCAQMD’s CEQA construction significance thresholds. Construction NOx emissions, for example, will exceed the 100 lb/day significance threshold if Tier 1 equipment were used.<sup>10</sup> As there is nothing in the IS/ND to prevent the applicant from selecting all Tier 1 off-road construction equipment, construction NOx impacts are significant and unmitigated, requiring the preparation of an EIR.

The significant NOx emissions from construction equipment can be controlled by requiring the use of Tier 4 construction equipment or by retrofitting older Tier 1 to 2 equipment with similarly effective emissions controls, such as exhaust selective catalytic reduction (SCR). A mitigation measure requiring Tier 4 construction must be included in the IS/ND, which requires the preparation of IS/MND or EIR.

### 3. OPERATIONAL VOC EMISSIONS ARE SIGNIFICANT

The IS/ND estimated Project emissions as summarized in Table 1, concluding that the Project would not result in any significant operational air quality impacts.

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**Table 1: Summary of Maximum Daily Operation Emission Increases (lb/day)**

	VOC	CO	NO <sub>x</sub>	SO <sub>x</sub>	PM10	PM2.5
On-road	0.02	0.09	0.60	0.00	0.04	0.01
Tank Fugitive VOC <sup>1</sup>	9.70	–	–	–	–	–
Loading Racks/Vapor Control	0.09	0.18	0.20	0.00	0.01	0.01
Total Emissions	9.81	0.25	0.81	0.00	0.06	0.03
Significance Threshold	75	550	100	150	150	55
Exceeds Threshold?	NO	NO	NO	NO	NO	NO

Source: Appendix A: SCAQMD, 2019a; SCAQMD, 2019b.

<sup>1</sup>-These emissions have been offset at a 1.2:1 ratio (12 pounds per day of VOC emissions reduction credits), so that the offset emissions total would be minus 2.19 pound per day.

<sup>10</sup> Revised construction NOx emissions (based on IS/ND Table 4.3-1): (30.3 lb/day)(35) = 1060.5 lb/day.



This table shows that the tanks are the major source of VOC emissions. As demonstrated below, there are major problems with the VOC emissions in Table 1 that underestimate VOC emissions and their significance.

First, the TANKS model used to estimate VOC emissions is known to significantly underestimate VOC emissions from tanks.

Second, there are sources of VOC emissions from the tanks that are not included in the TANKS model and that were not disclosed in the IS/ND.

Third, emissions from the repurposed tanks and from fugitive components (two pumps, connections to existing pipelines, valves, connectors, etc.<sup>11</sup>) were omitted.

Fourth, emission offsets, hinted as mitigation in footnote 1 to Table 1, are not valid CEQA mitigation for VOC emissions.

Fifth, the significance thresholds listed in Table 1 are for Project construction, not Project operation.<sup>12</sup>

Sixth, I was unable to verify the tank fugitive VOC emissions of 9.7 lbs/day based on calculations in the SCAQMD's Permit to Construct Evaluation.<sup>13</sup>

Seventh, the IS/ND indicates that the Project will expand crude oil storage,<sup>14</sup> asserting "the proposed project would provide additional storage capacity of petroleum products for refining and distribution."<sup>15</sup> An increase in storage generally implies an increase in crude oil throughput at the supported refinery and hence, an increase in refinery emissions. The IS/ND is silent as to any changes in operation of the World Oil Refinery and resulting emissions that would occur as a result of the Project. Some of these issues are discussed below.

Eighth, the consultant to the Applicant, Aspen Environmental Group, in discussing the air quality analysis, reported that "The information provided by the Applicant does not contain enough information to quantitatively estimate emission increases from operation of the new tanks. Specifically, the throughput is not known,

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<sup>11</sup> IS/ND, pdf 16, p. 2-4.

<sup>12</sup> SCAQMD, South Coast AQMD Air Quality Significance Thresholds; <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>.

<sup>13</sup> York Engineering, LLC, Robost Terminal LLC, SCAQMD Facility ID: 111238, Application for Permit to Construct/Permit to Operate – Two Additional Petroleum Storage Tanks, June 2019, Exhibit 1.

<sup>14</sup> IS/ND, pp. 1, 2-4, pdf 9, 16.

<sup>15</sup> IS/ND, p. 1-1, pdf 11.

the specific liquid to be stored is not known, and the effects to ground and marine transportation aren't known."<sup>16</sup>

The IS/ND used the EPA model, TANKS 4.0.9d, to estimate tank VOC emissions.<sup>17</sup> The EPA no longer recommends using this model to calculate tank emissions. The TANKS website cautions that the outdated model be used "at your own risk."<sup>18</sup> Rather, EPA recommends using equations and algorithms in AP-42, Chapter 7 to estimate VOC emissions from storage tanks:<sup>19</sup>

*\*\*\*The TANKS model was developed using a software that is now outdated. Because of this, the model is not reliably functional on computers using certain operating systems such as Windows Vista or Windows 7. We are anticipating that additional problems will arise as PCs switch to the other operating systems. Therefore, we can no longer provide assistance to users of TANKS 4.09d. The model will remain on the website to be used at your discretion and at your own risk. We will continue to recommend the use of the equations/algorithms specified in AP-42 Chapter 7 for estimating VOC emissions from storage tanks. The equations specified in AP-42 Chapter 7 (<https://www.epa.gov/ttn/chief/ap42/ch07/index.html>) can be employed with many current spreadsheet/software programs.*

Further, the TANKS 4.09d model is known to underestimate VOC (and hence HAP) emissions in certain circumstances. These circumstances apply to both the new and repurposed tanks, including the following:

- TANKS does not accommodate tanks that receive warmer-than-ambient stock but are not heated. Products that may have warmer-than-ambient temperatures include gas oil, naphtha, and alkylate. The draft permits for the tanks do not prohibit warmer-than-ambient stock. These permits also allow products with a Reid vapor pressure up to 10.0 pounds per square inch (gasoline),<sup>20</sup> which could include warmer-than-ambient stock. The Application for the tanks indicates they will receive product from upstream oil production facilities,<sup>21</sup> including "a combination of gas oil, atmospheric gas oil (AGO), heavy vacuum gas oil (HVGO), light vacuum gas oil (LVGO), fuel oil, crude oil, and

<sup>16</sup> Walters, September 14, 2018, p. 3, Exhibit 18.

<sup>17</sup> IS/ND, p. 4-9, pdf 33; York Engineering, LLC, Permit to Construct/Permit to Operate: Two Additional Petroleum Storage Tanks, Prepared for Ribost Terminal, LLC, SCAQMD Facility ID: 111238, June 2019 (PTC Application), pdf 22-27. Exhibit 1.

<sup>18</sup> EPA, TANKS Emissions Estimation Software, Version 4.09D, <https://www3.epa.gov/ttnchie1/software/tanks/>.

<sup>19</sup> ERA Environmental, Can I Still Use EPA TANKS? What You Need to Know Right Now; <https://www.era-environmental.com/blog/epa-tanks-what-you-need-to-know>.

<sup>20</sup> SCAQMD, Permits to Construct, Ribost Terminal, LLC, Tank Nos. TK-1 and TK-2, Application Nos. 614274 and 614275, Conditions 4: "The operator shall only use this equipment to store crude oil or non-gasoline petroleum products having a Reid vapor pressure not to exceed 10.0 pounds per square inch."

<sup>21</sup> PTC Application, p. 6, Exhibit 1 ("The new tanks will be able to transfer products to and from an existing pipeline and also receive product from upstream oil production facilities also located in Long Beach, CA.").



petroleum distillates,”<sup>22</sup> which likely will have temperatures warmer than ambient temperatures.

- Default inputs used for complex mixtures such as crude oil, gas oil and naphtha do not accurately capture the large variations in vapor pressure and composition.
- The TANKS model implements calculations in AP-42. In November 2006, Section 7.1 of AP-42 was updated with subsection 7.1.3.2.2, Roof Landings.<sup>23</sup> The TANKS program has not been updated with these new algorithms for internal floating roof tanks, such as those used by the Project.<sup>24</sup> It is based on the 1997 version of AP-42, Section 7.1.<sup>25</sup> The PTC Application did not include these emissions.

In these circumstances, EPA recommends the calculation procedures included in AP-42, Chapter 7.<sup>26</sup> However, these also underestimate tank emissions. It is well known that both the TANKS model and the AP-42 algorithms underestimate tank VOC and HAP emissions over the lifetime of a tank.<sup>27,28</sup> In over 35 studies performed between 1988 and 2008, measured tank emissions were consistently considerably higher than reported emissions.<sup>29</sup>

The TANKS 4.09 model used by the Applicant is based on algorithms developed by the American Petroleum Institute for “ideal new installations.” However, over time, tank performance degrades, resulting in increased emissions. The VOC emissions must remain below the SCAQMD significance threshold over the tank’s lifetime, not just in the early years of operation. Actual measurements of tank emissions using remote

<sup>22</sup> PTC Application, Exhibit 1, Table 3-1 and Section 3.1, p. 8.

<sup>23</sup> EPA, TANKS Software Frequent Questions, <https://www3.epa.gov/ttn/chief/faq/tanksfaq.html#14>.

<sup>24</sup> Ibid.

<sup>25</sup> Ibid.

<sup>26</sup> ERA Environmental, How to Calculate Storage Tanks Emissions: How-To Guide, “Now that EPA TANKS 4.09d is no longer accepted for compliance reporting, accurately determining emissions from liquid storage tanks has become one of the most complicated and time consuming air emissions tasks”; <https://lando.era-environmental.com/the-science-of-tanks-emissions>; Trinity Consultants, Calculating Tank Emissions with TANKEP, January 7, 2016, <https://www.trinityconsultants.com/news/technology/calculating-tank-emissions-with-tankesp>.

<sup>27</sup> See literature review in Environmental Integrity Project, Comments on EPA’s Draft “Emission Estimation Protocol for Petroleum Refineries,” March 31, 2010, p. 5, [https://www.law.uh.edu/faculty/thester/courses/Emerging%20Tech%202011/20100331\\_EIPCommentsonRefineryEmissionsProtocol.pdf](https://www.law.uh.edu/faculty/thester/courses/Emerging%20Tech%202011/20100331_EIPCommentsonRefineryEmissionsProtocol.pdf).

<sup>28</sup> Alex Cuclis, Why Emission Factors Don’t Work at Refineries and What To Do About It, Paper Presented at the Emissions Inventory Conference in Tampa, Florida, August 13-16, 2012, Exhibit 4; [https://gaftp.epa.gov/Air\\_Quality\\_Data/nei/ei\\_conference/EI20/session7/acuclis.pdf](https://gaftp.epa.gov/Air_Quality_Data/nei/ei_conference/EI20/session7/acuclis.pdf).

<sup>29</sup> Ibid., p. 6.



sensing methods such as differential absorption lidar (“DIAL”)<sup>30</sup> indicate that tank emissions are substantially higher than calculated using the TANKS model and AP-42 algorithms, which both substantially underestimate VOC and HAP emissions. Swedish authorities, for example, on discovering these discrepancies, required the use of remote sensing methods in place of emission factors to estimate tank emissions.<sup>31</sup> Since 1995, all five Swedish refineries report emissions based on either SOF or DIAL studies performed at least once every 3 years.<sup>32</sup> Some of these studies are reviewed below.

First, a study at a Canadian refinery demonstrated that the TANKS program underestimates VOCs by a factor of 33 and benzene by a factor of 98.<sup>33</sup>

Second, an EPA evaluation of DIAL emission test data for the BP Refinery in Texas City, Texas,<sup>34</sup> found VOC emissions underestimated by factors of 1.5<sup>35</sup> to 10<sup>36</sup> for tanks storing “various products” and concluded that “[o]n average, the DIAL results for external floating roof tanks storing crude oil were at least 3 to 7 times higher than estimates that used conditions at the time of the DIAL testing.”<sup>37</sup>

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<sup>30</sup> LIDAR is a remote-surveying technology that measures distance by illuminating a target with a laser light. Differential absorption lidar (DIAL) measurements utilize two or more closely spaced wavelengths to measure the concentration of atmospheric gases. See ScienceDirect, Differential Absorption Lidar; <https://www.sciencedirect.com/topics/earth-and-planetary-sciences/differential-absorption-lidar>.

<sup>31</sup> Cuclis 2012, p. 4 and Figure 1, Exhibit 4.

<sup>32</sup> Ibid.

<sup>33</sup> Allan K. Chambers, Melvin Strosher, Tony Wootton, Jan Moncrieff, and Philip McCready, Direct Measurement of Fugitive Emissions of Hydrocarbons from a Refinery, *Journal of the Air and Waste Management Association*, v. 58, August 2008, pp. 1047-1056, Tables 7 and 8 (“storage or handling”); <https://www.tandfonline.com/doi/pdf/10.3155/1047-3289.58.8.1047?needAccess=true>. Exhibit 5.

<sup>34</sup> U.S. EPA, Critical Review of DIAL Emission Test Data for BP Petroleum Refinery in Texas City, Texas, November 2010, Table 1, [https://www3.epa.gov/airtoxics/bp\\_dial\\_review\\_report\\_12-3-10.pdf](https://www3.epa.gov/airtoxics/bp_dial_review_report_12-3-10.pdf).

<sup>35</sup> U.S. EPA, November 2010, Table 1, Tank 43:  $2/1.3 = 1.5$ .

<sup>36</sup> Table 2, Tanks 54, 55, 56, 98: Maximum underestimate for Tanks 54, 55, 56, 98 =  $3.1/0.3 = 10.3$ .

<sup>37</sup> Ibid, p. ES-4.

**Table 2: Comparison of DIAL Results and Tank Emissions  
Estimated Using AP-42<sup>38</sup>**

Source	Source Description	Compound	Average DIAL flux, lb/hr <sup>2</sup>	Estimated emissions using standard estimating procedures with actual conditions at the time of the DIAL test, lb/hr
Tanks 1020, 1021, 1024, and 1025	EFR <sup>c</sup> tanks storing crude oil	VOC	6.4 <sup>d</sup>	1.3 – 1.9 <sup>e</sup>
Tanks 1052, 1053, and 1055	EFR tanks storing crude oil	VOC	16.3 <sup>d</sup>	1.8 – 2.3 <sup>e</sup>
Tanks 501, 502, 503, and 504	EFR tanks storing light distillates	VOC	8.6 <sup>d</sup>	3.0 – 3.9 <sup>e</sup>
Tank 43	VFR <sup>f</sup> tank storing fuel oil #6	VOC	2	1.3
			9.3	1.3
Tanks 60, 63, 11, 12, 18, 42, 61, and 65	VFR and EFR tanks storing various products	VOC	9	0.6 – 9.1 <sup>e</sup>
Tanks 54, 55, 56, and 98	VFR and EFR tanks storing various products	VOC	3.1 <sup>d</sup>	0.3 – 9.7 <sup>e</sup>
Tanks 53 and 55	VFR tanks storing diesel fuel	VOC	23.8 <sup>d</sup>	4.8 – 5.2 <sup>e</sup>

*Note:* VFR = vertical fixed roof tank; EFR = external floating roof tank

Third, similar studies at the Shell Deer Park Refinery in the Houston Ship Channel area, reviewed by the U.S. EPA, demonstrated that standard EPA tank calculation methods underestimated VOC emissions by factors of 4 to 132 and benzene emissions by factors of 10 to 93.<sup>39</sup> This is shown in Table 3 below.

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<sup>38</sup> Ibid., Table 1, p. ES-2, pdf 8.

<sup>39</sup> U.S. EPA, EPA Review of Available Documents and Rationale in Support of Final Emissions Factors and Negative Determinations for Flares, Tanks, and Wastewater Treatment Systems, Table 5-2, pdf 41, April 2015, [https://www3.epa.gov/ttn/chief/consentdecree/final\\_report\\_review.pdf](https://www3.epa.gov/ttn/chief/consentdecree/final_report_review.pdf).

**Table 3: Benzene and VOC Emissions Estimated by DIAL Compared with Emissions Estimated by EPA Emission Factors<sup>40</sup>**

Area	Date	Emission Factor Based Calculation (lbs/hr)	VOC (V) or Benzene (B)	Estimate of the 95th Upper Confidence Limit of the Mean (lbs/hr)**	Potential Underestimation Multiplier
Southwest Tanks	A-333	13-Jan	0.43	V	
	A-330	13-Jan	0.45	V	
	A-332	13-Jan	1.27	V	
	Total		2.15		20.18
	A-325	15-Jan	0.22	V	
	A-326	15-Jan	0.34	V	
	Total		0.56		13.15
	AP-17	19-Jan	0.46	V	
	Total		0.46		42.6
	AP-17	15-Jan	0.25	V	
AP-16	15-Jan	0.14	V		
Total		0.39		51.53	
West Tanks	A-310	1/14	0.17	V	
	G-324-R1	1/14	0.26	V	
	Total		0.43		15.8
East Tanks	J-327	22-Jan	0.14	V	
	J-328	22-Jan	0.12	V	
	J-331*	22-Jan	4.63	V	
	J-332*	22-Jan	4.63	V	
	Total		9.52		37.05
	J-327	23-Jan	0.15	V	
	J-328	23-Jan	0.12	V	
	Total		0.27		18.07
	J-327	28-Jan	0.11	V	
	J-328	28-Jan	0.16	V	
J-331*	28-Jan	4.63	V		
J-332*	28-Jan	4.63	V		
Total		9.53		35.98	
Tanks T-OL913 and T-OL920	T-OL913	8-Feb	1.15	B	
	T-OL913	10-Feb	1.17	B	
	T-OL913	23-Mar	1.18	B	
	T-OL920	8-Feb	0.83	B	
	T-OL920	10-Feb	0.83	B	
	T-OL920	23-Mar	0.83	B	
Total of Tank Averages		2.00		19.76	
Tanks South of ACU BEU	D-350	2-Feb	0.03	B	
	D-351	12-Feb	0.09	B	
	D-381	15-Feb	0.3	B	
	D-352	22-Mar	0.02	B	
Total		0.44		41.13	

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Fourth, one of the studies reviewed by the EPA, published in a refereed journal article, reported underestimates of benzene from internal floating roof tanks by factors of 6 to 254 and underestimates of VOCs from external and internal floating roof tanks by factors of 8 to 121.<sup>41</sup> The two internal floating roof tanks had the largest underestimate, a factor of 121 compared to the emission factor estimate.<sup>42</sup> The

<sup>40</sup> Ibid.

<sup>41</sup> Daniel Hoyt and Loren H. Raun, Measured and Estimated Benzene and Volatile Organic Carbon (VOC) Emissions at a Major U.S. Refinery/Chemical Plant: Comparison and Prioritization, *Journal of the Air & Waste Management Association*, v. 65, no. 8, 2015, Tables 4 & 5; Exhibit 6 and <https://www.tandfonline.com/doi/pdf/10.1080/10962247.2015.1058304?needAccess=true>.

