

FINAL ENVIRONMENTAL IMPACT REPORT

World Oil Tank Installation Project

State Clearinghouse # 2020100119

Prepared for



Port of
LONG BEACH
THE GREEN PORT

Submitted by



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LIST OF ACRONYMS

AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ARB	Air Resources Board
ARSSS	Anchorage Road Soil Storage Site
ASR	Application Summary Report
ASTs	Aboveground storage tanks
ATCM	Air toxic control measure
ATLs	Advisory Tissue Levels
BACT	Best available control technologies
BMPs	Best Management Practices
BTEX	Benzene, toluene, ethylbenzene, and xylene
CAA	Clean Air Act
CAAP	Clean Air Action Plan
CAAQS	California Ambient Air Quality Standards
CalARP	California Accidental Release Prevention Program
Cal-EPA	California Environmental Protection Agency
Cal-ESA	California Endangered Species Act
CalGEM	California Geologic Energy Management Division
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCA	California Coastal Act
CCAA	Clean Air Act of 1988
CCC	California Coastal Commission
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERP	Community Emission Reduction Plan
CERS	California Environmental Reporting System
CFR	Code of Federal Regulations
CGS	California Geological Survey
CMP	Congestion Management Program
CO	Carbon monoxide
CRP	Coastal Resiliency Plan
CTR	California Toxics Rule
CUPA	Certified Unified Program Agencies
CWA	Clean Water Act
DAF	Dissolved air flotation
DDT	Dichlorodiphenyltrichloroethane
DMV	Department of Motor Vehicles
DPM	Diesel particulate matter
DTSC	Department of Toxic Substance Control
E10	Ethanol
EIR	Environmental Impact Report
ERCs	Emission Reduction Credits
ESA	Endangered Species Act

FEMA	Federal Emergency Management Agency
FSEIR	Final Supplemental Environmental Impact Report
GCASP	General Construction Activities Stormwater Permit
GCC	Global climate change
GHGRP	Greenhouse Gas Reporting Program
GHG	Greenhouse gas
GWP	Global warming potential
H ₂ S	Hydrogen Sulfide
HARP	Hotspots Analysis and Reporting Program
HDP	Harbor Development Permit
HFC	Hydrofluorocarbons
HMBP	Hazardous Materials Business Plan
IBC	International Building Code
ICC	International Code Council
ICTF	Intermodal container transfer facility
IS/ND	Initial Study/Negative Declaration
LACSD	Los Angeles County Sanitation District
LARWQCB	Los Angeles Regional Water Quality Control Board
LBFD	Long Beach Fire Department
LBMC	Long Beach Municipal Code
LCFS	Low Carbon Fuel Standard
LDAR	Leak detection and repair
LF	Linear feet
LID	Low Impact Development
LLW	Lower low water
LNAPL	Light Non-Aqueous Phase Liquid
LST	Localized significance thresholds
LUST	Leaking underground storage tank
MATES	Multiple Air Toxics Exposure Study
MBTA	Migratory Bird Treaty Act of 1918
MCE	Maximum considered earthquake or maximum considered event
MLLW	Mean lower low water
MOTEMS	Marine Oil Terminal Engineering and Maintenance Standards
MRP	Monitoring and reporting program
MS4	Los Angeles and Ventura Counties Municipal Separate Storm Sewer System
MT	Metric tons
MTA	Metropolitan Transportation Authority
MTBE	Methyl tert-butyl ether
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NOAA	National Oceanic and Atmospheric Administration
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NRCS	National Resources Conservation Service
NSPS	New Source Performance Standards
NSR	New Source Review
OCOF	Our Coast Our Future
OEHHA	Office of Environmental Health Hazard Assessment
OGI	Optical gas imaging
OVA	Organic vapor analyzer
PAHs	Polycyclic aromatic hydrocarbons

PCBs	Polychlorinated biphenyls
PERP	Portable Equipment Registration Program
PFC	Perfluorocarbons
PGAs	Peak site accelerations
PM	Particulate matter
PM10	Particulate matter (less than 10 microns in diameter)
PM2.5	Particulate matter (less than 2.5 microns in diameter)
PMP	Port Master Plan
PMPU	1990 Port Master Plan Update
POLA	Port of Los Angeles
POLB	Port of Long Beach
PRC	Public Resources Code
RAPs	Rammed aggregate piers
RCRA	Resource Conservation and Recovery Act
RFS	Renewable Fuel Standard
RMP	Risk Management Plan
RPS	Renewables Portfolio Standard
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RVP	Reid Vapor Pressure
RWQCB	Regional Water Quality Control Board
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCIG	Southern California International Gateway Project
SIP	State Implementation Plan
SLR	Sea-level rise
SMP	Soil Management Plan
SPCC	Spill Prevention, Control and Countermeasure Plan
SQOs	Sediment Quality Objectives
SR	State Route
SRA	Source Receptor Area
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic air contaminant
TMDLs	Total Maximum Daily Loads
TPH	Total petroleum hydrocarbon
TRPH	Total recoverable petroleum hydrocarbons
TSCA	Toxic Substances Control Act of 1976
TSDF	Treatment, storage, and disposal facilities
US	United States
USACE	US Army Corps of Engineers
USDA	US Department of Agriculture
USEPA	US Environmental Protection Agency
USFWS	US Fish and Wildlife Service
VOC	Volatile organic compounds
WMP	Water Management Program
WRAP	Water Resources Action Plan
WWTP	Wastewater treatment plant