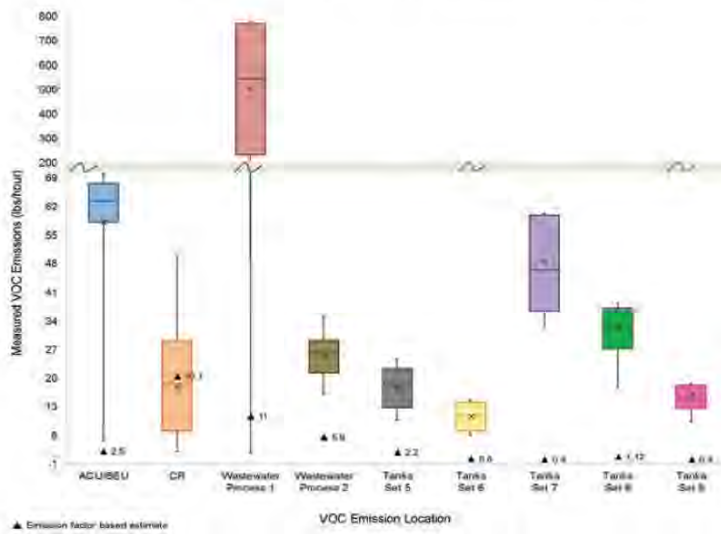
<sup>42</sup> Hoyt and Raun 2015, Exhibit 6: calculated from Table 5 as: Emission factor underestimate = [measured mean/emission factor estimate].



distribution of measured VOCs compared to emission factor estimates is summarized in Figure 2. Tank sets 5, 6, and 9 are external floating roofs, tank set 7 is two internal floating roof tanks, tank set 8 is four fixed roof tanks, and tank set 9 is two external floating roof tanks.<sup>43</sup> The highest relative error (>97%) occurred at the tank set 2 area, the tank set 3 area, and tank sets 1, 2, and 3, which are all internal floating roof tanks, proposed for the Project.<sup>44</sup>

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**Figure 2: Distribution of Measured VOC Emissions in Relation to Emission Factor Estimates (lb/hr)<sup>45</sup>**



Fifth, as shown in Table 4 below, a Texas Commission on Environmental Quality (TCEQ) study reported underestimates of up to a factor of 39 for crude oil tanks, compared to results obtained using the TANKS model.<sup>46</sup> The TCEQ concluded that “[c]rude oil default parameter data in TANKS, including vapor pressure, needs to be investigated” and “[c]hemical parameter default data for crude oil and mid-refined

<sup>43</sup> Hoyt and Raun 2015, Table 1, p. 1025, Exhibit 6.

<sup>44</sup> Hoyt and Raun 2015, Table 1, p. 1025, Exhibit 6.

<sup>45</sup> Hoyt and Raun, 2015, Figure 4, Exhibit 6. Note that the measured emissions of VOCs from the wastewater area are significantly higher than other areas. Therefore, the y axis is broken to accommodate the extreme values.

<sup>46</sup> Appendix C, Russ Nettles, Texas Commission on Environmental Quality (TCEQ) Differential Absorption Lidar (DIAL) Project, Summer 2007, Texas City, Texas, April 1, 2008, pdf 32, 53, [https://www3.epa.gov/ttnchie1/efpac/workshops/remotewkshp08/appendix\\_c\\_presentations.pdf](https://www3.epa.gov/ttnchie1/efpac/workshops/remotewkshp08/appendix_c_presentations.pdf).

products in TANKS may needs [sic] to be improved.”<sup>47</sup> The Project’s tanks will store crude oil and mid-refined products.

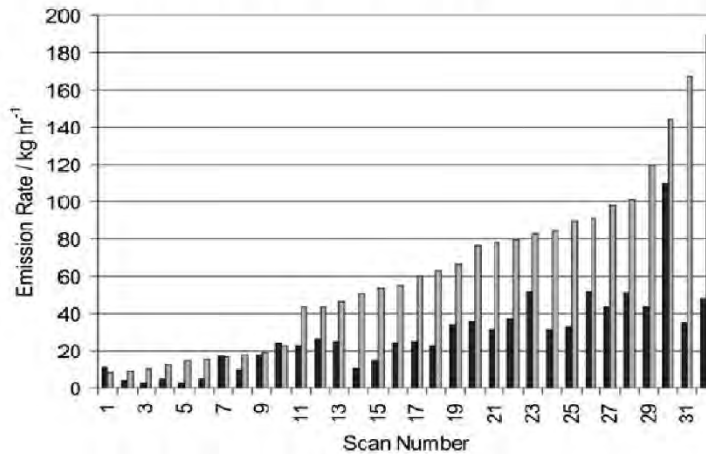
**Table 4: Crude Oil Tank DIAL Measurements<sup>48</sup>**

Tank #	1020	1021	1024	1025	1052	1053	1055
Lbs/hr	<2	16	5	11	22 to 39	7	<5

TANKS program emissions estimates using crude oil default parameters expected to be < 1lb/hr

Sixth, IR-DIAL measurements at a UK refinery had consistently higher VOC emissions than estimated using the EPA Tanks program. This is illustrated in Figure 3.

**Figure 3: Comparison of Total VOC Emissions from a Range of Petrochemical Storage Tanks by IR-DIAL compared to AP-42<sup>49</sup>**



Seventh, the Houston Bureau of Pollution Control and Prevention conducted a comprehensive survey of emissions from a combined petroleum refinery and chemical plant complex in the Houston Ship Channel area using DIAL.<sup>50</sup> This study

<sup>47</sup> Ibid., pdf 76.

<sup>48</sup> Ibid., pdf 53.

<sup>49</sup> Rod Robinson et al., Infrared Differential Absorption Lidar (DIAL) Measurements of Hydrocarbon Emissions, *Journal of Environmental Monitoring*, v. 13, 2011, p. 2213-2220, Figure 6. Exhibit 7.

<sup>50</sup> Loren Raun and Dan W. Hoyt, City of Houston, Measurement and Analysis of Benzene and VOC Emissions in the Houston Ship Channel Area and Selected Surrounding Major Stationary Sources Using

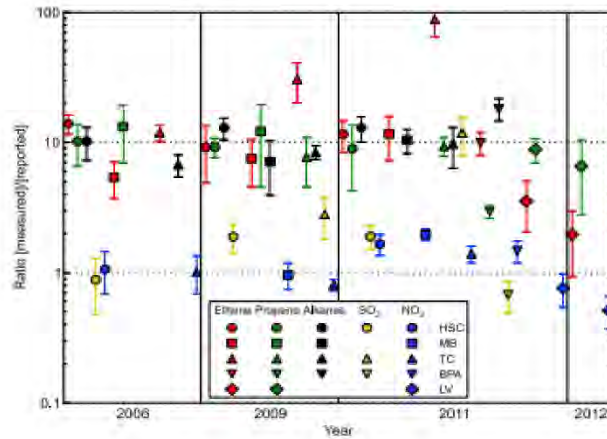
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demonstrated VOC emissions from tanks estimated using standard EPA emission factors were underestimated by factors of 4 to 132 compared to real-time DIAL measurements.<sup>51</sup> Benzene emissions from tanks were underestimated by factors of 6 to 254 compared to real-time DIAL measurements.<sup>52</sup>

Eighth, in another study, Johansson et al. (2014) reported for refineries in Texas that, “Despite some significant variations from year to year and from area to area, there is a clear pattern of measured VOC emissions (alkanes, ethane, and propene) exceeding reported emissions with almost an order of magnitude on average, while no similar pattern exists for SO<sub>2</sub> and NO<sub>2</sub>.”<sup>53</sup> This pattern is highlighted in Figure 4, where the ratios between measured emissions and reported annual average emissions are plotted for each year, species, and area.

**Figure 4: Ratios of Emissions Measured with SOF and Mobile DOAS to Annual Average Emissions Reported to Texas<sup>54</sup>**



DIAL (Differential Absorption Light Detection and Ranging) Technology to Support Ambient HAP Concentrations Reductions in the Community (DIAL Project), Final Report, July 20, 2011, Exhibit 8, <https://www.epa.gov/sites/production/files/2020-01/documents/houston-dial.pdf>. See also: Hoyt and Raun, Exhibit 6.

<sup>51</sup> Raun and Hoyt, 2011, Table 4.4a, pp. 93-94, Exhibit 8.

<sup>52</sup> Hoyt and Raun, 2015, Figure 3 and Table 4, Exhibit 6. From Table 4: Underestimate = Mean/Emission Factor Estimate.

<sup>53</sup> John K. E. Johansson et al., Emission Measurements of Alkenes, Alkanes, SO<sub>2</sub>, and NO<sub>2</sub> from Stationary Sources in Southeast Texas Over a 5 Year Period Using SOF and Mobile DOAS, *Journal of Geophysical Research: Atmospheres*, February 27, 2014, Exhibit 9; <https://agupubs.onlinelibrary.wiley.com/doi/pdfdirect/10.1002/2013JD020485>.

<sup>54</sup> Johansson et al. 2014, Figure 11, Exhibit 9.



Ninth, scientists at the Second International Workshop on Remote Sensing reported that the AP-42 tank model underestimated VOC emissions by factors of 5 to 50. This study reported: "DIAL crude oil tanks measurements were 5-10 times greater than calculated emissions using the TANKS program. Crude oil default parameter data in TANKS, including vapor pressure, need to be investigated."<sup>55</sup> Elsewhere in this report: "For the Houston Ship Channel, there were 5-50 times greater VOC emissions than reported in the 2004 TCEQ inventory. . . The discrepancies between measurements and conventional estimates are consistent with differences observed elsewhere, e.g., Sweden."<sup>56</sup>

Tenth, a study at a Texas refinery found that VOC emissions from crude tanks measured by DIAL were 5 to 10 times greater than calculated using the TANKS program.<sup>57</sup> DIAL measurements ranged from <2 lb/hr (not detected) for one tank, up to 22-39 lb/hr for another, with several in between (at <5, 5, 7, 11, and 16 lb/hr), while the TANKS program using crude oil default parameters estimated emissions under 1 lb/hr.<sup>58</sup> Studies in Sweden using DIAL (where all refineries are required to perform DIAL measurements every 2 to 3 years) show that the EPA model underestimates tank emissions by factors of 2 to 5.<sup>59</sup> The DIAL studies have been confirmed in the field by independent groups using a different test method.<sup>60</sup>

Figure 5, for example, compares DIAL measurements with calculated emissions at one refinery in Sweden. The underestimates are generally due to failure to address tank degradation over time; exclusion of upsets, malfunction, startups and shutdowns;

<sup>55</sup> U.S. EPA, 2<sup>nd</sup> International Workshop on Remote Sensing of Emissions: New Technologies and Recent Work, 2008, pp. ix; [https://clu-in.org/download/char/voc2008/voc\\_fugitive\\_losses\\_2nd\\_wkshp\\_5-29-08.pdf](https://clu-in.org/download/char/voc2008/voc_fugitive_losses_2nd_wkshp_5-29-08.pdf).

<sup>56</sup> *Ibid.*

<sup>57</sup> *Ibid.*, p. ix.

<sup>58</sup> *Ibid.*, p. 7; Robinson et al., *supra* note 48, at 16; Nettles 2008, *supra* note 45, at App. ix ("For the Houston Ship Channel, there were 5-50 times greater VOC emissions than reported in the 2004 TCEQ inventory. For NO<sub>x</sub> and SO<sub>2</sub> values, the discrepancy is less, a factor of 1.5 to 1.9.") and 51-53.

<sup>58</sup> Remote Sensing of Emissions at 18.

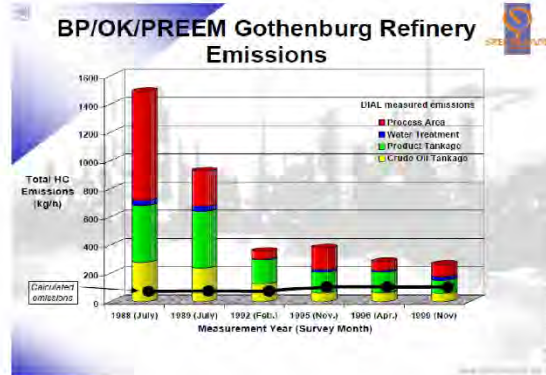
<sup>59</sup> Karin Fransson and Johan Mellqvist, Measurement of VOCs at Refineries Using Solar Occultation Flux Technique, Chalmers University of Technology, Sweden 2002, [https://www.researchgate.net/profile/Johan\\_Mellqvist/publication/228893370\\_Measurements\\_of\\_VOCs\\_at\\_Refineries\\_Using\\_the\\_Solar\\_Occultation\\_Flux\\_Technique/links/02e7e516cfc5c2f528000000/Measurements-of-VOCs-at-Refineries-Using-the-Solar-Occultation-Flux-Technique.pdf?origin=publication\\_list](https://www.researchgate.net/profile/Johan_Mellqvist/publication/228893370_Measurements_of_VOCs_at_Refineries_Using_the_Solar_Occultation_Flux_Technique/links/02e7e516cfc5c2f528000000/Measurements-of-VOCs-at-Refineries-Using-the-Solar-Occultation-Flux-Technique.pdf?origin=publication_list); Nettles 2008 at App. C, 43. See also M. Kihlman, J. Mellqvist, and J. Sameulsson, Monitoring of VOC Emissions from Refineries and Storage Depots Using the Solar Occultation Flux Method, 2005; <https://clu-in.org/characterization/technologies/pdf/SOF-Refinery-report-KORUS-2005.pdf>.

<sup>60</sup> K. Fransson and J. Mellqvist, Measurement of VOCs at Refineries Using Solar Occultation Flux Technique, Exhibit 10, and Nettles 2008 at App. C, 43.

exclusion of some types of emission events; improper input parameters such as built-in defaults and winds that deviate from the average.<sup>61</sup> Winds that deviate from average, such as the Santa Ana winds, are a concern in the area where the Project's tanks will be located.

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**Figure 5: Comparison of Measured and Calculated VOC Emissions from Refinery Storage Tanks<sup>62</sup>**



In contrast, this and other studies<sup>63</sup> found good agreement between emission inventories and measurements for NO<sub>x</sub> and SO<sub>x</sub>. The average ratio between measured and reported emissions for NO<sub>x</sub> was 0.8 and for SO<sub>x</sub>, 1.5, compared to an average ratio of 6.2 for VOCs,<sup>64</sup> consistent with other studies. Most major refining processes that emit NO<sub>x</sub> and SO<sub>x</sub> are continuously monitored using continuous emission monitoring systems (CEMSs), while VOC emissions are calculated using emission factors from AP-42, or estimated from infrequent stack tests – explaining the discrepancy between VOCs, which are grossly underestimated when calculated using AP-42 emission factors and models, such as the TANK model, and NO<sub>x</sub> and SO<sub>x</sub>, which are much more

<sup>61</sup> Johan Mellqvist et. al., Measurements of Industrial Emissions of VOCs, NH<sub>3</sub>, NO<sub>2</sub>, and SO<sub>2</sub> in Texas using the Solar Occultation Flux Method and Mobile DOAS, August 20, 2007 (rev. September 17, 2007), [https://www.researchgate.net/publication/241447345\\_Measurements\\_of\\_industrial\\_emissions\\_of\\_VOCs\\_NH3\\_NO2\\_and\\_SO2\\_in\\_Texas\\_using\\_the\\_Solar\\_Occultation\\_Flux\\_method\\_and\\_mobile\\_DOAS](https://www.researchgate.net/publication/241447345_Measurements_of_industrial_emissions_of_VOCs_NH3_NO2_and_SO2_in_Texas_using_the_Solar_Occultation_Flux_method_and_mobile_DOAS); Technical Memorandum from Brenda Shine, EPA/SPPD, to EPA Docket No. EPA-HQ-OAR-2003-0146 (July 27, 2007), <http://www.greenhoustontx.gov/reports/lowbias.pdf>.

<sup>62</sup> Alex Cuclis, Why Emission Factors Don't Work at Refineries and What to Do About It, Presentation at the Emissions Inventory Conference, Tampa, FL, August 13-16, 2012: Emission Inventories – Meeting the Challenges Posed by Emerging Global, National, Regional and Local Air Quality Issues, <https://www3.epa.gov/ttnchie1/conference/ei20/session7/acuclis.pdf>.

<sup>63</sup> See, for example, FluxSense Inc., Emission Measurements of VOCs, NO<sub>2</sub> and SO<sub>2</sub> from Refineries in the South Coast Air Basin Using Solar Occultation Flux and Other Remote Sensing Methods, Final Report, April 11, 2017 (FluxSense Report), Table 43, pdf 95, Exhibit 11; Johansson et al. 2014, p. 1983, Exhibit 9.

<sup>64</sup> FluxSense Report, Table 43, pdf 95, Exhibit 11.



accurately estimated in emission inventories. This supports the importance of adopting permit conditions for real-time VOC monitoring, such as routinely performed in Sweden, to ensure the emissions assumed in the IS/ND are practically enforceable.

Finally, the SCAQMD, where the subject tanks are located, commissioned a study to compare calculated emissions from six refineries and a refinery tank farm using methods employed in the IS/ND with real-time measurements.<sup>65</sup> This study, the FluxSense Report, used mobile optical measurements at the Carson<sup>66</sup> tank farm for 8 days between September 28 and October 7, 2015 to estimate tank VOC and BTEX<sup>67</sup> emissions. This study confirmed that tanks are the major source of VOC emissions at the Carson refinery, comprising 71% of the total measured VOC emissions.<sup>68</sup> This is consistent with results reported elsewhere for refinery tank emissions.<sup>69</sup>

The FluxSense study demonstrated that the six refineries included in the study underestimated their VOC emissions by an average factor of 6.2 (2.7-12) and benzene by an average factor of 34 (3.2-202), compared to those reported to the SCAQMD in emission inventories.<sup>70</sup> The underestimate could be even larger as one of the refineries in the area was partially shutdown during the study. As tank emissions contribute two thirds of total refinery VOC emissions,<sup>71</sup> it is reasonable to assume that tank VOC emissions are underestimated by about a factor of 6.2 and benzene emissions by about a factor of 34 based on the FluxSense study.

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<sup>65</sup> FluxSense Report, Exhibit 11.

<sup>66</sup> The tank farm monitored in this study is at the largest refinery in the SCAQMD (FluxSense Report, p. 31), presumably the Carson Refinery, owned by Marathon Petroleum Corp.; <https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/californias-oil-refineries>.

<sup>67</sup> Benzene, toluene, ethylbenzene, and xylene (BTEX).

<sup>68</sup> The VOC emissions from the Carson tank farm, reported as alkane flux (less methane), are 191 kg/hr (FluxSense Report, Table 38). Total VOC emissions from the Carson Refinery including its tank farm, reported as alkane flux (less methane), are 269 kg/hr (FluxSense Report, Table ES-1). Thus, the percent of Carson VOC emissions that originates from the tanks is  $(191/269)100 = 71\%$ .

<sup>69</sup> See, e.g., Johansson 2014, p. 1989, Exhibit 9; M. Kihlman, J. Mellqvist, and J. Sameulsson, Monitoring of VOC Emissions from Refineries and Storage Depots Using the Solar Occultation Flux Method, 2005, pdf 55, 81, and Table 4 at pdf 90 ("Of the emitted gas 26% originates from the process, 31% from the crude-oil tanks, 32% from product tanks, 8% from the water treatment facility and 2% from transport related activities."); <https://clu-in.org/characterization/technologies/pdf/SOF-Refinery-report-KORUS-2005.pdf>; Manne Kihlman, Application of Solar FTIR Spectroscopy for Quantifying Gas Emissions, Thesis for the Degree of Licentiate of Engineering, Chalmers, Sweden, 2005, Exhibit 12.

<sup>70</sup> FluxSense Report, Exhibit 11, Table 43, pdf 95.

<sup>71</sup> FluxSense Report, Exhibit 11, p. 94 and Kihlman 2005, Exhibit 12.



The high tank emissions found in the FluxSense report, compared with calculations based on the EPA TANKS 4.09 model, is consistent with monitoring results reported elsewhere for refinery tank emissions, discussed *supra*. The TANKS model or the Applicant's use of this model (e.g., selection of input parameters, such as temperature, vapor pressure, vapor molecular weight) significantly underestimates VOC and benzene emissions from tanks and thus should not be used to estimate tank VOC and benzene (or other HAP) emissions. Other studies, reviewed *supra* based on real-time monitoring, have reached similar conclusions.

### 3.1. Revised Tank VOC Emissions

As demonstrated above, the IS/ND significantly underestimated VOC emissions from storage tanks by relying on the TANKS model. A more realistic estimate can be made using studies that relied on mobile optical measurements. These studies indicate the method used to estimate VOC emissions from the new tanks in the IS/ND underestimates VOC emissions by factors of 1.5 to 132. Two approaches are considered here for correcting the tank emissions.

First, assuming the midpoint of the measured range of factors of 1.5 to 132 underestimates, or a factor of 67, tank VOC emissions would increase from 9.7 lb/day to about 650 lb/day, which greatly exceeds the significance threshold of 55 lb/day. The IS/ND incorrectly reports the VOC significance threshold for operational emissions as 75 lb/day.<sup>72</sup> However, this is the construction significance threshold. The operational VOC significance threshold is 55 lb/day.<sup>73</sup> Thus, VOC emissions from the new tanks are highly significant, requiring mitigation.

Second, using only the measurements for internal floating roof tanks, which are proposed for the Project, VOC emissions were underestimated by a factor of 121 in the studies reviewed in Comment 3.<sup>74</sup> In this case, VOC emissions would increase from 9.7 lb/day to about 1,174 lb/day, which also greatly exceeds the significance threshold of 55 lb/day.

Third, even assuming a more modest underestimation factor of 6.2—the average factor found by the FluxSense study commissioned by SCAQMD—VOC emissions from

<sup>72</sup> IS/ND, p. 4-10, pdf 34.

<sup>73</sup> SCAQMD, South Coast AQMD Air Quality Significance Thresholds; <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>.

<sup>74</sup> Hoyt and Raun, Table 4.

the tanks would be 60 lb/day.<sup>75</sup> This amount still exceeds the operational significance threshold of 55 lb/day and requires mitigation of VOC emissions impacts.

In sum, VOC emissions from the tanks are highly significant. VOC emissions from the tanks are even higher than estimated here because this estimate excludes roof landing, degassing, and cleaning emissions, discussed in Comment 3.2.

### 3.2. Roof Landing, Degassing, and Cleaning Emissions Were Omitted

As discussed in Comment 3.1, the IS/ND estimated VOC emissions from storage tanks using EPA's model, TANKS 4.0.9d. However, this model only estimates a portion of the emissions from storage tanks: rim seal losses, withdrawal losses, deck fitting losses, and deck seam losses. It does not estimate roof landing losses, inspection losses, degassing, and cleaning emissions.<sup>76</sup> These emissions must be separately calculated using AP-42, Section 7.1.<sup>77</sup> The IS/ND is silent on these emissions. I did not find these calculations in any of the IS/ND or PRA documents nor any requirement to control them in the Permits To Construct (PTC) per Rule 1149, Subsection 7.1.3.2.2, Roof Landings. Further, while SCAQMD Rule 1149 seeks to reduce "storage tank and pipeline cleaning and degassing," it does not eliminate them.<sup>78</sup> Thus, the IS/ND further underestimated tank emissions by failing to include all sources of tank VOC emissions.

The Project involves two new internal floating roof storage tanks. These tanks do not have a self-supporting roof. Rather, the roof floats on the surface of the liquid inside the tank, reducing evaporative losses during normal operations. However, when the tank is emptied, the roof sits on deck legs at the bottom of the tank and is uncontrolled. Figure 6 shows a diagram of a traditional internal floating roof tank and the location of the deck legs.

<sup>75</sup> FluxSense Report, Exhibit 11, Table 43, pdf 95. Revised tank emissions =  $6.2 \times 9.7 = 60$  lb/day.

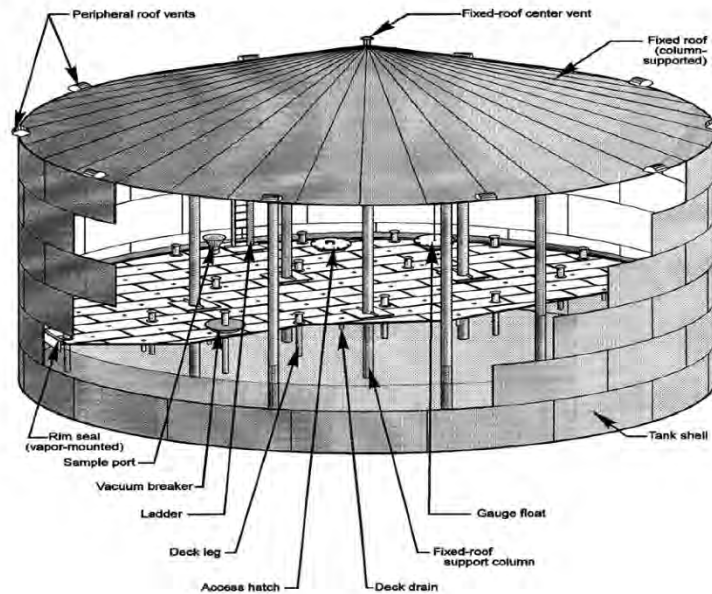
<sup>76</sup> U.S. EPA, TANKS Software Frequent Questions: How can I estimate emissions from roof landing losses in the TANKS program?; <https://www3.epa.gov/ttn/chief/faq/tanksfaq.html#14>.

<sup>77</sup> Ibid.

<sup>78</sup> SCAQMD Rule 1149, <http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1149.pdf>.



Figure 6: Traditional Internal Floating Roof Tank<sup>79</sup>



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cont.

As EPA explains, when a tank is emptied to the point that the roof no longer floats on the liquid but lands on the deck legs, evaporative losses occur:

**Roof landing losses:** When using floating roof tanks, the roof floats on the surface of the liquid inside the tank and reduces evaporative losses during normal operation. However, when the tank is emptied to the point that the roof lands on deck legs, there is a period where the roof is not floating and other methods must be used to estimate emissions. These emissions continue until the tank is refilled to a sufficient level to again float the roof. Therefore, these emission estimate calculations are applicable each time there is a landing of the floating roof.<sup>80</sup>

These losses are called “roof landing losses” and consist of standing idle losses and filling losses, which EPA explains as below:

**Standing idle losses:** After the floating roof is landed and the liquid level in the tank continues to drop, a vacuum is created which could cause the floating roof to collapse. To prevent damage and to equalize the pressure,

<sup>79</sup> From: EPA, AP-42, 7.1 Organic Liquid Storage Tanks, Figure 7.1.4, November 2006; [https://www3.epa.gov/ttn/chief/old/ap42/ch07/s01/final/c07s01\\_2006.pdf](https://www3.epa.gov/ttn/chief/old/ap42/ch07/s01/final/c07s01_2006.pdf).

<sup>80</sup> EPA, AP-42, 7.1 Organic Liquid Storage Tanks, *op. cit.*, p. 7.1-27.



a breather vent is actuated. Then, a vapor space is formed between the floating roof and the liquid. The breather vent remains open until the roof is again floated, so whenever the roof is landed, vapor can be lost through this vent.<sup>81</sup>

**Filling losses:** When a floating roof tank is refilled, there are additional emissions resulting from the roof being landed. These losses are called “filling losses” and continue until the liquid reaches the level of the floating roof. The first contributor to filling losses is called the “arrival” component. As liquid flows into the tank, the vapor space between the liquid and the floating roof is decreased. The displaced vapors are expelled through the breather vent. Once the roof is refloated on the liquid surface, the breather vent closes. The second contributor to filling losses is called the “generated” component. As the incoming liquid evaporates, additional vapors will be formed in the vapor space and will also be expelled through the breather vent.<sup>82</sup>

The EPA has explained that the TANKS model used to estimate tank VOC emissions does not include roof landings and recommended that they be estimated with the equations in AP-42.<sup>83</sup> In other words, the EPA TANKS model estimates evaporative emissions for normal operations only – that is, it assumes that the floating tank roof is always floating.<sup>84</sup> However, when a tank is emptied to the point that the roof no longer floats on the liquid but lands, evaporative losses occur. These losses are uncontrolled tank emissions and can be larger than routine controlled emissions. They are called “roof landing losses” and are estimated using AP-42, Section 7.1.3.4.<sup>85</sup> The IS/ND did not include these emissions because they are not included in the TANKS program.<sup>86</sup> I cannot estimate them because all of the inputs required to make the calculations are not provided in the IS/ND. Thus, the IS/ND fails as an informational document under CEQA.

<sup>81</sup> Ibid., internal citations omitted.

<sup>82</sup> Ibid., p. 7.1-32, internal citations omitted.

<sup>83</sup> U.S. EPA, TANKS Software Frequent Questions; <https://www3.epa.gov/ttn/chief/faq/tanksfaq.html>.

<sup>84</sup> EPA, TANKS Software Frequent Questions, updated September 2016, <http://www.epa.gov/ttnchief/faq/tanksfaq.html>. (“How can I estimate emissions from roof landing losses in the TANKS program? ... In November 2006, Section 7.1 of AP42 was updated with subsection 7.1.3.2.2 Roof Landings. The TANKS program has not been updated with these new algorithms for internal floating roof tanks. It is based on the 1997 version of section 7.1.”).

<sup>85</sup> AP-42, Section 7.1.3.4, <https://www3.epa.gov/ttn/chief/ap42/ch07/final/ch07s01.pdf>.

<sup>86</sup> See, e.g., U.S. EPA, TANKS Software Frequent Questions, “How Can I Estimate Emissions from Roof Landing Losses in the TANKS Program?”, <https://www3.epa.gov/ttn/chief/faq/tanksfaq.html#13>.



The EPA, in a recent Notice of Violation (“NOV”) issued to a rail terminal permitted by the SJVAPCD, recognized roof landing losses as emissions that must be included to determine the Potential to Emit (“PTE”) of a source and concluded that “[a] proper Engineering Evaluation includes roof landing losses in the PTE for a petroleum storage tank.”<sup>87</sup>

Tank roof landing losses are large, typically comprising about a quarter (but up to 60%) of total tank emissions.<sup>88,89</sup> Based on the estimated VOC emissions determined for the Project’s two tanks using the TANKS model of 1,241.38 lb/yr per tank,<sup>90</sup> tank roof landing emissions for the Project’s two new storage tanks can thus be estimated ranging from 620 lbs to 1,490 lbs for the two tanks per cleaning event.<sup>91</sup> Thus, in years in which the tanks are cleaned, the IS/ND substantially underestimates tank VOC emissions, related health impacts, and the quantity of ERCs required to offset Project VOC emissions.

In addition, “degassing and cleaning losses” occur when tanks are drained and degassed for inspection and/or cleaning. These include both roof landing emissions, complete tank degassing, and emissions from cleaning out accumulated sludge. These

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<sup>87</sup> EPA, In the Matter of Bakersfield Crude Terminal LLC, Plains Marketing, L.P., Plains All American Inc., Taft California, Proceedings Under Section 113(a), Clean Air Act, as Amended, Docket No. R9-15-08, Findings and Notice of Violation, April 30, 2015 (“Plains NOV”) (Exhibit 13), Paragraph 26 (“The PTE calculations in the 2012 Application Review did not include emissions referred to as “roof landing losses” for internal floating roof tanks. Roof landing losses occur regularly in the petroleum industry when internal floating roof tanks are emptied to the point that the floating roof touches down on its support legs. Roof landings of internal floating roof tanks result in extra emissions of VOCs occurring compared to those emissions when the internal roof is floating on the liquid in the tank.”) and Paragraph 46 (“The PTE calculations used in the 2012 Application Review to determine the Facility’s minor source status incorrectly underestimated the emissions from the floating roof tanks installed at the Facility. As set forth in the 2012 ATCs for the storage tanks at the Facility and as experienced in the petroleum industry, internal floating roof tanks are regularly emptied to the point that the floating roof touches down on its support legs. In a roof landing event, substantial amounts of VOC emissions occur, and these emissions are referred to as “roof landing losses.” A proper engineering analysis includes roof landing losses in the PTE for a petroleum storage tank. The PTE calculations used to determine the Facility’s minor source status omitted roof landing losses for the internal floating roof tanks.”), <http://earthjustice.org/sites/default/files/files/NOV%20Bakersfield%20Crude%20Terminal%20LLC.pdf>.

<sup>88</sup> See, for example, Plains Marketing, L.P., New Source Review Permit Initial Application, Corpus Christi Dock and Storage Terminal, September 2014, Exhibit 14.

<sup>89</sup> See, for example, Enbridge Energy, LP, Letter to Wisconsin Department of Natural Resources, Re: Superior Terminal Enhancement Project Permit Application, October 9, 2012, Att. C, Table 2-2 Exhibit 15; (roof landing loss in lb VOC/year)/(total loss in lb VOC/year) = **0.181-0.617**.

<sup>90</sup> PTC Application, Exhibit 1, Table 3-2 and Appendix B, TANKS 4.0.9d output, Exhibit 1.

<sup>91</sup> The increase in VOC emissions due to roof landing emissions can be estimated from the TANKS 4.0.9d output (Exhibit 1) as:  $[1,241.38/4]^2 = 621$  lbs;  $[1,241.38*0.6]^2 = 1,490$  lb.



emissions are essentially uncontrolled tank emissions<sup>92</sup> and can be larger than normal operating emissions. The City of Houston, with EPA funding, performed a DIAL study at a large refinery in Texas in 2010 and found tank cleaning emitted 4,000 lb/hr of alkane VOCs.<sup>93</sup> The IS/ND is silent on these emissions, which were not included in emission estimates. These emissions can be controlled using special degassing equipment.<sup>94</sup> The IS/ND does not contain any commitment to use degassing equipment for tank cleaning.

The EPA recommends methods to estimate emissions from degassing, cleaning, and roof landing losses.<sup>95</sup> The method for estimating emissions depends on the construction of the tank – for example, the flatness of the tank bottom and the position of the withdrawal line (the so-called liquid heel). Degassing, cleaning, and roof landing losses continue until the tank is refilled to a sufficient level to again float the tank roof. Total VOC emissions from floating roof tanks during a roof landing are the sum of standing idle losses and filling losses. They can be estimated using formulas contained in AP-42, Chapter 7.1, Organic Liquid Storage Tanks, Section 7.1.3.2.2. These emissions are routinely included in emission inventories. They are required to be reported, for example, in Texas.<sup>96</sup> The IS/ND does not mention these emissions or include emissions from cleaning, storing, or processing removed sludge. I cannot estimate them as the inputs required to make these calculations are in the record. Thus, VOC emissions are underestimated, and the IS/ND fails as an informational document under CEQA.

### 3.3. Other Omitted Sources of VOC Emissions

There are several other sources of emissions that were omitted from the IS/ND's air quality analysis. These include:

- Water draw tank emissions
- Truck loading rack disconnect emissions
- Emissions from drops during loading

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<sup>92</sup> Ibid.

<sup>93</sup> Hoyt and Raun, 2015, p. 1024.

<sup>94</sup> See, for example, Envent Corp., Tank & Vessel Degassing; <http://www.enventcorporation.com/services/degassing-vapor-control/tank-vessel-degassing/>.

<sup>95</sup> U.S. EPA, TANKS Software Frequent Questions: "How Can I Estimate Emissions from Degassing and Cleaning Operation During a Tank Turnaround? And How Can I Estimate Emissions from Roof Landing Losses in the TANKS Program?"; <http://www.epa.gov/ttnchie1/faq/tanksfaq.html#13>.

<sup>96</sup> Memorandum from Dan Eden, Deputy Director, Office of Permitting, Remediation, and Registration; David C. Schanbacher, Chief Engineer; and John Steib, Deputy Director, Office of Compliance and Enforcement, Re: Air Emissions During Tank Floating Roof Landings, December 5, 2006, [http://www.tceq.texas.gov/assets/public/permitting/air/memos/tank\\_landing\\_final.pdf](http://www.tceq.texas.gov/assets/public/permitting/air/memos/tank_landing_final.pdf).



- Emissions from sumps at the loading rack
- Emissions from fugitive components (e.g., valves) at the loading rack
- Emissions from changes in products stored in the repurposed tanks
- Emissions from increases in repurposed tanks throughputs
- Emissions from ground and marine transportation<sup>97</sup>

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cont.

Further, crude oil typically contains small amounts of water, which is separated from the crude oil and accumulates in the bottom of storage tanks. This accumulated water, referred to as water draw, is typically transferred from the crude oil storage tanks into a smaller water draw surge tank for processing prior to disposal. Over time, a thick layer of crude oil forms in the water draw surge tank. The water draw surge tank and processing of wastewaters from it emit VOCs and HAPs.

The IS/ND does not disclose or estimate emissions from any of these additional sources, failing as an informational document under CEQA.

### **3.4. Offsets Are Not Valid CEQA Mitigation**

The IS/ND, Table 4.3-1 indicates VOC emissions would be offset, implying offsets are mitigation. However, for several reasons the IS/ND cannot rely on offsets to mitigate air quality impacts because they are not valid CEQA mitigation unless they reduce the emissions at the time and location where the impact occurs.

SFERCA-40

First, historically banked ERCs are part of the CEQA baseline. The emission reductions are already accounted for in the ambient air quality at the project site at the time of project proposal. Increases in emissions from the Project will increase emissions relative to the existing baseline. Thus, purchasing ERCs would not reduce, offset, or mitigate increases in Project emissions, as the reductions occurred historically, before the Project was conceived and are part of the baseline.

Second, historically banked ERCs are legally distinct from emission reductions required under CEQA to mitigate new increases in emissions. Thus, the ERC concept is not consistent with the CEQA mandate to mitigate actual impacts on local receptors. The emissions of VOCs will increase in the area where the new Project emissions are released. The impact of this increased pollution on local sensitive receptors must be evaluated under CEQA and mitigated at the time and place that it occurs.

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<sup>97</sup> Project Memorandum from Will Walters, Aspen Environmental Group, to Allyson Teramoto, Port of Long Beach, Re: Ribost Tanks Project Screening Air Quality Analysis, September 14, 2018: "The new tanks impact on ground and marine transportation were not completely known at the time of this analysis. These effects need to be fully determined to ensure that there would be no substantial increases in these operating emissions." Exhibit 18.

On a common sense level, it is not logical to assume that ERCs, which frequently have been banked decades ago, will do anything to mitigate impacts from local emission increases, especially in a region plagued with serious and ongoing air quality violations. The VOC offset proposed for the Project was issued December 14, 1993,<sup>98</sup> 27 years ago. Instead, this approach aggravates the exposure of residents to extraordinarily unhealthy ozone in the local area.

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cont.

Therefore, the use of ERCs is not valid mitigation under CEQA. ERCs are not an acceptable substitute for performing local air quality analyses and mitigating the local impacts themselves. A revised CEQA document should clearly state that the use of offsets to mitigate air quality impacts, except those offsets that occur at the project site at the time of project startup, are not valid mitigation. Instead, conventional mitigation is required to reduce the significant ROG emissions.

#### 4. HEALTH IMPACTS ARE SIGNIFICANT

The IS/ND concludes that “operation emissions would not expose sensitive receptors to substantial pollutant concentrations, and operation impacts would be less than significant.”<sup>99</sup> This conclusion is based on a cancer health risk assessment (HRA) prepared by the SCAQMD for the new tanks that concluded cancer health risks were well below the significance threshold of  $10 \times 10^{-6}$  (ten in one million exposed). This significance threshold assumes that T-BACT is used.<sup>100</sup> The IS/ND further concludes that other emission sources – loading rack, fuel oil vapors, trucks – would make negligible contributions to the cancer risk and excluded them from the HRA analysis.<sup>101</sup> However, there are two problems with the IS/ND’s analysis, which result in a significant underestimate of health impacts.

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First, the HRA underestimated VOC emissions and by extension, HAP emissions. Assuming VOC emissions were underestimated by a factor of 67, as explained in Comment 4.1, health impacts are significant.

Second, the HRA failed to evaluate the health impacts from increases in ambient ozone concentrations in the vicinity of the Project due to increases in VOC emissions. Comment 4.1.

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<sup>98</sup> SCAQMD, Certificate of Proof for Registered Emission Reduction Credit, Certificate No. AQ001032, Reissued to Ribost Terminal, LLC, Issued December 5, 2019. Exhibit 16.

<sup>99</sup> IS/ND, pdf 36.

<sup>100</sup> SCAQMD, Risk Assessment Procedures for Rules 1401, 1401.1 and 212, Version 8.1, September 1, 2017, p. 3; <http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/riskassessproc-v8-1.pdf?sfvrsn=12>.

<sup>101</sup> IS/ND, pdf 36.

#### 4.1. Health Impacts from Speciated Tank HAP Emissions Are Significant

The VOC emissions discussed in Comment 2.1 are comprised of many individual organic compounds, some of which are carcinogens or cause acute or chronic health impacts. Health risk assessments typically evaluate the impact of these individual compounds, collectively as cancer risk or individually as acute and chronic health risks. The IS/ND relied on the HRA contained in the Application for a Permit to Construct (PTC Application),<sup>102</sup> asserting this HRA is conservative because the TAC emission rates are based on gasoline rather than crude oil.<sup>103</sup> However, there are several major problems with the HRA in the PTC Application, which significantly underestimate health impacts. When these errors are corrected, cancer risks are significant and unmitigated.