EXECUTIVE SUMMARY

This Final Environmental Impact Report (EIR) has been prepared pursuant to the requirements of the California Environmental Quality Act (CEQA), Public Resources Code (PRC) Sections 21000, *et seq.* In accordance with State CEQA Guidelines Section 15123, this section of the EIR includes (1) a brief summary of the proposed actions and its consequences; (2) significant and unavoidable impacts; (3) identification of alternatives that would reduce or avoid environmental impacts; (4) areas of controversy known to the Lead Agency and issues raised during the Notice of Preparation (NOP) process; and (5) summary of proposed Project impacts, with proposed mitigation measures.

ES.1 Introduction/Background

Ribost Terminal LLC, doing business as (dba) World Oil Terminals (Ribost) proposes to construct and operate the World Oil Tank Installation Project (proposed Project). The proposed Project is located within the existing Ribost Terminal at 1405 Pier C Street, Long Beach, California. The existing 6-acre site at 1405 Pier C Street has been privately owned and operated as a petroleum storage facility since 1964. The property was originally owned and operated by Powerine Oil Company from 1964 to 1983. From 1964 to 1983, Powerine also leased approximately 2.5 acres of Port-owned property immediately to east of the Powerine-owned property, which contained two additional 35,000-barrel (bbl) tanks. In 1983, Ribost purchased the 6-acres of land from Powerine and leased it back to Powerine from February 1983 to December 1996, at which point Ribost assumed operational control. The two 35,000 bbl tanks to the east of the site located on Port-owned land were removed in 1995. The 2.5 acres of Port-owned property adjacent to the existing 6-acre site is currently leased by SSA Terminal, LLC and is not part of the proposed Project, nor is Ribost seeking to utilize the Port-owned land.

Ribost submitted an Application for a Harbor Development Permit with the Port of Long Beach (POLB or Port) on August 14, 2019, to construct and operate two new 25,000-barrel (bbl) internal floating roof petroleum storage tanks in the vacant northwest corner within the existing approximately 12.5- to 13-foot-high containment wall of the petroleum bulk station. The new tanks would be connected to existing utilities, such as electrical lines and petroleum piping. The terminal contains seven existing petroleum 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. Currently, four of the seven tanks are available for lease to customers. Three of the seven tanks store crude oil for World Oil Refinery, the paving/roofing asphalt refinery in South Gate, CA.

While World Oil Corp., the parent company to Ribost and Lunday-Thagard Company dba World Oil Refining (World Oil Refining), primarily recycles oil-based waste including used motor oil, antifreeze, and oily wastewater into motor oil, marine diesel fuel, new antifreeze, and paving and roofing asphalt blending components, current operations at the Ribost Terminal do not involve, nor are on-site processing of material proposed. The asphalt blending components are then used at World Oil Refining in South Gate, CA.

The City of Long Beach, acting by and through its Board of Harbor Commissioners, (POLB) has prepared this EIR, as required under CEQA, to identify and evaluate the potential environmental impacts associated with implementation of the proposed Project or "Single Tank Alternative". For the environmental review process, the POLB is the lead agency under CEQA.

This EIR fulfills the requirements of CEQA as set forth in Public Resources Code (PRC), Section 21000, *et seq.*, and 14 California Code of Regulations (CCR), Section 15000, *et seq.* (State CEQA

Guidelines). As referenced in State CEQA Guidelines Section 15121(a), the purpose of an EIR is to serve as an informational document which:

...will inform public agency decision-makers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

Other State and local agencies that have jurisdiction or regulatory responsibility over components of the proposed Project would also rely on this EIR for CEQA compliance as part of their decision-making processes (refer to Section 1.8.2 of this EIR).

ES.2 Project Objectives

As required by State CEQA Guidelines Section 15124(b), the description of a project must include the project's statement of objectives, which describes the underlying purpose of the project. The objectives of the proposed Project are to:

- Increase efficiency of terminal operations,
- Realign storage capacity needs, and
- Make more existing tanks available for lease by customers.

ES.3 Summary Description of the Proposed Project

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 the Long Beach Harbor District (POLB, 1990). The proposed Project would be located within the existing Ribost 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 vacant northwest corner of the existing petroleum bulk station and terminal. The Project site within the regional context of the vicinity is presented in Figure ES-1.