First, gasoline is not a conservative assumption because the Permits to Construct for the two tanks allow the storage of “crude oil or non-gasoline petroleum products having a Reid vapor pressure not to exceed 10.0 pounds per square inch.”<sup>104</sup> The Reid vapor pressure of gasoline is 10 pounds per square inch. Thus, regardless of what it’s called, the tanks can store products with a vapor pressure equal to that of gasoline. The vapor pressure ultimately determines how much of a chemical will be emitted. Many of the products that will be stored in the new and repurposed tanks have higher benzene concentrations that assumed based on gasoline.

Second, the HRA failed to evaluate the nearest sensitive receptor. The PTC Application assumed the distance to the nearest residence is 925 meters (3,034 feet or 0.6 miles).<sup>105</sup> However, the IS/ND indicates the nearest residence is 0.5 miles away.<sup>106</sup> The SCAQMD Permit to Construct (PTC) evaluation also assumed the closest residential receptor is approximately 2,640 feet away or 0.5 miles and the nearest school, Edison Elementary School, is 2,916 feet away (0.6 miles).<sup>107</sup> My review of the Google map of the Project area indicates that there are many other sensitive receptors, including schools, parks and child development centers, some closer than disclosed in the IS/ND. Exhibit 7.

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<sup>102</sup> PTC Application, Exhibit 1, Appendix C – Health Risk Assessment.

<sup>103</sup> IS/ND, pdf 36.

<sup>104</sup> Permit to Construct, Tank No. TK-1 and Permit to Construct, Tank No. TK-2, Conditions 4.

<sup>105</sup> PTC Application, Exhibit 1, Appendix C, pdf 29.

<sup>106</sup> IS/ND, p. 4-10, 4-31, pdf 34, 55.

<sup>107</sup> PTC Application, Exhibit 1, pdf 2, Toxic Emissions.



The IS/ND asserts it relied on the SCAQMD’s health risk assessment, reporting the maximum cancer risks for a residential receptor of 1.85 E-7<sup>108</sup> and did not report the risk for the nearest commercial receptor. The SCAQMD’s Application Evaluation, on the other hand, reported a maximum cancer risk of 1.85 E-7 for the nearest residential receptor and 6.04 E-8 for the nearest commercial receptor.<sup>109</sup>

Third, the VOC emissions from the storage tanks were underestimated by up to a factor of 121. Comment 3. Assuming VOC emissions were underestimated by a factor of 121, this would increase the estimated cancer risk from 1.85 E-7 for the nearest residential receptor to 2.24 E-5 (22 in one million).<sup>110</sup> As the cancer significance threshold is 10 in one million, cancer risks are significant. Assuming VOC emissions were underestimated by a factor of 67 would yield an estimated cancer risk of about 12 in one million, also a significant impact.<sup>111</sup>

Fourth, the SCAQMD FluxSense study concluded that benzene emissions from refineries, which account for 94% of the cancer risk,<sup>112</sup> were underestimated by an average factor of 34, ranging from 3.2 to 202,<sup>113</sup> compared to calculated values using methods similar to those used in the PTC Application. Assuming an average underestimate of benzene by a factor of 34 coupled with an average underestimate in tank VOC emissions of 121 (Comment 3), the cancer risk would increase from 1.85 E-7 to 8.10 E-4 (810 in one million),<sup>114</sup> which is highly significant, exceeding the cancer significance threshold of 10 E-6 (10 in one million) by a factor of 81.

Alternatively, real-time measurements at 23 tanks and tank groups in the SCAQMD reported average benzene emissions of 0.11 lb/hr per tank<sup>115</sup>, which is 65 times higher than the 1.70 E-3 lb/hr benzene assumed in the PTC Application’s cancer

<sup>108</sup> IS/MND, p. 4-12, pdf 36.

<sup>109</sup> ATC Application Evaluation, p. 2.

<sup>110</sup> Increase in cancer risk due to underestimate in tank VOC emissions = (1.85E-7)(121) = **2.24E-5 (22.4 in one million)**.

<sup>111</sup> Increase in cancer risk due to underestimate in tank VOC emissions by a factor of 67 = (1.85E-7)(67) = **1.24E-5 (12.4 in one million)**.

<sup>112</sup> Fraction of cancer risk due to benzene, based on Application, pdf 33: (4.93E-8/5.22E-8)100 = **94%**.

<sup>113</sup> SCAQMD, FluxSense 2015, Table 43, p. 94.

<sup>114</sup> Increase in cancer risk due to underestimate in tank VOC emissions and benzene concentration = (1.85E-7)(34)(121)/0.94 = 8.10E-4 (**810 in one million**).

<sup>115</sup> Average tank benzene based on FluxSense Report, Table 38: [(1.2 kg/hr)/23 tanks][2.2 lb/kg] = **0.11 lb/hr**.

risk assessment at R1.<sup>116</sup> The revised cancer risk in this case would be 68 E-6 (68 in one million), which is also highly significant.<sup>117</sup>

Finally, real-time measurements summarized in Table 4 found that benzene from internal floating roof tanks was underestimated by factors of 6 to 254.<sup>118</sup> Using the midpoint of this range, 130, the revised cancer risk would be 129 E-6 (129 in one million),<sup>119</sup> which is also highly significant.

In sum, cancer health risks are significant, requiring mitigation.

#### **4.2. Cumulative Air Quality and Public Health Impacts Are Significant**

Mandatory findings of significance are required if a project has impacts that are individually limited but cumulatively considerable. As defined by Section 15065 of the CEQA Guidelines, "cumulatively considerable means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects."<sup>120</sup>

The IS/MND concluded that all cumulative impacts were less than significant without identifying any cumulative projects or conducting a cumulative impact analysis. Instead, the IS/MND asserts that the Project's operational air quality impacts are not "cumulatively considerable due to the relatively nominal level and area of impact, highly developed industrial surroundings, and temporary nature of the proposed project."<sup>121</sup> As to construction, it asserts that "construction activities are minor..."<sup>122</sup> The IS/ND further argues that because the Project's air quality and greenhouse gas impact would be less than significant and the Project, as well as all other current projects in the region, would comply with applicable SCAQMD standards, recommendations, and regulation, designed to limit air quality impacts.<sup>123</sup> This violates both CEQA and SCAQMD guidance.

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<sup>116</sup> Application, Appendix C, p. 4, Emission Calculations benzene emissions = 1.70E-3 lb/hr.

<sup>117</sup> Increase in cancer risk due to underestimate in tank benzene emissions = (9.92E-7)(68) = 6.75E-5 (67.5 in one million).

<sup>118</sup> Hoyt and Raun, Table 4.

<sup>119</sup> Increase in cancer risk due to underestimate in tank benzene emissions = (9.92E-7)(130) = 1.29E-4 (129 in one million).

<sup>120</sup> CEQA Guidelines §15065(a)(3).

<sup>121</sup> IS/ND, p. 4-65, pdf 89.

<sup>122</sup> IS/MND, p. 4-65, pdf 89.

<sup>123</sup> IS/ND, p. 4-65, pdf 89.

Under CEQA, “[c]umulative impacts refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.”<sup>124</sup> “The individual effects may be changes resulting from a single project or a number of separate projects.”<sup>125</sup> Further, “the cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.”<sup>126</sup> According to CEQA Guidelines Section 15064, compliance with a significance threshold “does not relieve a lead agency of the obligation to consider substantial evidence indicating the project’s environmental effects may still be significant.”<sup>127</sup> Thus, while construction air quality impacts are individually minor and operational air quality impacts for all pollutants but VOCs (Comment 3) are individually minor, they are cumulatively significant when considered with other reasonably foreseeable projects.

The South Coast Air Quality Management District (SCAQMD), where the Project is located, has provided guidance on an acceptable approach to address cumulative air quality impacts. This guidance states: “As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR ... Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable.”<sup>128</sup>

Comment 3 demonstrates that VOC emissions from Project operation are significant. Comment 4 demonstrates that cancer risks from Project operation are significant. Thus, under the SCAQMD guidance, air quality impacts and public health impacts are *per se* cumulatively significant, requiring the preparation of an EIR.

Regardless, there are other cumulative projects in the general area which, when considered together with the Project, are cumulatively significant. The two existing tanks that will be repurposed for new uses by Marathon is an adjacent cumulative project. The Los Angeles International Airport, for example, is planning a major

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<sup>124</sup> CEQA Guidelines §15355.

<sup>125</sup> CEQA Guidelines §15355(a).

<sup>126</sup> CEQA Guidelines §15355(b).

<sup>127</sup> CEQA Guidelines §15064(b)(2).

<sup>128</sup> SCAQMD, White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution, Appendix D – Cumulative Impact Analysis Requirements Pursuant to CEQA, August 2003.



expansion.<sup>129</sup> The area where the World Oil Project is located will be affected by emissions from LAX expansion construction, which is anticipated to occur over 7 years between 2021 and 2028<sup>130</sup> and increased ground and air traffic passing near the Project site. Further, all of the emissions from the LAX expansion will be released into the same air basin, adversely affecting air quality in the vicinity of the Project. Thus, cumulative operational VOC and health impacts are significant.

SFERCA-42  
cont.

**4.3. The IS/ND Fails to Demonstrate That the Increase in VOC Emissions Will Not Cause a Violation or Make Significantly Worse an Existing Violation of VOCs, Resulting in Significant Health Impacts**

SFERCA-43

VOC emissions are converted into ozone in the atmosphere. Ozone, the main component of smog, is formed in the atmosphere from precursor pollutants rather than being directly emitted. Ozone forms as a result of VOCs and NO<sub>x</sub> reacting in the presence of sunlight. Ozone damages lung tissue and reduces lung function, affecting people with impaired respiratory systems as well as healthy children and adults.<sup>131</sup>

The South Coast Air Basin where the Project is located is in extreme nonattainment with the federal 1-hour and 8-hour ozone standards and in nonattainment with the state 1-hour and 8-hour ozone standards.<sup>132</sup> In fact, the area where the Project is located has the worst ozone pollution in the entire United States.<sup>133</sup> The number of days that ozone standards were exceeded in the Project's zip code are summarized in Figure 7. The significant VOC emissions from the Project will aggravate existing violations of ambient air quality standards, resulting in significant public health impacts.

<sup>129</sup> City of Los Angeles, Draft Environmental Impact Report, Airfield & Terminal Modernization Project, October 2020, <https://cloud1law.aapp.box.com/s/bracr7k700eb3y7x37x02u19bsec3r5>.

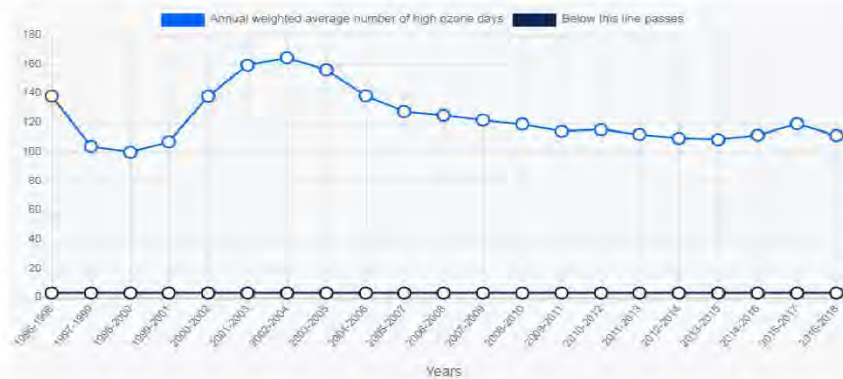
<sup>130</sup> LAX DEIR, Section 4.1.1.1.2.1, p. 4.1.1-5.

<sup>131</sup> U.S. EPA, Ground-level Ozone Pollution; <https://www.epa.gov/ground-level-ozone-pollution/ground-level-ozone-basics>.

<sup>132</sup> National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) Attainment Status for South Coast Air Basin; <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf>.

<sup>133</sup> American Lung Association, State of the Air, Most Polluted Cities; <https://www.stateoftheair.org/city-rankings/most-polluted-cities.html>.

**Figure 7: Number of Days Air Quality in Zip Code 90802 Exceeded Ozone Ambient Air Quality Standards<sup>134</sup>**



The Los Angeles–Long Beach area (zip code 90802), where the Project is located, has remained at the top of the worst ozone pollution list for 20 out of the 21 years that the American Lung Association (ALA) has been ranking pollution in its annual State of the Air Report.<sup>135</sup> Four groups of people are especially vulnerable to the effects of breathing ozone: (1) children and teens; (2) anyone 65 and older; (3) people with existing lung diseases, such as asthma and chronic obstructive pulmonary disease (also known as COPD, which includes emphysema and chronic bronchitis); and (4) people who work or exercise outdoors.<sup>136</sup> In the Project area (Los Angeles–Long Beach) in 2020, these included 10 million people with preexisting conditions that were at risk from ozone pollution, plus 15 million otherwise sensitive individuals (people of color and those living in poverty) who likely live and/or work outdoors:

- 4,270,638 under 18;
- 2,583,214 that are 65 and over;
- 263,657 with pediatric asthma;
- 1,234,623 with adult asthma;
- 662,425 with COPD;
- 956,017 with cardiovascular disease;

<sup>134</sup> American Lung Association, State of the Air; <https://www.stateoftheair.org/city-rankings/states/california/los-angeles.html>.

<sup>135</sup> American Lung Association, State of the Air, 2020 (ALA 2020); <https://www.stateoftheair.org/assets/SOTA-2020.pdf>, p. 7 (“Los Angeles remains at the top of the list of most polluted cities for ozone, as it has been for all but one of the 21 reports...); see also Laura Parker, See the Best and Worst Places for Breathable Air in the U.S., *National Geographic*, April 19, 2017, <http://news.nationalgeographic.com/2017/04/ozone-pollution-city-rankings-particles-Clean-Air-Act/>.

<sup>136</sup> American Lung Association, Who Is At Risk from Breathing Ozone?; <https://www.lung.org/clean-air/outdoors/what-makes-air-unhealthy/ozone>.



- 13,006,958 people of color; and
- 2,440,945 living in poverty.<sup>137</sup>

Further, the Project is very close to many facilities where people will be exercising outdoors, including parks (Drake Park, Cesar E. Chavez Park, Golden Park), a soccer field (Drake Park Soccer Field, and schools (Edison Child Development Center, Edison Elementary School, Cesar Chavez Elementary School).<sup>138</sup>

Further, a major study found evidence that people with lung cancer faced greater risk from ozone and other outdoor air pollutants. The 2016 study tracked the air pollution levels from 1988 to 2011 experienced by more than 350,000 cancer patients in California. The researchers found that ozone and other air pollutants shortened their survival.<sup>139</sup> Numerous studies, cited in ALA 2020, document the serious public health impacts of ozone. Thus, it is critical that the huge increase in ozone precursors that will result from this Project be fully mitigated.

In addition to these sensitive populations in the general area, the IS/ND identified nearby sensitive receptors, including the Edison Elementary School, located about 0.5 miles east of the project site; the Cesar Chavez Elementary school, located about 0.6 miles east;<sup>140</sup> and the nearest residence on West Chester Place, about 0.5 miles east of the project site.<sup>141</sup> Google Maps indicates other nearby sensitive receptors, including Golden Park, Cesar E. Chavez Park, Drake Park, Drake Park Soccer Field, Edison Child Development Center, and numerous additional homes.<sup>142</sup> See Exhibit 17. Thus, the IS/ND has failed to disclose all of the sensitive receptors in the vicinity of the Project, failing as an informational document under CEQA.

The IS/ND concluded that health impacts of “non-speciated VOC emissions” would not be significant because its estimated VOC emissions are below the

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<sup>137</sup> American Lung Association, State of the Air, 2020 (ALA 2020); <https://www.stateoftheair.org/assets/SOTA-2020.pdf>.

<sup>138</sup> Exhibit 17.

<sup>139</sup> S. P. Eckel and others, Air Pollution Affects Lung Cancer Survival, *Thorax*, v. 71, 2016, pp. 891-898; <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5400105/>.

<sup>140</sup> IS/ND, pdf 55.

<sup>141</sup> IS/ND, pdf 66 and 67, Table 4.13-1.

<sup>142</sup> Google Maps:

<https://www.google.com/maps/place/911+W+Chester+Pl,+Long+Beach,+CA+90813/@33.7762551,-118.2027098,17z/data=!4m5!3m4!1s0x80dd314cf8149c3b0x697be6b65c56edb5!8m2!3d33.777352!4d-118.2030209>.



SCAQMD's daily significant thresholds.<sup>143</sup> However, the IS/ND significantly underestimated VOC emissions, which exceed the SCAQMD's daily operational significance threshold for VOCs. Comment 3.

Further, the IS/ND did not quantify how much ozone these emissions would create. Although the IS/ND explained that ozone can cause health impacts, this information is meaningless because the IS/ND did not estimate how much ozone the Project would generate, making it impossible for the public to translate VOC emission estimates into adverse health impacts. The only way to evaluate the health impacts of unspecified VOCs is by conducting air dispersion modeling to determine if the Project's emissions cause a new violation or contribute to an existing violation of state or federal ozone standards.

In December 2018, the California Supreme Court determined that CEQA requires that the potential for a project's emissions to affect human health in the air basin must be disclosed when a project's criteria air pollutant emissions exceed applicable significance thresholds or explain why such further evaluation is infeasible.<sup>144</sup> While the IS/ND concluded VOC emissions were not significant, as explained in Comment 3, the IS/ND significantly underestimated operational VOC emissions, which are highly significant. These significant VOC emissions must be converted into specific human health effects in the air basin. At least three recent draft environmental impact reports (DEIRs) have assessed the human health impacts from significant emissions of ozone and PM2.5 precursors.<sup>145,146,147</sup> Two of these are in the SCAQMD.

The Health Risk Assessment failed to evaluate the health impacts from ozone pollution,<sup>148</sup> thus failing as an informational document under CEQA. There are numerous sensitive receptors in the vicinity of the Project, notably children that would

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<sup>143</sup> IS/ND, pdf 36.

<sup>144</sup> *Sierra Club v. County of Fresno* (2018) 6 Cal. 5th 202, 521 (also referred to as "the Friant Ranch Decision").

<sup>145</sup> City of San Jose, Draft Environmental Impact Report for Amendment to Norman Y. Mineta San Jose International Airport Master Plan, November 2019, Section 4.3.5.2, Health Effects Assessment for Criteria Pollutants, pp. 89-94; <https://www.sanjoseca.gov/Home/ShowDocument?id=61640>.

<sup>146</sup> City of Inglewood, Inglewood Basketball and Entertainment Center Project Draft Environmental Impact Report, pp. 3.2-61 to 3.2-63, December 2019; <https://files.ceqanet.opr.ca.gov/60191-3/attachment/a-wQrPYfgqX6rH7PlozmRPEvEaRCdDy9wtEOIK6Lkzx9y2kM5Y76yA2pvL0h1Nhm4o1xu79V9PavU-kk0>.

<sup>147</sup> City of Los Angeles, Draft Environmental Impact Report, Los Angeles International Airport (LAX) Airfield & Terminal Modernization Project, October 2020; <https://cloud1law.aapp.box.com/s/bracr7k700eb3y7x37x02u19bsec3r5>.

<sup>148</sup> IS/ND, pdf 36.

be exposed to increased ambient ozone concentrations. Figure 7. The American Lung Association, in its 2020 State of the Air report, summarized recent research on health impacts to children that would be present in these facilities due to ozone exposure. The impacts include:<sup>149</sup>

- premature death;
- developmental harm;
- reproductive harm;
- asthma attack;
- wheezing and coughing;
- shortness of breath;
- cardiovascular harm;
- increased risk of susceptibility to respiratory infections;
- increased susceptibility to pulmonary inflammation;
- lung tissue redness and swelling;
- increased admission to hospitals for asthma, with younger children and those from low-income families more likely than others to need hospital admission;
- some children with certain genes are more likely to develop asthma as adolescents; and
- lower birth weight and decreased lung function in newborns.

The IS/ND does not contain any analysis of the health impacts of ozone. As demonstrated in Comment 3, VOC impacts are significant. VOC is an ozone precursor. Thus, the IS/ND fails as an informational document under CEQA. Because the corrected VOC emissions exceed the SCAQMD's significance threshold for operational emissions by factors of 6 to 121, it is reasonable to assume that ambient concentrations of ozone would cause or contribute to violations of federal and/or state ambient air quality standards, resulting in a significant health impact. Therefore, absent effective mitigation measures to reduce these impacts, an EIR must be prepared.

SFERCA-43  
cont.

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<sup>149</sup> ALA, State of the Air, 2020, pdf 41-42.

## **Response to Comments – SFERCA**

Safe Fuel and Energy Resources California  
Adams Broadwell Joseph & Cardozo  
Paul Encinas, Legal Assistant  
October 9, 29, and November 9, 2020

### **Response to Comment SFERCA-1**

The comment requests mailed notice of the availability of any environmental review document related to the proposed Project as well as all hearings and/or actions related to the proposed Project and provides a contact mailing address and email address. The POLB has included the commenter on the mailing list for any future mailings or notices related to the proposed project.

### **Response to Comment SFERCA-2**

The comment requests immediate access to all public records related to the proposed Project, including but not limited to, any and all materials, correspondence, resolutions, memos, notes, analysis, electronic mail messages, files, maps, charts, and/or any other documents related to the Project.

It is common practice for project-related documents and referenced materials to be included in the administrative record, which is kept on file and available for public review upon request in accordance with the California Public Records Act (Government Code Section 6250, et seq). On October 9, 2020, the Port received Public Records Request #C008842-100920 from Mr. Paul Encinas, Adams Broadwell Joseph & Cardozo via the City of Long Beach's (City) public records request portal, GovQA portal. On October 22, 2020, the POLB provided all public records related to the proposed Project in .PDF and native file format via the City's GovQA portal, as requested.

### **Response to Comment SFERCA-3**

The comment summarizes the proposed Project. No further response is required.

### **Response to Comment SFERCA-4**

The comment reiterates the request for immediate access to all public records related to the proposed Project, and any and all documents referenced, relied upon, and incorporated by reference in the Draft IS/ND. Please refer to Response to Comment SFERCA-2.

### **Response to Comment SFERCA-5**

The comment reiterates the request for immediate access to all documents referenced, relied upon, and incorporated by reference in the Draft IS/ND. Please refer to Response to Comment SFERCA-2.

### **Response to Comment SFERCA-6**

The comment requests the remaining documents referenced in the Draft IS/ND pursuant to Public Resources Code section 21092(b)(1) and CEQA Guidelines section 15072(g)(4). On October 29, 2020, the Port received Public Records Request #C009079-102920 from Mr. Paul Encinas, Adams Broadwell Joseph & Cardozo via the City of Long Beach's (City) public records request portal, GovQA portal. On November 3, 2020, the POLB provided the Certificates for Emissions Reduction Credits (ERC Certificates #AQ015139



and #AQ015145) and the SCAQMD modeling files, in .PDF and native file format via the City's GovQA portal, as requested.

### **Response to Comment SFERCA-7**

This is Exhibit A to SFERCA's comment letter dated October 29, 2020, which is a duplicate of SFERCA's letter dated October 9, 2020. Responses to comments to that letter are provided in Response to Comment SFERCA-2.

### **Response to Comments SFERCA-8**

This is Exhibit B to SFERCA's Comment Letter dated October 29, 2020, which is email correspondence dated October 14, 2020 regarding Public Records Request #C008842-100920 received by the Port on October 9, 2020. Please refer to Responses to Comments SFERCA-2 and SFERCA-6.

### **Response to Comment SFERCA-9**

This is Exhibit B to SFERCA's Comment Letter dated October 29, 2020, which is email correspondence dated October 15, 2020 regarding Public Records Request #C008842-100920 received by the Port on October 9, 2020. The comment requests production of documents and prioritization of the following documents: (1) South Coast Air Quality Management Permit to Construct, Application 614274. Approved 1/2/20 (referenced on IS/ND, pp. 4-8, 7-4) (the Permit Application, Engineering Analysis, and Permit itself); (2) South Coast Air Quality Management Permit to Construct, Application 614275. Approved 1/2/20 (referenced on IS/ND, pp. 4-8, 7-4) (Permit Application, Engineering Analysis, and Permit itself); (3) South Coast Air Quality Management District Applications Evaluations and Calculations, Permit to Construct Evaluation, Application 614274. Approved 8/5/19 (referenced on IS/ND, pp. 4-9, 4-10, 7-4.); (4) All Inputs and Outputs used to Calculate VOC Emissions using U.S. EPA TANKS program (referenced on IS/ND, p. 4-9 & Table 4.3-2.); (5) All inputs for CalEEMod model, including Engine Tiers for all construction equipment; (6) Supporting data for emissions in Tables 4.3-2 and 4.3-4 of the IS/ND; and (7) a copy of the unlocked excel spreadsheets for all of the requested modeling files. Please refer to Responses to Comments SFERCA-2 and SFERCA-6.

### **Response to Comment SFERCA-10**

This is Exhibit B to SFERCA's Comment Letter dated October 29, 2020, which is an email from the Long Beach Public Records Center in reference to Public Records Request reference # C008842-100920 dated October 19, 2020. The email provides notice to Mr. Paul Encinas that the time within which to identify responsive documents was being extended by fourteen (14) calendar days. No further response is required.

### **Response to Comment SFERCA-11**

This is Exhibit B to SFERCA's Comment Letter dated October 29, 2020, which is email correspondence dated October 19, 2020 regarding Public Records Request #C008842-100920 received by the Port on October 9, 2020. Please refer to Responses to Comments SFERCA-2 and SFERCA-6.

### **Response to Comment SFERCA-12**

This is Exhibit B to SFERCA's Comment Letter dated October 29, 2020, which is email correspondence dated October 20, 2020 regarding Public Records Request #C008842-100920 received by the Port on

October 9, 2020. The comment requests immediate access to documents referenced in the Negative Declaration. Please refer to Responses to Comments SFERCA-2 and SFERCA-6.

### **Response to Comment SFERCA-13**

This is Exhibit B to SFERCA's Comment Letter dated October 29, 2020, which is email confirmation from the Long Beach Public Records Center confirming submission of Public Records Request Reference #C008842-100920 received by the Port on October 9, 2020. No further response is required.

### **Response to Comment SFERCA-14**

This is Exhibit B to SFERCA's Comment Letter dated October 29, 2020, which is email confirmation from the City's GovQA portal in reference to Public Records Request Reference #C0088958-102020. The email dated October 20, 2020, provides a "Notice" that delays in response times may be experienced due to handling of high priority issues related to COVID-19, Government Code section 6253(c). No further response is required.

### **Response to Comment SFERCA-15**

This is Exhibit B to SFERCA's Comment Letter dated October 29, 2020, an email response from Jose Cruz, POLB PRA Coordinator, via the City of Long Beach's Public Records Requests system, GovQA, confirming that Public Records Request # C008958-102020, originally received on October 12, 2020, has closed. No further response is required.

### **Response to Comment SFERCA-16**

This is Exhibit B to SFERCA's Comment Letter dated October 29, 2020, which is an email confirmation from the City of Long Beach's Public Records Request system, dated October 21, 2020, that Public Records Request # C008958-102020 has been produced. No further response is required.

### **Response to Comment SFERCA-17**

The comment summarizes SAFERCA's understanding of the proposed Project. No further response is necessary.

### **Response to Comment SFERCA-18**

The comment provides introductory text to the remainder of the comment letter. No further response is required.

### **Response to Comment SFERCA-19**

The comment provides background information on SAFERCA. No further response is necessary.

### **Response to Comment SFERCA-20**

The comment provides background on CEQA and the content and analysis required within an EIR and states that a Negative Declaration (for the proposed Project) is improper, and an EIR is required because the proposed Project may have a significant environmental impact. This is introductory text and supporting assertions are provided in the remainder of the comment letter. Please refer to Responses to Comments SFERCA-21 through SFERCA-43.

### **Response to Comment SFERCA-21**

The comment states that the Draft IS/ND provides an inadequate project description that fails to include all potential sources of emissions and therefore does not provide a complete and accurate description of the Project. The comment asserts that because the proposed Project would increase crude oil storage, it would increase crude oil throughput at refineries and result in an increase in refinery emissions.

Please refer to Responses to Comments EJ-13, EJ-14, EJ-19, EJ-20, EJ-21, and EJ-31. The IS/ND included all proposed Project construction and operation emissions sources, including non-stationary operation emissions sources, and minor increases to existing permitted emissions sources, which were not required to be evaluated in World Oil's application for a SCAQMD permit to construct/permit to operate the new tanks.

### **Response to Comment SFERCA-22**

The comment states that the Draft IS/ND is inadequate because it does not disclose what third-party vendors will do with the existing tanks once they are leased. IS/ND Project Description Sections 2.9 and 2.11 have been revised to clarify that when the existing tanks are leased out to third-party vendors, they are expected to store the same or similar fuel oils as have been historically stored, including different grades of marine fuels such as marine diesel oil, bunker fuel oil, and low sulfur fuel oil.

### **Response to Comment SFERCA-23**

The comment states that the Applicant did not provide enough information to the consultant to "quantitatively estimate emission increases from operation of the new tanks." Since the release of the Draft IS/ND in October 2020, due to the lapse of the previous application for a permit to construct, in February 2021, World Oil submitted to the SCAQMD a new application for a permit to construct/permit to operate for the two new tanks. In addition to the information provided in the previously submitted application, the new permit application includes an additional estimate by the Applicant for the number of new piping components and fugitive VOC emissions and estimates for the very small amount of H<sub>2</sub>S emissions from the operation of the new tanks. SCAQMD has reviewed this permit to construct/permit to operate application and completed its own VOC emissions estimate for the new tanks (SCAQMD, 2021b, 2021c). Final IS/ND Section 4.3 (Air Quality), Table 4.3-2, has been updated to reflect the updated VOC operation emission estimate prepared by SCAQMD as part of its review of World Oil's new permit to construct/permit to operate application for the new tanks.

As part of the new permit application, and through other information provided to POLB, World Oil provided the necessary information to estimate emissions from the following normal operation emissions sources:

- Tank emissions, now including H<sub>2</sub>S emissions.
- Tank piping component fugitive emissions
- Vehicle trip emissions increase
- Thermal oxidizer emissions increase

This list represents all of the direct and secondary emissions sources that would be affected by the operation of the new tanks. The increase in petroleum storage capacity would not directly affect the emissions from other facilities or fuel users.



Please see Responses to Comments EJ-4, EJ-11, EJ-13, EJ-14, EJ-19, EJ-20, EJ-21, and EJ-31 in relation to comments regarding air permit application, H<sub>2</sub>S emissions, and life-cycle emissions.

### **Response to Comment SFERCA-24**

This comment asserts that there is fair argument that construction emissions could be significant and further notes that the emissions estimate completed using CalEEMod assumed the use of Tier 4 engines, without identifying it properly as mitigation and so only provided a mitigated emissions estimate.

Construction emissions for the proposed Project were calculated assuming CalEEMod fleet average off-road equipment and fleet average on-road vehicles. The “fleet average” is the unmitigated case assumed by CalEEMod. No off-road equipment engine mitigation was assumed in the CalEEMod emissions estimate. Fleet average for the assumed construction year (2021) is approximately equivalent on average to assuming Tier 3 equipment. Appendix A (Air Quality Emissions) shows that the exhaust emissions are the same in the unmitigated and mitigation construction emissions tables (see IS/ND Appendix A, pg. A-3). The only emission reduction controls included in the construction emissions estimate, as summarized in IS/ND Table 4.3-1, were fugitive dust controls that would be required to comply with SCAQMD Rule 403 – Fugitive Dust, where compliance with existing law is considered part of the Project, and therefore is not identified as a mitigation measure. Additional clarification regarding the construction off-road equipment and on-road vehicle assumptions has been added to Final IS/ND Section 4.3 (Air Quality), above Table 4.3-1. This uncontrolled construction emission estimate identified that all pollutant emissions rates are below SCAQMD daily regional and localized significance thresholds. Additionally, the conservatively calculated construction air toxics emissions health risks, combined with the SCAQMD calculated operation health risks were found to be below all SCAQMD health risk significance thresholds. Therefore, no construction emissions mitigation is required under CEQA for the proposed Project, nor does the analysis take credit for the use of Tier 4 off-road construction equipment.

While no mitigation is required under CEQA for the proposed Project, the POLB is expected to require the Project to use Tier 4 equipment as a Special Condition of the Project’s Harbor Development Permit (HDP) in accordance with the Port’s Construction Air Quality Best Management Practice (BMP) for off-road equipment engines. Section 4.3 (Air Quality) and Section 5 (Application Summary Report) have been revised to add a new Special Condition to require the use of Tier 4 off-road engines in construction equipment. Use of Tier 4 off-road construction equipment for the proposed Project would substantially reduce the on-site construction NO<sub>x</sub> and DPM emissions from the estimated levels already found to create less than significant air quality impacts.

### **Response to Comment SFERCA-25**

This comment states that there is fair argument that operation VOC emissions could be significant and further notes that the SCAQMD permitting emissions estimate using the U.S. EPA TANKS model provides underestimated emissions for the two new tanks. Please see Response to Comment EJ-9.

### **Response to Comment SFERCA-26**

This comment states that the IS/ND omits numerous sources of VOC emissions associated with operations and fails to consider indirect emissions. A portion of this comment reiterates issues regarding use of the U.S. EPA TANKS emissions model. Please see Response to Comment EJ-9 which addresses SCAQMD revision from the use of the TANKS model to the use of the latest U.S. EPA AP-42 Section 7.1 Organic

Liquid Storage Tank calculation methods to estimate emissions for the new tanks' air quality permit to construct/permit to operate application.

The comment also notes that tank dewatering emissions have not been considered. Please see Response to Comment EJ-14.

This comment also notes tank inspection and cleaning emissions have not been disclosed. The comment further notes that the VOC emissions during degassing and tank cleaning are essentially uncontrolled. This statement is not completely factual as emission controls are required during these tank inspection and cleaning events; these events occur with a very low frequency (approximately every 10 years). Specifically, tank inspection and cleaning events must comply with SCAQMD Rule 1149 – Storage Tank and Pipeline Cleaning and Degassing. If a tank is subject to Rule 1149 at the time it is being emptied and prepared for cleaning, the vapor space of the tank will be vented (degassed) to a portable rental thermal oxidizer until the vapor space is monitored to be below 5,000 ppm for at least an hour. Vacuum trucks hired to assist in removal of material from a tank are required to comply with Rule 1149. World Oil verifies that vacuum trucks are compliant with AQMD rules prior to hiring. Typically, vacuum trucks are equipped with an integral carbon canister for organic vapor control or bring a towable trailer with carbon canister for organic vapor control. Vacuum truck operators are required to ensure that their equipment is leak free by monitoring their trucks and equipment each time they are used. Since these maintenance events are infrequent and controlled, and that regular emissions do not occur from the tanks concurrent with these maintenance events, the emissions from these events are not expected to increase the tanks VOC emissions above normal operations.

The emissions estimate for the two new petroleum storage tanks has been revised as part of the new Permit to Construct/Permit to Operate Application to the SCAQMD (see Response to Comment EJ-7). SCAQMD is the responsible agency for the tank emissions estimate; however, the POLB has reviewed the new World Oil permit application for the two tanks, provide comments on the permit application, and continues to consult with SCAQMD during their permitting process. The IS/ND has been revised to address any changes and additions to the SCAQMD emissions estimate for the new permit application.

### **Response to Comment SFERCA-27**

The comment states that the IS/ND improperly relies on emission offsets to reduce VOC emissions and that VOC offsets are not valid to be used for CEQA mitigation.

The IS/ND does not rely on emissions offsets to reduce or mitigate VOC emissions under CEQA. The proposed Project's operation VOC emissions are presented in the IS/ND, without taking into consideration use of the emissions reduction credits required for permitting (see IS/ND Table 4.3-2). The proposed Project's operation VOC emissions are well below the SCAQMD emissions significance thresholds and therefore do not require mitigation. VOC emissions offsets are specifically discussed as a requirement of SCAQMD for permitting the new tanks (SCAQMD, 2021c). The IS/ND indicates that VOC emissions reduction will be achieved using the emissions reduction credits in a footnote to the operation emissions table; however, use of the emissions offsets is in no way relied on to make CEQA emissions impact determinations for the proposed Project.

### **Response to Comment SFERCA-28**

This comment notes that evidence supports a fair argument that the Project will produce cumulatively considerable air quality impacts. Please see Responses to Comments EJ-13 and EJ-15.

## Response to Comment SFERCA-29

This comment contends that there is a fair argument that the Project would result in potentially significant health risk impacts, that the IS/ND did not provide a discussion, supported by evidence, of the nature and magnitude of impacts of air pollution on public health. The comment also argues that the IS/ND was legally deficient as the risk assessment modeling should have been supplied with the IS/ND. The comment provides the following additional specific arguments:

- The Project's VOC emissions and benzene emissions are underestimated, so the actual health risk would be significant.
- The significant health impacts are undisclosed and were not mitigated.
- The IS/ND did not evaluate impacts to all sensitive receptors in the project vicinity.
- The IS/ND did not evaluate health impacts from the Project's VOC emissions downwind ozone formation.

The air quality impacts assessment was prepared in accordance with published SCAQMD methods and guidelines that include assessment of regional impacts, localized impacts for criteria pollutants, and health risk assessment (cancer, chronic, acute health impacts) for toxic air contaminants. Discussion, supported by evidence, was provided for these impact analyses.

Please see Response to Comment EJ-9 that addresses similar comments related to the VOC and benzene emissions estimates. The VOC and benzene emissions associated with operation of the proposed new tanks were estimated by SCAQMD, as the responsible agency for issuing the permit to construct/permit to operate, using U.S. EPA-approved emissions estimation methods (SCAQMD, 2021b, 2021c).

The IS/ND disclosed the nearest sensitive receptor locations, identified their locations and distances from the project site, and provided the worst-case risks identified for the maximum exposed sensitive receptor location. Given that the worst-case health risk impacts were found to be less than significant no additional analysis was necessary. There is no requirement to list all sensitive receptors surrounding a site that would be subject to less than significant project impacts. See also Response to Comment EJ-10.

Downwind ozone formation resulting from VOC emissions as a precursor pollutant in the regional context would be indirect, in contrast with the direct effects of Project's TAC emissions health risk impacts addressed above. SCAQMD control strategies in the AQMP are designed to address downwind ozone formation and prevent adverse ozone health risks in the region. The IS/ND shows that the proposed Project would not conflict with the AQMP, and VOC emissions of less than 11 lbs/day (as shown in IS/ND Table 4.3-2) would be well below the SCAQMD daily emissions thresholds that are set at levels to identify potentially significant impacts to ozone from VOC as a precursor. For context, these emissions would be a 0.000026 fraction of the daily VOC emissions estimated for the Los Angeles portion of the South Coast Air Basin in 2020 (CARB, 2016).<sup>9</sup> No additional analysis is necessary.

## Response to Comment SFERCA-30

The comment asserts that the proposed Project is inconsistent with the City of Long Beach General Plan Land Use Element. The proposed Project does not result in significant air quality impacts or cumulative impacts and thus, does not require mitigation. The proposed Project would result in negligible emissions during construction and operation that are well below SCAQMD health risk significance thresholds.

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<sup>9</sup>Assumes VOC is equivalent to ROG for this type of emissions source.



Therefore, the proposed Project is not inconsistent with the City's General Plan. Please also refer to Response to Comment EJ-15.

The comment also asserts that the proposed Project is inconsistent with the Port Master Plan (PMP). Section IV (Land Use Designations, Goals, Objectives, and Long-Range Plans) of the Port Master Plan, Update 1990 states the following (POLB, 1990):

The long-range planning goals and objectives for the Port are essential for developing policies involving future Port development and expansion. These planning goals are intended to be general to maintain flexibility and respond to Port tenant needs. In addition, since development policies are driven by national and international economic trends, general goals allow the Port to respond to immediate and short-term requirements dictated by these trends.