Proposed Project

Ribost proposes to construct and operate two additional, new 25,000-bbl petroleum storage tanks with internal floating roofs with new tank foundations and piping connections to existing facility infrastructure, including the truck loading racks and pipelines. The two new, smaller tanks would provide more adequate storage capacity for Ribost's operations by moving the crude oil currently stored for World Oil Refining, the paving/roofing asphalt refinery in South Gate, CA, from two existing underutilized crude tanks at the site. Two of the three existing crude tanks would then be removed from Ribost's dedicated paving/roofing asphalt refinery service and made available to lease by customers for storage of marine fuels and marine fuel blending components, as is currently done for four of the existing seven tanks at the facility.

The site would be prepared for tank installation by clearing debris; ground preparation, including excavating the upper approximately four feet of earth material to accommodate locally imported sandy engineered fill to provide a stable base for the new tanks; and construction of a ground improvement system consisting of vibratory stone column Geopiers, also known as vibro piers, or equivalent rammed aggregate piers (RAPs). The two tank foundations would be installed on top of a ring-wall-type foundation. Approximately 40 linear feet (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. A short electrical connection would be provided between the new tanks and the existing subpanel located just outside the containment wall to the north.

1 The two tanks would undergo a National Pollutant Discharge Elimination System (NPDES) per-
2 mitted hydrotest, or hydrostatic test, to check for leaks and structural integrity. The tank exteriors
3 would be shop-blasted and painted off-site with primer, and then painted on-site with two coats of
4 paint.

5 Construction is expected to take approximately 10 months. Access to the Project site would be
6 provided by Pier C Street at the existing gated entrance to the Ribost Terminal property (see
7 Figure ES-2). The unpaved area north of the control building would serve as a staging area for
8 construction vehicles.

9 During Project operations, the existing tanks that would be converted to newly leased tanks would
10 continue to primarily ship and receive the same or similar fuel oils through either the two inbound
11 and outbound Marathon Petroleum pipelines serving the Marathon Petroleum Carson Refinery
12 and/or Marathon Petroleum pipeline and terminal assets; or the Glencore bidirectional pipeline
13 serving the Glencore Long Beach Marine Terminal and Glencore Carson Marine Terminal. A third
14 pipeline, RT-1, is owned and operated by Ribost and is a receive-only pipeline that would deliver
15 crude oil to the proposed new tanks. The proposed Project would not enable the facility to increase
16 throughput of existing pipelines, tanks, or loading racks beyond the permitted limits established
17 by the Ribost Terminal South Coast Air Quality Management District (SCAQMD) Permit to Operate.

18 Ribost would need to obtain new Permits to Construct and Permits to Operate from SCAQMD for
19 each of the two new storage tanks. No changes to conditions in Ribost's existing Permits to Operate
20 for the existing tanks are proposed or needed to implement the proposed Project; the existing
21 tanks would continue to operate as currently permitted.