The POLB's planning goals include the following:

- Goal 1. Consolidating similar and compatible land and water areas
- Goal 2. Encouraging maximum use of facilities
- Goal 3. Improving terminal circulation involving roadways and rail
- Goal 4. Providing for the safe cargo handling and movement of vessels within the port
- Goal 5. Developing land for primary port facilities and port-related uses
- Goal 6. Protecting, maintaining, and enhancing the overall quality of the coastal environment

The proposed Project would occur in an existing terminal and continue to support similar operations. The proposed Project would support the modernization and efficiency of the existing World Oil Terminal by increasing liquid bulk capacity and maximizing the use of the existing facility. Based on the Land Use Designations, Goals, Objectives, and Long-Range Plans chapter of the PMP, development that accommodates the consolidation of land uses and encourages the maximum use of facilities is consistent with the POLB's goals.

The comment also states that the proposed Project is inconsistent with the PMP's permitting policies because the Project has not yet met the requirements of CEQA and thus, the Board of Harbor Commissioners may not approve the application for the Harbor Development Permit (HDP).

As stated in IS/ND Section 1.1 (Proposed Project Overview), Ribost Terminal LLC, DBA World Oil Terminals (World Oil) filed an Application for an HDP with the POLB on August 14, 2019, to construct and operate the proposed Project. As a public agency, with jurisdiction and discretionary authority for the issuance of HDPs in the Long Beach Harbor District, pursuant to the California Coastal Act and Long Beach City Charter 1215, the POLB, acting by and through the Board of Harbor Commissioners, is required to comply with CEQA by analyzing the potential environmental impacts of the proposed Project. As such, this IS/ND and Application Summary Report (Section 5.0 of the IS/ND) have been prepared in accordance with CEQA and the Port's Guidelines for the Implementation of the Certified PMP. A Notice of Intent to adopt the ND and public hearing will be issued for the Long Beach Board of Harbor Commissioners to consider adoption/approval of the IS/ND and Application Summary Report and issuance of an HDP for the proposed Project. Please also see IS/ND Section 1.2.1 (CEQA Process).

Therefore, the proposed Project is consistent with the PMP's permitting policies.

### **Response to Comment SFERCA-31**

The comment states that approval of the proposed Project would violate the California Coastal Act because it would result in significant air quality and public health impacts and fails to minimize these impacts. Please refer to Response to Comment EJ-15 regarding the proposed Project's cumulative air quality impacts. The proposed Project would not result in any significant or cumulatively considerable air quality or public health impacts and therefore, does not require mitigation. Approval of the proposed Project would not violate the California Coastal Act. Please refer to Responses to Comment SFERCA-30 regarding the proposed Project's conformance with the certified PMP and Comment Set CCC. Please also refer to IS/ND Section 5.1 (California Coastal Act Consistency Analysis) for a discussion of how the proposed Project is consistent with the California Coastal Act.

### **Response to Comment SFERCA-32**

The comment concludes the previous statements made, and states that the Draft IS/ND must be thoroughly revised and recirculated as an EIR. Please see Responses to Comment EJ-15 and SFERCA-21 through SFERCA-31.

### **Response to Comment SFERCA-33**

The comment summarizes the proposed Project. No further response is required.

### **Response to Comment SFERCA-34**

The comment provides introductory text stating that the Draft IS/ND is incomplete, has failed to identify and mitigate significant environmental impacts, and that an EIR must be prepared. Please see Responses to Comment SFERCA-35 through SFERCA-43.

### **Response to Comment SFERCA-35**

The comment references the Technical Appendix's author, Phyllis Fox's resume and experience. No further response required.

### **Response to Comment SFERCA-36**

This comment states that the Project's construction emissions are significant and that emissions calculations are unsupported. Please see Response to Comment SFERCA-2. All requested files, including emissions estimate files, have been provided in a readily accessible format, or in the requested format such as the CalEEMod input file.

The comment asserts that construction schedule, equipment use, equipment horsepower, etc. are not provided; however, the CalEEMod output file presented in Appendix A provides all this information (See IS/ND Appendix A, pg. A-4). The comment further notes that the PRA requested all the CalEEMod files, specifically inputs including information on engine tiers for construction equipment and instead an Excel spreadsheet that was not the input file was provided that summarized input values. CalEEMod input files are saved in the form of Excel files (.xls), and the Excel file provides all assumed inputs values. This CalEEMod input Excel file was provided along with the CalEEMod output file. All unedited original format emissions and health risk assessment files, which are requested by SCAQMD to be provided with CEQA documents, were provided to address the PRA request. Please also see Response to Comment SFERCA-24.

The comment also presents a CalEEMod input file off-road equipment table from an air quality screening analysis performed prior to the start of the IS/ND, which helped the POLB assess whether the proposed Project would result in significant air quality impacts. This air quality screening analysis used preliminary project information and was not used in the Draft IS/ND. These preliminary air quality screening emissions files were provided to fully address the PRA request.

The Draft IS/ND emissions input and output files were also provided as part of the PRA request. These files show that Tier 4 equipment was not assumed in the construction emissions analysis. See also Response to Comment SFERCA-24.

#### **Response to Comment SFERCA-37**

This comment is from the attached Technical Appendix to the Comment Letter and provides additional details to support Comment SFERCA-24. Please see Response to Comment SFERCA-24.

#### **Response to Comment SFERCA-38**

This comment is from the attached Technical Appendix to the Comment Letter and provides additional details to support Comment SFERCA-25. Please see Response to Comment SFERCA-25.

#### **Response to Comment SFERCA-39**

This comment is from the attached Technical Appendix to the Comment Letter and provides additional details to support Comment SFERCA-26. Please see Response to Comment SFERCA-26.

#### **Response to Comment SFERCA-40**

This comment is from the attached Technical Appendix to the Comment Letter and provides additional details to support Comment SFERCA-27. Please see Response to Comment SFERCA-27.

#### **Response to Comment SFERCA-41**

This comment is from the attached Technical Appendix to the Comment Letter and provides additional details to support Comment SFERCA-29. Please see Response to Comment SFERCA-29.

#### **Response to Comment SFERCA-42**

This comment is from the attached Technical Appendix to the Comment Letter and provides additional details to support Comments SFERCA-28 and SFERCA-29. Please see Response to Comments SFERCA-28 and SFERCA-29.

#### **Response to Comment SFERCA-43**

This comment states that the IS/ND failed to demonstrate that the increase in VOC emissions would not cause a violation or make significantly worse an existing violation of [ozone], resulting in significant health impacts. Please see Response to Comment EJ-10.



## DF – Dianne Flowers

### Email: World Oil Tank Installation Project Team

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**From:** twoflowers@verizon.net  
<twoflowers@verizon.net> **Sent:** Friday, November 20, 2020 4:27 PM  
**To:** Port of Long Beach Environmental Planning <CEQA@polb.com>  
**Subject:** Project Title: World Oil Tank Installation Project SCH # 2020100119

November 20, 2020

To: Long Beach Board of Harbor  
Commissioners c/o  
Matthew Arms  
Director of Environmental  
Planning Port of Long Beach  
415 W. Ocean  
Blvd.  
Long Beach, CA  
90802

From: Dianne Flowers (562) 810-6713

Re:

Project Title: World Oil Tank  
Installation Project SCH # 2020100119

Project Location: 1405 Pier C Street, Berth C73, Long Beach, California 90813; Northeast Long Beach Harbor Planning District (District 2); Los Angeles County

Dear Harbor Commissioners,

Port of Long Beach must deny World Oil's request for tank installation at Berth C73. Considering a 5% increase in fuel capacity at a fossil fuel facility in the Port of Long Beach is inexcusable. Instead of expanding the fossil fuel footprint in our harbor, POLB must be implementing plans for incremental *reductions* in existing fossil fuel facilities in order to meet zero emissions target dates.

Also, a negative declaration is not enough; a full environmental review must be done. The ports and shipping play a significant role in the climate disruption that has been turning our lives upside down with the recent pandemic and the wildfires. Ports have a responsibility to move immediately to heal the climate. All of us in the harbor area are directly impacted by these crises, in addition to long-standing health impacts caused by toxic port air.

Our harbor communities – and communities in the Inland Empire and along the 710 Corridor – have lived for decades under a deadly pollution load from the ports and the ports-generated goods movement. Recently this port pollution has put our health and lives at greater risk because of covid; those living with high rates of port pollution suffer higher rates of covid illness, complications, and death.

In addition to the disease itself, the covid pandemic has caused other serious environmental stressors in our community. Cruise ships and oil tankers have been idling in the bay for months, spewing especially dirty fuel into our air. A rebound in trade since July has caused a huge increase

DF-1

DF-2

DF-3

in the number of cargo ships spewing their dirty fuel as they pass through the harbor and sit at the docks. And, because the ports are full, many of these cargo ships wait their turn in the bay with the tankers, idling and spewing even more dirty fuel on a daily basis into our communities. This has been going on for months. There is a dark cloud over the bay and a thick, dirty haze over the ports. Because of all these emissions, the particulate load has greatly increased for those already suffering with asthma, heart disease, diabetes, and many other chronic diseases caused by port pollution; and the threat of cancer has risen in areas already at the highest risk. More illness, pain, and death.

DF-3  
cont.

This situation was dire enough, but then came the wildfires. The entire West – 12 states – were on fire. Our beautiful California was being destroyed. The AQMD interactive Smoke & Fire map was frightening in October; ***the smoke plume covered the entire U.S. except for parts of the Northeast, plus all of Mexico, and parts of Canada.***

The local air was severely impacted by these wildfires which caused particulate levels to soar. We suffered week after week of hazardous air over densely populated areas. Even when the fires died out down here in Southern California we had high particulate levels caused by the Northern California fires.

Our world is on fire. Life as we have known it is over. The future for us and our children and grandchildren is at risk. This nightmare is the climate destruction scientists have long been warning us about. According to a CARB workshop I attended this month, this year's fire season has created double the particulates as the 2018 fire season; hospital emergency room visits for asthma were up 60%. Children were especially impacted by the toxic smoke.

So, we have the long-term deadly pollution from port and freight activity, plus the additional pollution caused by covid, plus the extremely high levels of particulates from wildfires. This is an unbearable burden for people living close to the ports, the freight lines, and the distribution centers. We are living in a nightmare.

DF-4

The people in the ports-impacted communities have for decades raised demands and pointed the way toward the sustainability that would save our communities *and* the planet. POLB *must* listen to the scientists and to the Environmental Justice organizations that are fighting for life itself.

The whole world knows that climate disruption is caused by fossil fuels. And yet the Port of Long Beach is considering an *expansion* of a fossil fuel facility. This is criminal and immoral.

The city of Long Beach and its Port have the responsibility to eliminate the causes of climate disruption and to assist in mitigation. To allow any expansion of fossil fuel facilities in our ports would do the opposite; it would put our planet and our communities, especially the children, at greater risk by accommodating a deadly entity.

Our house is on fire. Our people are dying. Business as usual must stop now. No fossil fuel expansion in our ports. My demands:

DF-5

1. POLB must deny World Oil's expansion at Berth C73.
2. POLB must complete a full environmental review; a negative declaration is improper.

Sincerely,  
Dianne  
Flowers  
Long Beach resident – 1985 through 2020

## Response to Comments – DF

Dianne Flowers  
November 20, 2020

### Response to Comment DF-1

Thank you for your review of the Draft IS/ND. The comment states that the POLB must deny the proposed Project because it would increase fuel capacity at a fossil fuel facility, whereas the POLB should be incrementally reducing existing fossil fuel facilities instead to meet zero emission target dates. Your opposition to and comments on the proposed Project are acknowledged for the record and are before the decision-makers for their consideration prior to taking any action on the proposed Project.

World Oil Terminals operates their facility on privately owned property at Pier C within the Long Beach Harbor District. The POLB is obligated to review the proposed Project under CEQA for the issuance of a Harbor Development Permit, which is a consolidated coastal development permit pursuant to the California Coastal Act of 1976 and a building permit pursuant to Long Beach City Charter Section 1215.

The proposed Project would not involve or affect other fossil fuel facilities such as oil production sites or refinery activities because the facility's purpose is solely to store and transport petroleum products. This limited project purpose does not involve large emissions sources. Petroleum production and refining processes are separate activities not influenced by the proposed Project's storage capacity. The proposed Project would nominally increase fuel storage capacity at the facility to allow for overall terminal operational efficiencies. As discussed in Section 2.11 (Operations and Maintenance) of the IS/ND, the proposed Project would not allow for greater actual crude throughput beyond the permitted limits through the pipelines, tanks, or loading racks.

The facility and its use are allowable within Long Beach Harbor Planning District 2 – Northeast Harbor under the POLB's certified 1990 PMP. Please see Response to Comment SFERCA-30 regarding the Project's consistency with the PMP. As described in IS/ND Section 2.6 (General Plan Designation), the City of Long Beach General Plan Land Use Element designates the project area as a Regional-Serving Facility, which allows for "businesses and operations that not only serve the City of Long Beach, but also the region and parts of the nation." This zoning type is consistent with Light, Medium, General, and Port-related Industrial Zoning Districts.

The commenter asserts that the Port "should be looking to implement plans for incremental reductions in existing fossil fuel facilities in order to meet zero emission target dates." The IS/ND Section 4.8 (Greenhouse Gas Emissions) identifies the Port's Clean Air Action Plan (CAAP) and regulations under the Low Carbon Fuel Standard that drive progress towards zero emissions efforts. Compliance with the State Low Carbon Fuel Standard regulations will drive fuel suppliers to transition away from fossil fuel production and into renewable fuels (such as biofuels) over time (ADI Analytics, 2021). The proposed Project could aid World Oil's future ability to transition to the storage of renewable fuels (for example, by replacing petroleum storage with waste vegetable oil storage), if required in the future to comply with State regulations (ADI Analytics, 2021). Any future modifications at the facility needed to implement storage of renewable fuels would be subject to CEQA and review, as applicable if appropriate.

See also Responses to Comments CP-1 and EJ-19.



### **Response to Comment DF-2**

The comment states that an ND is insufficient, and a full environmental review must be completed. The POLB, as the lead agency, followed the environmental review process required by CEQA, beginning with an IS (State CEQA Guidelines Section 15063). Information from an IS provides the basis for a lead agency under CEQA to determine whether an environmental impact report (EIR) is necessary or if a project can be modified to mitigate adverse environmental effects before an (EIR) is prepared. The IS/ND is adequate and complete because it sufficiently analyzes all potential environmental impacts, concluding that the proposed Project would have less-than-significant impacts to the environment, including air quality, public health, and climate change (see IS/ND Section 4.2 [Air Quality] and Section 4.8 [Greenhouse Gas Emissions]). As such, mitigation measures are not required for the proposed Project. Please also see Responses to Comments EJ-13, EJ-14, EJ-19, EJ-20, EJ-21, and EJ-31.

### **Response to Comment DF-3**

The comment does not provide any specific questions or comments on the Draft IS/ND or the proposed Project, but rather expresses concern that communities near the Port of Long Beach have been adversely impacted by the COVID-19 pandemic and the pollution from the ports and ports-generated goods movement. The proposed Project would not involve the use of cruise ships, cargo ships, or oil tankers during construction or operation. Because this comment is general and does not relate to the content or adequacy of the Draft IS/ND, no formal response is required under CEQA.

### **Response to Comment DF-4**

This comment does not provide any specific questions or comments on the Draft IS/ND or the proposed Project. The commenter expresses concern about air quality, public health, and climate change related to wildfires and port and freight activity. As discussed in the IS/ND, the proposed Project would not result in any significant impacts to the environment. Please also refer to Responses to Comments DF-1, DF-2, DF-3, and SFERCA-30.

### **Response to Comment DF-5**

The comment requests that the POLB deny the proposed Project and complete an EIR because an ND is improper. However, the commenter does not provide evidence from the IS/ND that supports why it is an insufficient document. Please also see Responses to Comment DF-1 through DF-4.

# **Appendix A**

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## Air Quality Emissions





World Oil Tanks Installation - Los Angeles-South Coast County, Summer

**World Oil Tanks Installation**  
**Los Angeles-South Coast County, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	2.00	User Defined Unit	0.30	0.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	11			<b>Operational Year</b>	2022
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics - Two Tank Construction Project

Land Use - Tank Area Assumed to be 180' by 80'

Construction Phase - Applicant dates for first two tasks, added a finishing task with tank painting and mechanical/piping interconnection.

Off-road Equipment - Added a man lift to the CalEEMod default for this phase.

Off-road Equipment - Applicant equipment list plus the addition of an excavator and grader for grading purposes. Used CalEEMod default for hp, except where applicant estimate was greater

Off-road Equipment - Added welders to the equipment list for tank erection, using CalEEMod default horsepower.

Off-road Equipment - Applicants equipment HP corrected using CalEEMod defaults, Bore/drill rig category used for pile driver.

Trips and VMT - From applicant, with addition for architectural coating workers and fuel/sanitary, etc. vendor trips. Used CalEEMod trip distance defaults, except for site preparation phase haul trips which was adjusted to applicant assumptions.

Grading - Conservative assumptions, including no backloading, on bulk material import/export.

Architectural Coating - Coating VOC emissions, due to variable paint types and coating thickness assumptions, are calculated separately.

Construction Off-road Equipment Mitigation - Assumes SCAQMD Rule 403 compliant watering during excavation/foundation phases where there is exposed areas and bulk material handling.