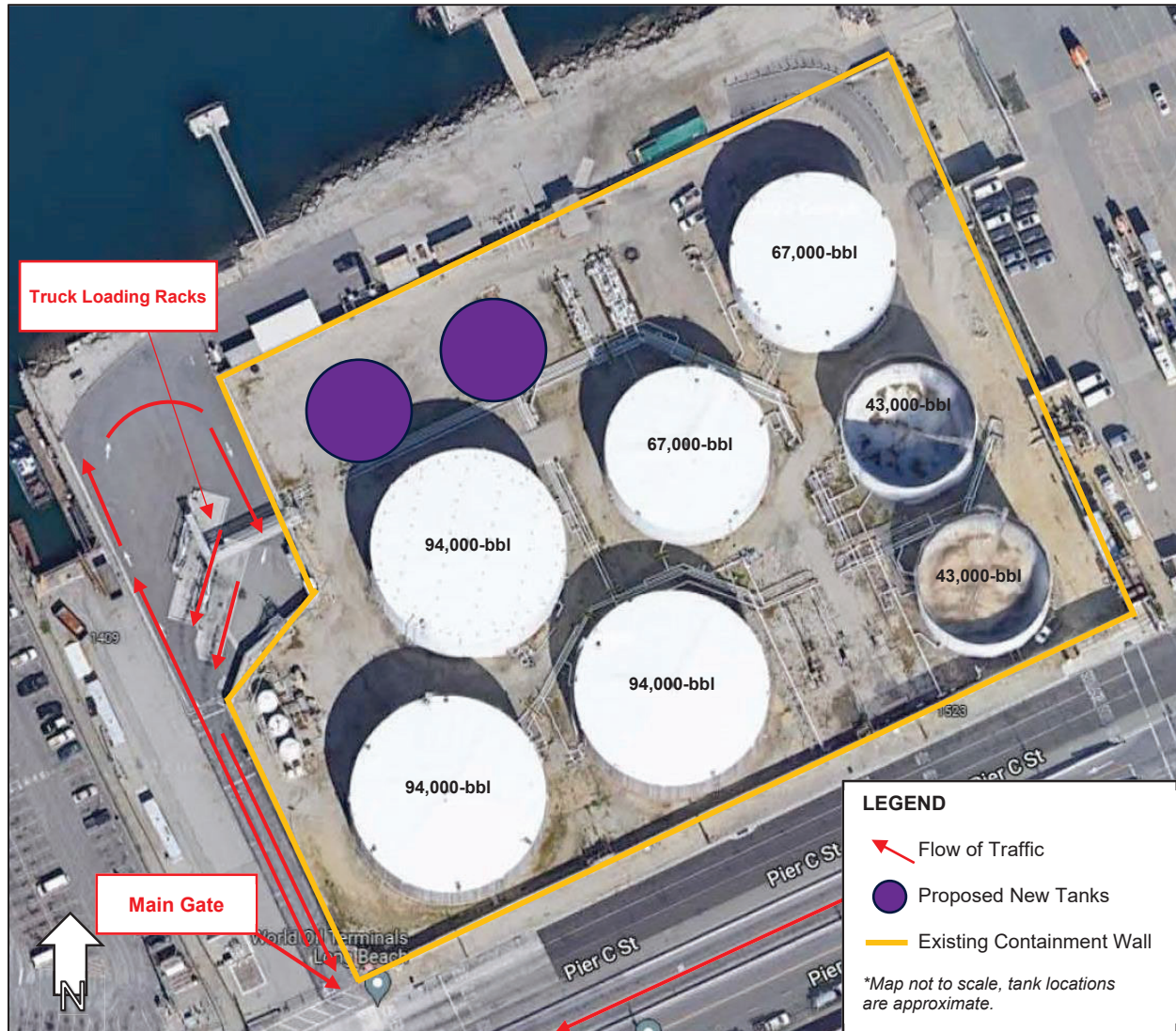
22 Project maintenance would be the same as those for the existing tanks, including cleaning sludge
23 from tank bottoms, dewatering, routine visual inspections, and standard quarterly inspections in
24 compliance with the SCAQMD Air Quality Permit. Ribost would adopt all existing maintenance
25 procedures for the proposed Project, including cleaning the tanks of sludge, repair, and/or
26 hydrotesting approximately every 10 years. Although typical tank cleaning and emptying occurs
27 approximately every 10 years, other maintenance activities may be conducted sooner, as needed.

28 Additional detailed information describing the proposed Project is provided in EIR Section 1.5,
29 *Project Characteristics*.

1 Figure ES-1. Project Vicinity – World Oil Tank Installation Project



1 Figure ES-2. Project Site Plan – World Oil Tank Installation Project



2

ES.4 Alternatives to the Project

In order to comply with CEQA requirements, the screening process used in the EIR to develop and evaluate a reasonable range of alternatives was based on the following criteria:

- Does the alternative accomplish all or most of the basic project objectives?
- Is the alternative feasible (from economic, environmental, legal, social, technological standpoints)?
- Does the alternative avoid or substantially lessen any significant effects of the proposed Project (including consideration of whether the alternative itself could create significant effects greater than those of the proposed Project)?

Five preliminary alternatives to the proposed Project were considered during preparation of this EIR, including the No Project Alternative, as well as various alternatives that reduce the number of tanks and tank volume, optimize the size of a single tank, and use of alternative sites. The four alternatives considered but eliminated from further discussion are listed below and discussed further in Section 1.6.2, *Alternatives Considered but Not Carried Forward for Detailed Analysis*.

- Reducing the number of tanks to one tank with equal volume to the two proposed tanks (50,000 bbl)
- Reducing the size of both of the tanks so that capacity is less than 25,000 bbl each,
- Increasing the size of one tank and reducing the size of the second tank such that total capacity is 50,000 bbl, and
- Placing the tanks at another facility.

These alternatives either do not meet the Project's main objectives or are infeasible due to site or operating constraints. Therefore, only the Single Tank Alternative and the No Project Alternative are analyzed in this EIR and are described below.

A comparison of the Single Tank Alternative (Alternative 1) and the No Project Alternative (Alternative 2) to the proposed Project is provided in Section 5.2, *Comparison of Alternatives*, and the environmentally superior alternative is presented in Section 5.3, *Environmentally Superior Alternative*.

Alternative 1 – Single Tank Alternative

The Single Tank Alternative was identified to potentially reduce air quality impacts associated with construction and operation of the proposed Project. A single 25,000 bbl tank would be constructed as opposed to two tanks. However, having a single tank would reduce the terminal's crude dewatering capability, which is a critical operation. Crude oil contains a small amount (~1%) of emulsified water, which if not removed prior to delivery to refineries, can instantly flash to steam at refinery operating temperatures and pressures, causing equipment damage and/or over-pressurization. Typical operation requires resting new deliveries of crude oil to allow for the water and oil to separate and to pump out the water layer. Tank redundancy is also needed when tanks are removed from service for inspection or repair. Given the quantity of the existing crude deliveries, the time it takes to allow the oil/water to naturally separate, and the fact that storage tanks require routine maintenance which periodically removes them from service, a minimum of three tanks (would include two existing tanks that will remain in crude service) need to be operational at the terminal to ensure uninterrupted crude operations, leaving only one tank available for leasing to customers. This alternative would at least partially realign storage capacity needs,

provide for some marginal improvement in the efficiency of terminal operations, and provide one tank for lease to customers.