World Oil Tanks Installation - Los Angeles-South Coast County, Summer

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.1789	32.2635	23.2204	0.0605	0.5040	1.2945	1.7985	0.1341	1.2015	1.3356	0.0000	5,865.659 1	5,865.659 1	1.5574	0.0000	5,904.592 7
Maximum	3.1789	32.2635	23.2204	0.0605	0.5040	1.2945	1.7985	0.1341	1.2015	1.3356	0.0000	5,865.659 1	5,865.659 1	1.5574	0.0000	5,904.592 7

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.1789	32.2635	23.2204	0.0605	0.4993	1.2945	1.7938	0.1336	1.2015	1.3351	0.0000	5,865.659 1	5,865.659 1	1.5574	0.0000	5,904.592 7
Maximum	3.1789	32.2635	23.2204	0.0605	0.4993	1.2945	1.7938	0.1336	1.2015	1.3351	0.0000	5,865.659 1	5,865.659 1	1.5574	0.0000	5,904.592 7

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.93	0.00	0.26	0.42	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00

World Oil Tanks Installation - Los Angeles-South Coast County, Summer

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/4/2021	5/10/2021	5	91	Excavation
2	Tank Construction	Building Construction	4/26/2021	10/28/2021	5	134	Tank Erection
3	Architectural Coating	Architectural Coating	10/18/2021	11/18/2021	5	24	Tank painting and piping/mechanical

**Acres of Grading (Site Preparation Phase): 0.5; Acres of Grading (Grading Phase): 0; Acres of Paving: 0; Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Bore/Drill Rigs	1	7.00	350	0.50
Site Preparation	Cranes	2	7.00	231	0.29
Site Preparation	Excavators	1	7.00	158	0.38
Site Preparation	Graders	1	7.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Tank Construction	Aerial Lifts	1	3.00	63	0.31
Tank Construction	Cranes	2	3.00	231	0.29
Tank Construction	Welders	2	7.00	46	0.45
Architectural Coating	Aerial Lifts	1	6.00	63	0.31
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	8	16.00	2.00	278.00	14.70	6.90	40.00	LD_Mix	HDT_Mix	HHDT
Tank Construction	5	16.00	2.00	48.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	8.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT



World Oil Tanks Installation - Los Angeles-South Coast County, Summer

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Site Preparation - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.6700e-003	0.0000	7.6700e-003	9.1000e-004	0.0000	9.1000e-004			0.0000			0.0000
Off-Road	2.1271	23.8277	16.5528	0.0417		1.0039	1.0039		0.9236	0.9236		4,035.6111	4,035.6111	1.3052		4,068.2410
<b>Total</b>	<b>2.1271</b>	<b>23.8277</b>	<b>16.5528</b>	<b>0.0417</b>	<b>7.6700e-003</b>	<b>1.0039</b>	<b>1.0116</b>	<b>9.1000e-004</b>	<b>0.9236</b>	<b>0.9245</b>		<b>4,035.6111</b>	<b>4,035.6111</b>	<b>1.3052</b>		<b>4,068.2410</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0461	1.3542	0.3493	4.4400e-003	0.1068	4.9200e-003	0.1117	0.0293	4.7100e-003	0.0340		482.2464	482.2464	0.0303		483.0050
Vendor	6.0800e-003	0.1942	0.0508	5.1000e-004	0.0128	4.0000e-004	0.0132	3.6900e-003	3.8000e-004	4.0700e-003		54.9761	54.9761	3.2400e-003		55.0571
Worker	0.0686	0.0471	0.6444	1.8300e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		182.2032	182.2032	5.3700e-003		182.3374
<b>Total</b>	<b>0.1208</b>	<b>1.5956</b>	<b>1.0445</b>	<b>6.7800e-003</b>	<b>0.2984</b>	<b>6.7700e-003</b>	<b>0.3052</b>	<b>0.0804</b>	<b>6.4200e-003</b>	<b>0.0868</b>		<b>719.4257</b>	<b>719.4257</b>	<b>0.0390</b>		<b>720.3995</b>

World Oil Tanks Installation - Los Angeles-South Coast County, Summer

**3.2 Site Preparation - 2021**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					2.9900e-003	0.0000	2.9900e-003	3.5000e-004	0.0000	3.5000e-004			0.0000				0.0000
Off-Road	2.1271	23.8277	16.5528	0.0417		1.0039	1.0039		0.9236	0.9236	0.0000	4,035.6111	4,035.6111	1.3052			4,068.2410
<b>Total</b>	<b>2.1271</b>	<b>23.8277</b>	<b>16.5528</b>	<b>0.0417</b>	<b>2.9900e-003</b>	<b>1.0039</b>	<b>1.0069</b>	<b>3.5000e-004</b>	<b>0.9236</b>	<b>0.9239</b>	<b>0.0000</b>	<b>4,035.6111</b>	<b>4,035.6111</b>	<b>1.3052</b>			<b>4,068.2410</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0461	1.3542	0.3493	4.4400e-003	0.1068	4.9200e-003	0.1117	0.0293	4.7100e-003	0.0340		482.2464	482.2464	0.0303			483.0050
Vendor	6.0800e-003	0.1942	0.0508	5.1000e-004	0.0128	4.0000e-004	0.0132	3.6900e-003	3.8000e-004	4.0700e-003		54.9761	54.9761	3.2400e-003			55.0571
Worker	0.0686	0.0471	0.6444	1.8300e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		182.2032	182.2032	5.3700e-003			182.3374
<b>Total</b>	<b>0.1208</b>	<b>1.5956</b>	<b>1.0445</b>	<b>6.7800e-003</b>	<b>0.2984</b>	<b>6.7700e-003</b>	<b>0.3052</b>	<b>0.0804</b>	<b>6.4200e-003</b>	<b>0.0868</b>		<b>719.4257</b>	<b>719.4257</b>	<b>0.0390</b>			<b>720.3995</b>

World Oil Tanks Installation - Los Angeles-South Coast County, Summer

**3.3 Tank Construction - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8534	6.5028	4.9054	9.4300e-003		0.2817	0.2817		0.2695	0.2695		843.1225	843.1225	0.2025		848.1858
<b>Total</b>	<b>0.8534</b>	<b>6.5028</b>	<b>4.9054</b>	<b>9.4300e-003</b>		<b>0.2817</b>	<b>0.2817</b>		<b>0.2695</b>	<b>0.2695</b>		<b>843.1225</b>	<b>843.1225</b>	<b>0.2025</b>		<b>848.1858</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.9900e-003	0.0961	0.0225	2.8000e-004	6.2600e-003	2.9000e-004	6.5600e-003	1.7200e-003	2.8000e-004	2.0000e-003		30.3205	30.3205	2.0600e-003		30.3719
Vendor	6.0800e-003	0.1942	0.0508	5.1000e-004	0.0128	4.0000e-004	0.0132	3.6900e-003	3.8000e-004	4.0700e-003		54.9761	54.9761	3.2400e-003		55.0571
Worker	0.0686	0.0471	0.6444	1.8300e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		182.2032	182.2032	5.3700e-003		182.3374
<b>Total</b>	<b>0.0777</b>	<b>0.3374</b>	<b>0.7177</b>	<b>2.6200e-003</b>	<b>0.1979</b>	<b>2.1400e-003</b>	<b>0.2001</b>	<b>0.0528</b>	<b>1.9900e-003</b>	<b>0.0548</b>		<b>267.4998</b>	<b>267.4998</b>	<b>0.0107</b>		<b>267.7664</b>



World Oil Tanks Installation - Los Angeles-South Coast County, Summer

**3.3 Tank Construction - 2021**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8534	6.5028	4.9054	9.4300e-003		0.2817	0.2817		0.2695	0.2695	0.0000	843.1225	843.1225	0.2025		848.1858
<b>Total</b>	<b>0.8534</b>	<b>6.5028</b>	<b>4.9054</b>	<b>9.4300e-003</b>		<b>0.2817</b>	<b>0.2817</b>		<b>0.2695</b>	<b>0.2695</b>	<b>0.0000</b>	<b>843.1225</b>	<b>843.1225</b>	<b>0.2025</b>		<b>848.1858</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.9900e-003	0.0961	0.0225	2.8000e-004	6.2600e-003	2.9000e-004	6.5600e-003	1.7200e-003	2.8000e-004	2.0000e-003		30.3205	30.3205	2.0600e-003		30.3719
Vendor	6.0800e-003	0.1942	0.0508	5.1000e-004	0.0128	4.0000e-004	0.0132	3.6900e-003	3.8000e-004	4.0700e-003		54.9761	54.9761	3.2400e-003		55.0571
Worker	0.0686	0.0471	0.6444	1.8300e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		182.2032	182.2032	5.3700e-003		182.3374
<b>Total</b>	<b>0.0777</b>	<b>0.3374</b>	<b>0.7177</b>	<b>2.6200e-003</b>	<b>0.1979</b>	<b>2.1400e-003</b>	<b>0.2001</b>	<b>0.0528</b>	<b>1.9900e-003</b>	<b>0.0548</b>		<b>267.4998</b>	<b>267.4998</b>	<b>0.0107</b>		<b>267.7664</b>

World Oil Tanks Installation - Los Angeles-South Coast County, Summer

**3.4 Architectural Coating - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2470	1.9773	2.6381	4.2300e-003		0.1027	0.1027		0.1020	0.1020		403.4129	403.4129	0.0588		404.8820
<b>Total</b>	<b>0.2470</b>	<b>1.9773</b>	<b>2.6381</b>	<b>4.2300e-003</b>		<b>0.1027</b>	<b>0.1027</b>		<b>0.1020</b>	<b>0.1020</b>		<b>403.4129</b>	<b>403.4129</b>	<b>0.0588</b>		<b>404.8820</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.0800e-003	0.1942	0.0508	5.1000e-004	0.0128	4.0000e-004	0.0132	3.6900e-003	3.8000e-004	4.0700e-003		54.9761	54.9761	3.2400e-003		55.0571
Worker	0.0343	0.0236	0.3222	9.1000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		91.1016	91.1016	2.6800e-003		91.1687
<b>Total</b>	<b>0.0404</b>	<b>0.2178</b>	<b>0.3730</b>	<b>1.4200e-003</b>	<b>0.1022</b>	<b>1.1200e-003</b>	<b>0.1033</b>	<b>0.0274</b>	<b>1.0500e-003</b>	<b>0.0285</b>		<b>146.0777</b>	<b>146.0777</b>	<b>5.9200e-003</b>		<b>146.2258</b>

World Oil Tanks Installation - Los Angeles-South Coast County, Summer

**3.4 Architectural Coating - 2021**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2470	1.9773	2.6381	4.2300e-003		0.1027	0.1027		0.1020	0.1020	0.0000	403.4129	403.4129	0.0588		404.8820
<b>Total</b>	<b>0.2470</b>	<b>1.9773</b>	<b>2.6381</b>	<b>4.2300e-003</b>		<b>0.1027</b>	<b>0.1027</b>		<b>0.1020</b>	<b>0.1020</b>	<b>0.0000</b>	<b>403.4129</b>	<b>403.4129</b>	<b>0.0588</b>		<b>404.8820</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.0800e-003	0.1942	0.0508	5.1000e-004	0.0128	4.0000e-004	0.0132	3.6900e-003	3.8000e-004	4.0700e-003		54.9761	54.9761	3.2400e-003		55.0571
Worker	0.0343	0.0236	0.3222	9.1000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		91.1016	91.1016	2.6800e-003		91.1687
<b>Total</b>	<b>0.0404</b>	<b>0.2178</b>	<b>0.3730</b>	<b>1.4200e-003</b>	<b>0.1022</b>	<b>1.1200e-003</b>	<b>0.1033</b>	<b>0.0274</b>	<b>1.0500e-003</b>	<b>0.0285</b>		<b>146.0777</b>	<b>146.0777</b>	<b>5.9200e-003</b>		<b>146.2258</b>



## World Oil Tanks Installation Los Angeles-South Coast County, Winter

### 2.0 Emissions Summary

#### 2.1 Overall Construction (Maximum Daily Emission)

##### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.1956	32.3049	23.1325	0.0602	0.5040	1.2945	1.7985	0.1341	1.2016	1.3357	0.0000	5,836.354 3	5,836.354 3	1.5578	0.0000	5,875.299 7
Maximum	3.1956	32.3049	23.1325	0.0602	0.5040	1.2945	1.7985	0.1341	1.2016	1.3357	0.0000	5,836.354 3	5,836.354 3	1.5578	0.0000	5,875.299 7

##### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.1956	32.3049	23.1325	0.0602	0.4993	1.2945	1.7938	0.1336	1.2016	1.3351	0.0000	5,836.354 3	5,836.354 3	1.5578	0.0000	5,875.299 7
Maximum	3.1956	32.3049	23.1325	0.0602	0.4993	1.2945	1.7938	0.1336	1.2016	1.3351	0.0000	5,836.354 3	5,836.354 3	1.5578	0.0000	5,875.299 7

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.93	0.00	0.26	0.42	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00

World Oil Tanks Installation - Los Angeles-South Coast County, Winter

**3.2 Site Preparation - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.6700e-003	0.0000	7.6700e-003	9.1000e-004	0.0000	9.1000e-004			0.0000			0.0000
Off-Road	2.1271	23.8277	16.5528	0.0417		1.0039	1.0039		0.9236	0.9236		4,035.6111	4,035.6111	1.3052		4,068.2410
<b>Total</b>	<b>2.1271</b>	<b>23.8277</b>	<b>16.5528</b>	<b>0.0417</b>	<b>7.6700e-003</b>	<b>1.0039</b>	<b>1.0116</b>	<b>9.1000e-004</b>	<b>0.9236</b>	<b>0.9245</b>		<b>4,035.6111</b>	<b>4,035.6111</b>	<b>1.3052</b>		<b>4,068.2410</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0467	1.3852	0.3597	4.4000e-003	0.1068	4.9600e-003	0.1117	0.0293	4.7400e-003	0.0340		477.7669	477.7669	0.0310		478.5408
Vendor	6.3800e-003	0.1938	0.0562	5.0000e-004	0.0128	4.1000e-004	0.0132	3.6900e-003	3.9000e-004	4.0800e-003		53.4691	53.4691	3.4500e-003		53.5554
Worker	0.0763	0.0522	0.5892	1.7200e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		171.5602	171.5602	5.0500e-003		171.6864
<b>Total</b>	<b>0.1294</b>	<b>1.6312</b>	<b>1.0051</b>	<b>6.6200e-003</b>	<b>0.2984</b>	<b>6.8200e-003</b>	<b>0.3052</b>	<b>0.0804</b>	<b>6.4600e-003</b>	<b>0.0869</b>		<b>702.7962</b>	<b>702.7962</b>	<b>0.0395</b>		<b>703.7825</b>

World Oil Tanks Installation - Los Angeles-South Coast County, Winter

**3.2 Site Preparation - 2021**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9900e-003	0.0000	2.9900e-003	3.5000e-004	0.0000	3.5000e-004			0.0000			0.0000
Off-Road	2.1271	23.8277	16.5528	0.0417		1.0039	1.0039		0.9236	0.9236	0.0000	4,035.6111	4,035.6111	1.3052		4,068.2410
<b>Total</b>	<b>2.1271</b>	<b>23.8277</b>	<b>16.5528</b>	<b>0.0417</b>	<b>2.9900e-003</b>	<b>1.0039</b>	<b>1.0069</b>	<b>3.5000e-004</b>	<b>0.9236</b>	<b>0.9239</b>	<b>0.0000</b>	<b>4,035.6111</b>	<b>4,035.6111</b>	<b>1.3052</b>		<b>4,068.2410</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0467	1.3852	0.3597	4.4000e-003	0.1068	4.9600e-003	0.1117	0.0293	4.7400e-003	0.0340		477.7669	477.7669	0.0310		478.5408
Vendor	6.3800e-003	0.1938	0.0562	5.0000e-004	0.0128	4.1000e-004	0.0132	3.6900e-003	3.9000e-004	4.0800e-003		53.4691	53.4691	3.4500e-003		53.5554
Worker	0.0763	0.0522	0.5892	1.7200e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		171.5602	171.5602	5.0500e-003		171.6864
<b>Total</b>	<b>0.1294</b>	<b>1.6312</b>	<b>1.0051</b>	<b>6.6200e-003</b>	<b>0.2984</b>	<b>6.8200e-003</b>	<b>0.3052</b>	<b>0.0804</b>	<b>6.4600e-003</b>	<b>0.0869</b>		<b>702.7962</b>	<b>702.7962</b>	<b>0.0395</b>		<b>703.7825</b>



World Oil Tanks Installation - Los Angeles-South Coast County, Winter

**3.3 Tank Construction - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8534	6.5028	4.9054	9.4300e-003		0.2817	0.2817		0.2695	0.2695		843.1225	843.1225	0.2025		848.1858
<b>Total</b>	<b>0.8534</b>	<b>6.5028</b>	<b>4.9054</b>	<b>9.4300e-003</b>		<b>0.2817</b>	<b>0.2817</b>		<b>0.2695</b>	<b>0.2695</b>		<b>843.1225</b>	<b>843.1225</b>	<b>0.2025</b>		<b>848.1858</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.0600e-003	0.0973	0.0239	2.7000e-004	6.2600e-003	3.0000e-004	6.5600e-003	1.7200e-003	2.9000e-004	2.0000e-003		29.7952	29.7952	2.1300e-003		29.8485
Vendor	6.3800e-003	0.1938	0.0562	5.0000e-004	0.0128	4.1000e-004	0.0132	3.6900e-003	3.9000e-004	4.0800e-003		53.4691	53.4691	3.4500e-003		53.5554
Worker	0.0763	0.0522	0.5892	1.7200e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		171.5602	171.5602	5.0500e-003		171.6864
<b>Total</b>	<b>0.0857</b>	<b>0.3432</b>	<b>0.6693</b>	<b>2.4900e-003</b>	<b>0.1979</b>	<b>2.1600e-003</b>	<b>0.2001</b>	<b>0.0528</b>	<b>2.0100e-003</b>	<b>0.0548</b>		<b>254.8245</b>	<b>254.8245</b>	<b>0.0106</b>		<b>255.0903</b>

World Oil Tanks Installation - Los Angeles-South Coast County, Winter

**3.3 Tank Construction - 2021**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8534	6.5028	4.9054	9.4300e-003		0.2817	0.2817		0.2695	0.2695	0.0000	843.1225	843.1225	0.2025		848.1858
<b>Total</b>	<b>0.8534</b>	<b>6.5028</b>	<b>4.9054</b>	<b>9.4300e-003</b>		<b>0.2817</b>	<b>0.2817</b>		<b>0.2695</b>	<b>0.2695</b>	<b>0.0000</b>	<b>843.1225</b>	<b>843.1225</b>	<b>0.2025</b>		<b>848.1858</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.0600e-003	0.0973	0.0239	2.7000e-004	6.2600e-003	3.0000e-004	6.5600e-003	1.7200e-003	2.9000e-004	2.0000e-003		29.7952	29.7952	2.1300e-003		29.8485
Vendor	6.3800e-003	0.1938	0.0562	5.0000e-004	0.0128	4.1000e-004	0.0132	3.6900e-003	3.9000e-004	4.0800e-003		53.4691	53.4691	3.4500e-003		53.5554
Worker	0.0763	0.0522	0.5892	1.7200e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		171.5602	171.5602	5.0500e-003		171.6864
<b>Total</b>	<b>0.0857</b>	<b>0.3432</b>	<b>0.6693</b>	<b>2.4900e-003</b>	<b>0.1979</b>	<b>2.1600e-003</b>	<b>0.2001</b>	<b>0.0528</b>	<b>2.0100e-003</b>	<b>0.0548</b>		<b>254.8245</b>	<b>254.8245</b>	<b>0.0106</b>		<b>255.0903</b>

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**3.4 Architectural Coating - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2470	1.9773	2.6381	4.2300e-003		0.1027	0.1027		0.1020	0.1020		403.4129	403.4129	0.0588		404.8820
<b>Total</b>	<b>0.2470</b>	<b>1.9773</b>	<b>2.6381</b>	<b>4.2300e-003</b>		<b>0.1027</b>	<b>0.1027</b>		<b>0.1020</b>	<b>0.1020</b>		<b>403.4129</b>	<b>403.4129</b>	<b>0.0588</b>		<b>404.8820</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.3800e-003	0.1938	0.0562	5.0000e-004	0.0128	4.1000e-004	0.0132	3.6900e-003	3.9000e-004	4.0800e-003		53.4691	53.4691	3.4500e-003		53.5554
Worker	0.0382	0.0261	0.2946	8.6000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		85.7801	85.7801	2.5200e-003		85.8432
<b>Total</b>	<b>0.0445</b>	<b>0.2199</b>	<b>0.3508</b>	<b>1.3600e-003</b>	<b>0.1022</b>	<b>1.1300e-003</b>	<b>0.1034</b>	<b>0.0274</b>	<b>1.0600e-003</b>	<b>0.0285</b>		<b>139.2492</b>	<b>139.2492</b>	<b>5.9700e-003</b>		<b>139.3986</b>



World Oil Tanks Installation - Los Angeles-South Coast County, Winter

**3.4 Architectural Coating - 2021**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2470	1.9773	2.6381	4.2300e-003		0.1027	0.1027		0.1020	0.1020	0.0000	403.4129	403.4129	0.0588		404.8820
<b>Total</b>	<b>0.2470</b>	<b>1.9773</b>	<b>2.6381</b>	<b>4.2300e-003</b>		<b>0.1027</b>	<b>0.1027</b>		<b>0.1020</b>	<b>0.1020</b>	<b>0.0000</b>	<b>403.4129</b>	<b>403.4129</b>	<b>0.0588</b>		<b>404.8820</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.3800e-003	0.1938	0.0562	5.0000e-004	0.0128	4.1000e-004	0.0132	3.6900e-003	3.9000e-004	4.0800e-003		53.4691	53.4691	3.4500e-003		53.5554
Worker	0.0382	0.0261	0.2946	8.6000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		85.7801	85.7801	2.5200e-003		85.8432
<b>Total</b>	<b>0.0445</b>	<b>0.2199</b>	<b>0.3508</b>	<b>1.3600e-003</b>	<b>0.1022</b>	<b>1.1300e-003</b>	<b>0.1034</b>	<b>0.0274</b>	<b>1.0600e-003</b>	<b>0.0285</b>		<b>139.2492</b>	<b>139.2492</b>	<b>5.9700e-003</b>		<b>139.3986</b>

## World Oil Tanks Installation Los Angeles-South Coast County, Annual

### 2.0 Emissions Summary

#### 2.1 Overall Construction

##### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1682	1.6454	1.2095	3.0700e-003	0.0279	0.0663	0.0941	7.4400e-003	0.0617	0.0692	0.0000	268.7605	268.7605	0.0691	0.0000	270.4890
<b>Maximum</b>	<b>0.1682</b>	<b>1.6454</b>	<b>1.2095</b>	<b>3.0700e-003</b>	<b>0.0279</b>	<b>0.0663</b>	<b>0.0941</b>	<b>7.4400e-003</b>	<b>0.0617</b>	<b>0.0692</b>	<b>0.0000</b>	<b>268.7605</b>	<b>268.7605</b>	<b>0.0691</b>	<b>0.0000</b>	<b>270.4890</b>

##### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1682	1.6454	1.2095	3.0700e-003	0.0277	0.0663	0.0939	7.4100e-003	0.0617	0.0692	0.0000	268.7602	268.7602	0.0691	0.0000	270.4888
<b>Maximum</b>	<b>0.1682</b>	<b>1.6454</b>	<b>1.2095</b>	<b>3.0700e-003</b>	<b>0.0277</b>	<b>0.0663</b>	<b>0.0939</b>	<b>7.4100e-003</b>	<b>0.0617</b>	<b>0.0692</b>	<b>0.0000</b>	<b>268.7602</b>	<b>268.7602</b>	<b>0.0691</b>	<b>0.0000</b>	<b>270.4888</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.75</b>	<b>0.00</b>	<b>0.23</b>	<b>0.40</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-4-2021	4-3-2021	0.8908	0.8908
2	4-4-2021	7-3-2021	0.5572	0.5572
3	7-4-2021	9-30-2021	0.2470	0.2470
		<b>Highest</b>	0.8908	0.8908

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**3.2 Site Preparation - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.5000e-004	0.0000	3.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0968	1.0842	0.7532	1.9000e-003		0.0457	0.0457		0.0420	0.0420	0.0000	166.5775	166.5775	0.0539	0.0000	167.9244
<b>Total</b>	<b>0.0968</b>	<b>1.0842</b>	<b>0.7532</b>	<b>1.9000e-003</b>	<b>3.5000e-004</b>	<b>0.0457</b>	<b>0.0460</b>	<b>4.0000e-005</b>	<b>0.0420</b>	<b>0.0421</b>	<b>0.0000</b>	<b>166.5775</b>	<b>166.5775</b>	<b>0.0539</b>	<b>0.0000</b>	<b>167.9244</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1100e-003	0.0642	0.0161	2.0000e-004	4.7700e-003	2.2000e-004	5.0000e-003	1.3100e-003	2.1000e-004	1.5300e-003	0.0000	19.8280	19.8280	1.2600e-003	0.0000	19.8596
Vendor	2.8000e-004	8.9800e-003	2.4300e-003	2.0000e-005	5.7000e-004	2.0000e-005	5.9000e-004	1.7000e-004	2.0000e-005	1.8000e-004	0.0000	2.2431	2.2431	1.4000e-004	0.0000	2.2466
Worker	3.1300e-003	2.4400e-003	0.0275	8.0000e-005	7.9800e-003	7.0000e-005	8.0400e-003	2.1200e-003	6.0000e-005	2.1800e-003	0.0000	7.1993	7.1993	2.1000e-004	0.0000	7.2046
<b>Total</b>	<b>5.5200e-003</b>	<b>0.0756</b>	<b>0.0460</b>	<b>3.0000e-004</b>	<b>0.0133</b>	<b>3.1000e-004</b>	<b>0.0136</b>	<b>3.6000e-003</b>	<b>2.9000e-004</b>	<b>3.8900e-003</b>	<b>0.0000</b>	<b>29.2704</b>	<b>29.2704</b>	<b>1.6100e-003</b>	<b>0.0000</b>	<b>29.3107</b>

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**3.2 Site Preparation - 2021**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4000e-004	0.0000	1.4000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0968	1.0842	0.7532	1.9000e-003		0.0457	0.0457		0.0420	0.0420	0.0000	166.5773	166.5773	0.0539	0.0000	167.9242
<b>Total</b>	<b>0.0968</b>	<b>1.0842</b>	<b>0.7532</b>	<b>1.9000e-003</b>	<b>1.4000e-004</b>	<b>0.0457</b>	<b>0.0458</b>	<b>2.0000e-005</b>	<b>0.0420</b>	<b>0.0420</b>	<b>0.0000</b>	<b>166.5773</b>	<b>166.5773</b>	<b>0.0539</b>	<b>0.0000</b>	<b>167.9242</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1100e-003	0.0642	0.0161	2.0000e-004	4.7700e-003	2.2000e-004	5.0000e-003	1.3100e-003	2.1000e-004	1.5300e-003	0.0000	19.8280	19.8280	1.2600e-003	0.0000	19.8596
Vendor	2.8000e-004	8.9800e-003	2.4300e-003	2.0000e-005	5.7000e-004	2.0000e-005	5.9000e-004	1.7000e-004	2.0000e-005	1.8000e-004	0.0000	2.2431	2.2431	1.4000e-004	0.0000	2.2466
Worker	3.1300e-003	2.4400e-003	0.0275	8.0000e-005	7.9800e-003	7.0000e-005	8.0400e-003	2.1200e-003	6.0000e-005	2.1800e-003	0.0000	7.1993	7.1993	2.1000e-004	0.0000	7.2046
<b>Total</b>	<b>5.5200e-003</b>	<b>0.0756</b>	<b>0.0460</b>	<b>3.0000e-004</b>	<b>0.0133</b>	<b>3.1000e-004</b>	<b>0.0136</b>	<b>3.6000e-003</b>	<b>2.9000e-004</b>	<b>3.8900e-003</b>	<b>0.0000</b>	<b>29.2704</b>	<b>29.2704</b>	<b>1.6100e-003</b>	<b>0.0000</b>	<b>29.3107</b>



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**3.3 Tank Construction - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0572	0.4357	0.3287	6.3000e-004		0.0189	0.0189		0.0181	0.0181	0.0000	51.2462	51.2462	0.0123	0.0000	51.5539
<b>Total</b>	<b>0.0572</b>	<b>0.4357</b>	<b>0.3287</b>	<b>6.3000e-004</b>		<b>0.0189</b>	<b>0.0189</b>		<b>0.0181</b>	<b>0.0181</b>	<b>0.0000</b>	<b>51.2462</b>	<b>51.2462</b>	<b>0.0123</b>	<b>0.0000</b>	<b>51.5539</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	6.6400e-003	1.5500e-003	2.0000e-005	4.1000e-004	2.0000e-005	4.3000e-004	1.1000e-004	2.0000e-005	1.3000e-004	0.0000	1.8295	1.8295	1.3000e-004	0.0000	1.8327
Vendor	4.2000e-004	0.0132	3.5900e-003	3.0000e-005	8.4000e-004	3.0000e-005	8.7000e-004	2.4000e-004	3.0000e-005	2.7000e-004	0.0000	3.3031	3.3031	2.0000e-004	0.0000	3.3081
Worker	4.6100e-003	3.5900e-003	0.0405	1.2000e-004	0.0118	1.0000e-004	0.0118	3.1200e-003	9.0000e-005	3.2100e-003	0.0000	10.6012	10.6012	3.1000e-004	0.0000	10.6090
<b>Total</b>	<b>5.2300e-003</b>	<b>0.0235</b>	<b>0.0457</b>	<b>1.7000e-004</b>	<b>0.0130</b>	<b>1.5000e-004</b>	<b>0.0131</b>	<b>3.4700e-003</b>	<b>1.4000e-004</b>	<b>3.6100e-003</b>	<b>0.0000</b>	<b>15.7338</b>	<b>15.7338</b>	<b>6.4000e-004</b>	<b>0.0000</b>	<b>15.7498</b>

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**3.3 Tank Construction - 2021**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0572	0.4357	0.3287	6.3000e-004		0.0189	0.0189		0.0181	0.0181	0.0000	51.2461	51.2461	0.0123	0.0000	51.5538
<b>Total</b>	<b>0.0572</b>	<b>0.4357</b>	<b>0.3287</b>	<b>6.3000e-004</b>		<b>0.0189</b>	<b>0.0189</b>		<b>0.0181</b>	<b>0.0181</b>	<b>0.0000</b>	<b>51.2461</b>	<b>51.2461</b>	<b>0.0123</b>	<b>0.0000</b>	<b>51.5538</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	6.6400e-003	1.5500e-003	2.0000e-005	4.1000e-004	2.0000e-005	4.3000e-004	1.1000e-004	2.0000e-005	1.3000e-004	0.0000	1.8295	1.8295	1.3000e-004	0.0000	1.8327
Vendor	4.2000e-004	0.0132	3.5900e-003	3.0000e-005	8.4000e-004	3.0000e-005	8.7000e-004	2.4000e-004	3.0000e-005	2.7000e-004	0.0000	3.3031	3.3031	2.0000e-004	0.0000	3.3081
Worker	4.6100e-003	3.5900e-003	0.0405	1.2000e-004	0.0118	1.0000e-004	0.0118	3.1200e-003	9.0000e-005	3.2100e-003	0.0000	10.6012	10.6012	3.1000e-004	0.0000	10.6090
<b>Total</b>	<b>5.2300e-003</b>	<b>0.0235</b>	<b>0.0457</b>	<b>1.7000e-004</b>	<b>0.0130</b>	<b>1.5000e-004</b>	<b>0.0131</b>	<b>3.4700e-003</b>	<b>1.4000e-004</b>	<b>3.6100e-003</b>	<b>0.0000</b>	<b>15.7338</b>	<b>15.7338</b>	<b>6.4000e-004</b>	<b>0.0000</b>	<b>15.7498</b>

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**3.4 Architectural Coating - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9600e-003	0.0237	0.0317	5.0000e-005		1.2300e-003	1.2300e-003		1.2200e-003	1.2200e-003	0.0000	4.3916	4.3916	6.4000e-004	0.0000	4.4076
<b>Total</b>	<b>2.9600e-003</b>	<b>0.0237</b>	<b>0.0317</b>	<b>5.0000e-005</b>		<b>1.2300e-003</b>	<b>1.2300e-003</b>		<b>1.2200e-003</b>	<b>1.2200e-003</b>	<b>0.0000</b>	<b>4.3916</b>	<b>4.3916</b>	<b>6.4000e-004</b>	<b>0.0000</b>	<b>4.4076</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	2.3700e-003	6.4000e-004	1.0000e-005	1.5000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	0.5916	0.5916	4.0000e-005	0.0000	0.5925
Worker	4.1000e-004	3.2000e-004	3.6300e-003	1.0000e-005	1.0500e-003	1.0000e-005	1.0600e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.9494	0.9494	3.0000e-005	0.0000	0.9501
<b>Total</b>	<b>4.8000e-004</b>	<b>2.6900e-003</b>	<b>4.2700e-003</b>	<b>2.0000e-005</b>	<b>1.2000e-003</b>	<b>1.0000e-005</b>	<b>1.2200e-003</b>	<b>3.2000e-004</b>	<b>1.0000e-005</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>1.5410</b>	<b>1.5410</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>1.5426</b>

World Oil Tanks Installation - Los Angeles-South Coast County, Annual

**3.4 Architectural Coating - 2021**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9600e-003	0.0237	0.0317	5.0000e-005		1.2300e-003	1.2300e-003		1.2200e-003	1.2200e-003	0.0000	4.3916	4.3916	6.4000e-004	0.0000	4.4076
<b>Total</b>	<b>2.9600e-003</b>	<b>0.0237</b>	<b>0.0317</b>	<b>5.0000e-005</b>		<b>1.2300e-003</b>	<b>1.2300e-003</b>		<b>1.2200e-003</b>	<b>1.2200e-003</b>	<b>0.0000</b>	<b>4.3916</b>	<b>4.3916</b>	<b>6.4000e-004</b>	<b>0.0000</b>	<b>4.4076</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	2.3700e-003	6.4000e-004	1.0000e-005	1.5000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	0.5916	0.5916	4.0000e-005	0.0000	0.5925
Worker	4.1000e-004	3.2000e-004	3.6300e-003	1.0000e-005	1.0500e-003	1.0000e-005	1.0600e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.9494	0.9494	3.0000e-005	0.0000	0.9501
<b>Total</b>	<b>4.8000e-004</b>	<b>2.6900e-003</b>	<b>4.2700e-003</b>	<b>2.0000e-005</b>	<b>1.2000e-003</b>	<b>1.0000e-005</b>	<b>1.2200e-003</b>	<b>3.2000e-004</b>	<b>1.0000e-005</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>1.5410</b>	<b>1.5410</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>1.5426</b>



# World Oil Tank Installation Project

## Construction - Architectural Coating VOC Emissions

### Assumptions:

- 1) The coating types and VOC contents, coating thicknesses, area coated, coating volumes, thinners used, and work schedules are provided by the applicant
- 2) The interior of the tank is coated on the floor and up the sides 48 inches (4 feet)
- 3) The floating roof is not coated onsite.
- 4) The entire tank exterior, except the floating roof, is coated.
- 5) Each coating type is applied sequentially, so total schedule for coating task is 24 days.

### VOC Emissions Estimate

Exterior Coating	Product	Sq.Ft./Tank	Thickness	Gallons	Lb/Gal	Total Lb's	X 2 Tanks	Days	Avg/Lb/Day
Field Primer	Sherwin Williams 646-100 (3-5 mils)	2000	3-5 Mils	10	0.83	8.3	16.6	4.0	4.2
Intermediate Coat	Sherwin Williams 646-100(4-6 mils)	13800	4-6 Mils	80	0.83	66.4	132.8	8.0	16.6
Finish Coat	Sherloxane 800 (no thinner required)	13800	4 mils	40	0.77	30.8	61.6	8.0	7.7
Total (lbs)							211.0	20.0	

Interior Coating	Product	Sq.Ft./Tank	Thickness	Gallons	Lb/Gal	Total Lb's	X 2 Tanks	Days	Avg/Lb/Day
Coating	Duraplate UHS	4200	20-30 mils	85	0.83	70.6	141.1	4.0	35.3

### Exempt Solvents Emissions Estimate

Exterior Coating Solvents	Gals	Components	By Weight	Density Lb/Gal	Emissions Lbs
R7K111 Thinner (for SW 646-100)	10	Acetone	40%	8.8	35.0
		p-Chlorobenzotrifluoride	60%	8.8	52.5

Interior Coating Solvents	Gals	Components	By Weight	Density Lb/Gal	Emissions Lbs
Cleaning Solvent	20	Acetone	100%	6.5	130.9

# World Oil Tank Installation Project

## Operations Criteria Air Pollutant Emissions Summary

Proposed Project Emissions Increase	Daily Emissions lbs/day					
	NOx	PM10	PM2.5	ROG	CO	SOx
Onroad Emissions	1.21	0.09	0.03	0.04	0.18	0.00
New Tanks Fugitive Emissions <sup>1</sup>	--	--	--	9.70	--	--
Loading Rack/Vapor Control	0.20	0.01	0.01	0.09	0.16	0.00
Total	1.41	0.10	0.04	9.83	0.34	0.00

1 - New tank emissions from SCAQMD permit engineering analysis.

## Operations GHG Emissions Summary

Proposed Project Emissions Increase	CO2e MT
Onroad Emissions	60.5
Loading Rack/Vapor Control	32.5
Indirect Electricity Emissions	5.9
Total	98.9

Annualized Emissions Increase	CO2e MT
Construction Emissions From CalEEMod	270.5
Amortized Construction Emissions (30-years)	9.0
Incremental Operations Emissions Increase	98.9
Total Increase	108.0

# World Oil Tank Installation Project

## Operation - On-Road Emissions Increase

### Assumptions

- 1) Emissions factors developed from CARB EMFAC2017 output. Paved road dust included using AP-42 and CalEEMod input defaults.
- 2) Heavy Duty Truck is the diesel fueled HHDT vehicle type meeting POLA/POLB's Clean Trucks Program designated as T7 POLA in EMFAC2017.
- 3) The additional maximum daily truck round trips caused by the project is 3 trips per day, a 10 percent increase from baseline per World Oil.
- 4) While World Oil does not anticipate a long term increase in fuel trucking, it is conservatively assumed that the maximum daily increase in trucking occurs daily.
- 5) The distance for each additional round trip is 30 miles per World Oil. A single average trip distance is 15 miles.
- 6) There are no additional passenger or delivery class vehicle trips above baseline for the proposed Project.

	Emissions Factors lbs/mile						
	NOx	PM10	PM2.5	ROG	CO	SOx	CO2e
Heavy Duty Truck	1.34E-02	9.66E-04	3.26E-04	4.83E-04	2.05E-03	3.68E-05	4.06

	Vehicle Type	Daily VMT	Daily Emissions - Lbs						GHG MTCO2e/Yr
			NOx	PM10	PM2.5	ROG	CO	SOx	
Incremental Increase	Heavy Truck	90	1.209	0.087	0.029	0.043	0.184	0.003	60.5

# World Oil Tank Installation Project

## Operation - Loading Rack/Vapor Control Emissions

### Assumptions

- 1) Emissions are a 10 percent increase from 2019 baseline for loading rack thermal oxidizer use and fugitive ROG
- 2) Baseline emissions are from the 2019 emissions inventory submitted to SCAQMD.
- 3) Annual thermal oxidizer natural gas fuel use is 6.0 million standard cubic feet (assume 1,020 Btu/scf to convert to MMBtu).
- 4) CO<sub>2</sub>e emissions factor for natural gas is from the Climate Registry is 53.17 Kg CO<sub>2</sub>e/MMBtu (includes CH<sub>4</sub> and N<sub>2</sub>O).
- 5) To adjust annual emissions, operations are 7 days per week year-round.

### Thermal Oxidizer Emissions

	Daily Emissions - Lbs						GHG MTCO <sub>2</sub> e/Yr
	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	ROG	CO	SO <sub>x</sub>	
2019 Baseline Annual	745.920	45.000	45.000	42.000	573.190	3.600	325
Project Increase Annual	74.59	4.50	4.50	4.20	57.32	0.36	32.54
Daily Increase	0.20	0.01	0.01	0.01	0.16	0.00	

### Fuel Oil Loading Rack Fugitive Emissions

	ROG
2019 Baseline Annual	277.540
Project Increase Annual	27.75
Daily Increase	0.08





# **Appendix B (Confidential)**

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## Cultural Resources Records Search Report



# **Appendix C**

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## Noise Calculations





**APPENDIX C. World Oil Tank Installation Project Noise Calculations**

Project equipment per Application Item 21. Assume maximum of 3 pieces of equipment; worst-case vibro pier installation using mounted impact hammer/hoe ram.

<b>Construction Equipment</b>	<b>Lmax Ref dBA</b>	<b>Useage Per Hour</b>	<b>Along Levee quantity</b>	<b>Distance to Resident feet</b>	<b>Equip Leq(h) dBA</b>
Foundation Installation	@ 50 ft	(%)			
Pile Driver (vibro pier mounted impact hammer/hoe ram)	90	20	1	2610	48.7
Crane	81	16	1	2610	38.7
Bobcat (backhoe)	78	40	1	2610	39.7
<b>Total Quantity of Equipment:</b>			<b>3</b>		
<b>Peak Unmitigated Composite Leq(h):</b>			<b>49.5</b>		
<b>Line-of-Site/Intervening Structures Reduction (10dB):</b>			<b>39.5</b>		

Threshold: LBMC District 1 50 dBA daytime - 5 (for tonal)=45 dBA OR increase by 5 dB to encompass ambient - 5 (for tonal)

Assumptions: Containment structure, which breaks the line of site, would provide at least 5 dBA reduction in noise levels from the project site, plus additional 5 dB reduction from topography and intervening structures (tanks).

Source: Federal Transit Administration (FTA). 2006. Transit Noise and Vibration Impact Assessment. Final Report, May. [Online]: [http://www.fta.dot.gov/documents/FTA\\_Noise\\_and\\_Vibration\\_Manual.pdf](http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf). Accessed March 2012.