Alternative 2 – No Project Alternative

Under CEQA the No Project Alternative must consider the conditions that would exist if a project does not proceed, which includes consideration of predictable actions, such as the proposal of some other project (State CEQA Guidelines §15126.6(e)(3)(B)). The No Project Alternative must consider the conditions that would exist if a project does not proceed, which includes consideration of predictable actions, such as the proposal of some other project (State CEQA Guidelines §15126.6(e)(3)(B)). The No Project Alternative considers the scenario of Ribost continuing existing operations without constructing the two new tanks, tank foundations, pumps, or connections to the pipeline system. The seven existing petroleum tanks would continue to store petroleum products including crude oil and different grades of marine fuels. Loading rack truck traffic and barrels transported would remain the same as existing permitted conditions. No additional efficiency in operations would be achieved, and no additional tanks would be available to lease to customers.

Environmentally Superior Alternative

Under CEQA, an “environmentally superior alternative” must be identified among the alternatives analyzed, which is the alternative found to have an overall environmental advantage compared to the other alternatives based on the impact analysis in the EIR. If the environmentally superior alternative is also the No Project Alternative, State CEQA Guidelines Section 15126.6(e)(2) requires the EIR to identify an environmentally superior alternative from among the other alternatives. As such, the environmentally superior alternative would be the Single Tank Alternative (Alternative 1). This alternative would result in slightly less construction emissions and approximately half as much operational emissions compared to the proposed Project; however, air quality and greenhouse gas (GHG) emission are not significant. Additionally, with only a single new tank, Alternative 1 does not provide for enough of an efficiency improvement for Ribost to conduct business and severely limits opportunities to lease the one existing tank that would be available under this alternative, as most lessees want at least two tanks. Therefore, while Alternative 1 is considered the environmentally superior alternative it is rejected because it does not fully meet the Project objectives, severely limits customer leasing, and would not be pursued by Ribost. There are no significant impacts associated with the construction and operation of the proposed Project even if incrementally higher than Alternative 1. The proposed Project better meets the objectives, and thus, there is no environmental basis or reason to adopt Alternative 1, which does not meet all the objectives.

ES.5 Environmental Issues

This EIR evaluates the potential impacts related to Air Quality and Health Risk (Section 3.1); Geology and Soils (Section 3.2); Greenhouse Gas Emissions (Section 3.3); Hazards and Hazardous Materials (Section 3.4), and Hydrology, Water Quality, and Sea-Level Rise (Section 3.5). All other issue areas were determined to have either no impact or less-than-significant impacts and are discussed in Section 1.8, *Environmental Resources Not Affected by the Proposed Project*, and Appendix B, Initial Study.

Below is a summary of the environmental criteria applied to the Project, a description of the potential impacts of the proposed Project, significance conclusions, and mitigation measures to be applied to reduce potentially significant impacts of the proposed Project.

Air Quality and Health Risk

Impacts on air quality and health risk were evaluated by determining the potential for the proposed Project to conflict with or obstruct the implementation of an applicable air quality management plan (Impacts AQ-1 and AQ-6); result in net emission increases from construction and operation exceeding a SCAQMD threshold of significance (Impacts AQ-2 and AQ-7); result in off-site ambient air pollutant concentrations from construction and operation exceeding a SCAQMD localized threshold (Impacts AQ-3 and AQ-8); expose sensitive receptors to substantial levels of toxic air contaminants (TACs) during construction and operation (Impacts AQ-4 and AQ-9); or create objectionable odors during construction and operation affecting a substantial number of people (Impacts AQ-5 and AQ-10).

The proposed Project would comply with all applicable air quality regulation and applicable strategies of the San Pedro Bay Ports Clean Air Action Plan including construction Best Management Practices (BMPs) made enforceable through the Harbor Development Permit. Project operations would comply with SCAQMD's rules and regulations to obtain air permits, permit conditions and regulations, California Air Resources Board's Truck and Bus Regulation, Clean Air Action Plan, and Community Emission Reduction Plan actions. The impact of the Project with respect to compliance with the applicable air quality management plans would be less than significant (Impacts AQ-1 and AQ-6).

Project criteria air pollutant emissions during construction and operations would increase compared to baseline conditions, and these emissions would contribute to regional nonattainment conditions and cause localized increases in criteria air pollutant concentrations. However, the Project would comply with SCAQMD fugitive dust control requirements and California's In-Use Off-Road Diesel-Fuel Fleets Regulation requirements during construction. During operations, the Project would increase ozone precursor emissions (volatile organic compounds [VOCs] and nitrogen oxides [NOx]). During construction and operations, the emissions increases would occur at levels below the SCAQMD daily significance thresholds and localized significance thresholds (LSTs). Criteria air pollutant impacts would be less than significant (Impacts AQ-2, AQ-3, AQ-7, and AQ-8).

Project construction emissions would include diesel particulate matter (DPM), which is a TAC. Emissions would not result in an excessive incremental cancer risk to sensitive receptors (residents or on-site workers), and the potential incremental cancer risk associated with construction DPM would be below the SCAQMD health risk thresholds, resulting in a less-than-significant impact (Impact AQ-4). Project emissions during operations would cause localized increases in TACs, primarily in the form of VOC emissions from the two new storage tanks. A health risk screening evaluation indicates that the new TAC emissions during operations would comply with the SCAQMD health risk thresholds and the thresholds of SCAQMD Rule 1401. Project operations would not expose sensitive receptors to substantial pollutant concentrations of TACs, and this impact would be less than significant (Impact AQ-9).

A short-term increase in air pollutants and odors would occur during construction; however, these emissions would adequately disperse below objectionable levels, resulting in a less-than-significant impact (Impact AQ-5). Project operation would cause increases in VOC and hydrogen sulfide (H₂S) emissions. However, the Project's emission rates and distances between emission sources and the nearest sensitive receptors would cause downwind concentrations of odorous emissions to be well below the thresholds for objectionable odors. The impact would be less than significant (Impact AQ-10).

1 Geology and Soils

2 Impacts on geology and soils were evaluated by determining the potential for the proposed Project
3 to directly or indirectly cause potential substantial adverse effects involving rupture of a known
4 earthquake fault, strong seismic ground shaking, seismic-related ground failure, including lique-
5 faction, and landslides (Impact GEO-1); result in substantial soil erosion or loss of topsoil during
6 construction and operation (Impacts GEO-2 and GEO-3); be located on geologic units or soil that
7 is unstable and potentially result in a landslide, lateral spreading subsidence, liquefaction, or
8 collapse (Impact GEO-4); or be located on expansive soil, creating risks to life or property (Impact
9 GEO-5).

10 Although the proposed Project is located in a seismically active region and is likely to experience
11 moderate to strong ground shaking within its lifetime, the ground improvement system (such as a
12 Drill Displacement Column™ or Rammed Aggregate Piers®) and mat-raft foundation would ensure
13 that impacts from ground shaking, liquefaction, and unstable geologic units would be less than
14 significant. The Project is located on relatively flat terrain and is not located in an area susceptible
15 to landslides; as such, no impact from landslides would occur (Impact GEO-1). In addition to the
16 ground improvement system and mat-raft foundation, the Project would also comply with applica-
17 ble State and local building codes, including the California Building Code (CBC) and municipal
18 code provisions. Impacts related to unstable geological units would be less than significant
19 (Impact GEO-4).

20 Excavation and grading for the new tank foundations could loosen soil and trigger or accelerate
21 erosion. However, the construction grading permit and the Stormwater Pollution Prevention Plan
22 (SWPPP) would include provisions to minimize erosion. Construction impacts to erosion would
23 be less than significant (Impact GEO-2). Operation of the proposed Project would not require
24 ground disturbance, and operations would occur within the same footprint of the existing site. The
25 SWPPP would include provisions to minimize erosion during operations. Impacts during operation
26 would be less than significant (Impact GEO-3).

27 While the Project site is underlain by expansive soils, the proposed Project would incorporate the
28 recommendations of the site-specific 2018 updated geotechnical update report including place-
29 ment of compacted sand beneath the proposed tanks; installation of a ground improvement
30 system and mat-raft foundation system; and would comply with applicable State and local building
31 codes, including CBC and municipal code provisions. Impacts would be less than significant
32 (Impact GEO-5).

33 Greenhouse Gas Emissions

34 The evaluation of GHGs and global climate change determines the potential for the proposed
35 Project to generate GHGs during construction and operations that may have a significant impact
36 on the environment contributing to global climate change (Impacts GHG-1 and GHG-2). The dis-
37 cussion also addresses whether the Project would conflict with an applicable plan, policy, or
38 regulation adopted for the purposes of reducing the emissions of GHG (Impact GHG-3).

39 The Project's construction GHG emissions would not exceed the SCAQMD GHG emissions
40 significance threshold. Therefore, the impact of the proposed Project's GHG emissions during
41 construction would be less than significant (Impact GHG-1). During operations, GHG emissions
42 would be generated during the transferring of materials between the two new storage tanks, the
43 change in volume of truck traffic, increased use of the existing thermal oxidizer, and increased
44 use of electricity at the site. The quantity of operational GHG emissions would not exceed the
45 SCAQMD GHG emissions significance threshold, and this impact would be less than significant
46 (Impact GHG-2).

The proposed Project would not conflict with any applicable GHG emissions reduction plans, strategies, policies, or regulations, and this impact would be less than significant (Impact GHG-3).

Hazards and Hazardous Materials

Impacts to hazards and hazardous materials were evaluated by determining the potential for the proposed Project to create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials during construction and operation (Impacts HAZ-1 and HAZ-2); or 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 (Impact HAZ-3).

Construction and operation activities could result in spills or leaks of hazardous materials, but compliance with the existing SWPPP, Soil Management Plan (SMP), Spill, Prevention, Control and Countermeasure Plan (SPCC), and Oil Spill Contingency and Facility Response Plan would reduce impacts to a less than significant level (Impacts HAZ-1 and HAZ-3).

Construction and operation activities would involve a risk of accidental release of hazardous materials. Compliance with the existing SWPPP and continued implementation of existing emergency contingency plans addressing hazardous material handling and storage, spill protocols, and worker training would reduce impacts to a less than significant level (Impacts HAZ-2 and HAZ-4).

Hydrology, Water Quality, and Sea-Level Rise

Impacts to hydrology, water quality, and sea-level rise were evaluated by determining the potential for the proposed Project to result in a risk of pollutant release due to inundation by flood or tsunami exacerbated by effects of sea-level rise (Impact HWQ-1).

Although there is a risk of inundation of the Project site during flood conditions in combination with future sea-level rise, the existing containment wall is designed to protect against a 100-year storm surge event that would protect against projected sea-level rise. Air-driven pumps would also divert water, should overtopping occur. Impacts during construction and operation would be less than significant (Impact HWQ-1).

ES.6 Public Involvement

The POLB prepared a Draft Initial Study/Negative Declaration (IS/ND) and Application Summary Report for the proposed World Oil Tank Installation Project and circulated it for public review and comment from October 7, 2020 through November 20, 2020 (State Clearinghouse #2020100119). 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. Substantial public comments were received on the Draft IS/ND. A Final IS/ND, including responses to comments received on the Draft IS/ND, was completed in September 2021. On October 28, 2021, the Board of Harbor Commissioners adopted a Negative Declaration that the Project would pose no significant effects on the environment. The determination was appealed to the Long Beach City Council. Prior to the Long Beach City Council's appeal hearing in January 2022, Ribost stipulated that an EIR be prepared by the Port for the proposed Project. The City Council dismissed the appeal hearing.

The POLB issued a Notice of Preparation (NOP) and revised Initial Study on January 30, 2023 (State Clearinghouse #2020100119). The NOP described the proposed Project, potential environmental impacts of the proposed Project, solicited public input on environmental issues to be addressed in the EIR, and announced the public scoping meetings. The POLB conducted two public scoping meetings; one virtual meeting on February 8, 2023, and one in-person meeting on February 15, 2023, at the Port of Long Beach Administrative Building. During the public review

period 12 letters were received. One person spoke at the virtual meeting; no people spoke at the in-person meeting.

Table ES-1 (also found in Appendix A) summarizes the environmental issues identified during the public scoping process (January 30 – February 28, 2023) and indicates the EIR section(s) in which these issues are addressed.

Table ES-1. Comments Received During the World Oil Tank Installation Project Public Scoping Process

Commenter	Comment Summary	EIR Section Addressing Comment
Native American Heritage Commission (NAHC) – Andrew Green, Cultural Resources Analyst	The NAHC notes that CEQA has been amended to add a separate category for “tribal cultural resources.” Also, Assembly Bill 52 (AB 52) applies to any project for which a NOP or notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015. Senate Bill 18 (SB 18) applies if the project involves adoption of or amendment to a general plan or specific plan. The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project as early as possible. Additional requirements of AB 52 and SB 18 were provided. NAHC outlines recommendations for cultural resources assessments.	Section 1.8 (<i>Environmental Resources Not Affected by the Proposed Project</i>) Appendix B, Initial Study, Section 2-XVIII (<i>Tribal Cultural Resources</i>)
Russ McCurdy	Mr. McCurdy asserts that an increased number of storage tanks would result in more tanker truck traffic on highways already experiencing heavy traffic (I-170, CA-47, I-110, and CA-103), as well as more air pollution. Mr. McCurdy recommends that World Oil Terminals contribute to highway improvements to reduce impacts.	Section 1.8 (<i>Environmental Resources Not Affected by the Proposed Project</i>) Section 3.1 (<i>Air Quality and Health Risk</i>) Appendix B, Initial Study, Section 2-XVII (<i>Transportation</i>)
Long Beach Area Chamber of Commerce – Kate Lomas Gutierrez/ Jeremy Harris	Letter of Support – Project will support the Port’s goals related to the reduction of emissions, creation of employment opportunities, and increased Port productivity. The Project will provide storage and efficiency benefits, as well as contribute to employment by maintaining existing jobs at terminals and supporting the creation of more jobs during the construction phase. The new storage tanks would meet or exceed all Federal and Air Quality Management District (AQMD) emission reduction requirements.	N/A
FuturePorts – Kat Janowicz, Chair, Board of Directors	Letter of Support – Project will provide storage and efficiency benefits; contribute to employment; and provide surge capacity for blending and storage of marine fuels to meet cleaner IMO 2020 standards, which will directly benefit Port tenants who use these fuels. The new storage tanks would meet or exceed all Federal and Air Quality Management District (AQMD) emission reduction requirements.	N/A
South Bay Association of Chambers of Commerce – Mark Waronek, SBACC Board Chair	Letter of Support – Reiterates the same points as the Long Beach Chamber of Commerce.	N/A

Commenter	Comment Summary	EIR Section Addressing Comment
Gabrieleno Band of Mission Indians – Kizh Nation – Andrew Salas, Chairman	The Gabrieleno Band of Mission Indians – Kizh Nation’s Tribal Government requests consultation with the Port to discuss the Project and the surrounding location, as the World Oil Terminal is within their Ancestral Tribal Territory. Note: AB 52 concluded in 2022. The Port scheduled a courtesy call with interested tribes in October 2022. The scheduled call was canceled by the tribe via email stating after further review of the site and proposed activities the tribe’s concerns have been reduced and they do not request measures.	Section 1.8 (<i>Environmental Resources Not Affected by the Proposed Project</i>) Appendix B, Initial Study, Section 2-XVIII (<i>Tribal Cultural Resources</i>)
California Department of Transportation (Caltrans)– Miya Edmonson, LDR/CEQA Branch Chief	Caltrans notes that the Project would result in less-than-significant impacts on transportation facilities during construction and operation. Caltrans states that any transportation of heavy construction equipment and/or materials that requires the use of oversized-transport vehicles on State highways would need a Caltrans transportation permit. Caltrans recommends that large-size truck trips be limited to off-peak commute periods.	Section 1.8 (<i>Environmental Resources Not Affected by the Proposed Project</i>) Appendix B, Initial Study, Section 2-XVII (<i>Transportation</i>)
Earthjustice – Oscar Espino-Padron, Senior Attorney/Shana Emile, Senior Associate Attorney	Earthjustice notes that the Project would add to the cumulative air and climate change impacts that fossil fuel infrastructure and other polluting operations currently place on surrounding communities, and as such, the EIR should disclose critical information about the health and environmental impacts of the Project. It is also noted that the Initial Study underestimates potential environmental impacts and should be analyzed in detail in the EIR, including how the Project would impact air quality, climate, and the Port’s environmental commitments. The commitments that were described as in conflict with the Project include the Port’s Green Port Policy, the South Coast AQMD’s 2022 Air Quality Management Plan, and the California State Air Resources Board’s 2022 Scoping Plan to reduce GHG emissions.	Section 3.1 (<i>Air Quality and Health Risk</i>) Section 3.3 (<i>Greenhouse Gas Emissions</i>)
Dr. Clyde T. (Tom) Williams, President Emeritus Citizens Coalition for A Safe Community, Sierra Club Angeles Water and Transportation Committees	Dr. Williams requests details regarding the proposed Project, site, and operations, for example inventories of onsite liquids. Past annual uses, modes of transport, historic aerial photos and satellite images of the site, and existing physical limitations. Requests the provision of alternatives, specific mitigation measures, and other measures to be implemented, such as alternatives that would not be subject to tsunami inundation risk and mitigation for all construction activities, including 100 percent impervious surfaces at the Project site. Dr. Williams notes concerns specific to geology, air quality, hazardous materials, and historic resources and requests the revision and recirculation of the Initial Study.	Section 1 (<i>Introduction and Project Description</i>) Section 3.1 (<i>Air Quality and Health Risk</i>) Section 3.2 (<i>Geology and Soils</i>) Section 3.4 (<i>Hazards and Hazardous Materials</i>) Section 5 (<i>Alternatives Comparison</i>) Appendix B, Initial Study, Section 2-V (<i>Cultural Resources</i>)
Long Beach Unified School District, Business Services Department Facilities Development & Planning – David Miranda, Executive Director	The District requests that the Port provide truck routes and construction vehicles to avoid streets adjacent to schools (Edison and Chavez Elementary Schools) and detailed information regarding how the increase in emissions would not impact school age children nearby. The District also requests that the Port ensure the established safe walking routes are not impeded in relation to nearby schools and clarify if the 10% truck traffic increase includes additional traffic from the leased portion of the property.	Section 1.8 (<i>Environmental Resources Not Affected by the Proposed Project</i>) Section 3.1 (<i>Air Quality and Health Risk</i>) Appendix B, Initial Study, Section 2-XVII (<i>Transportation</i>)

Commenter	Comment Summary	EIR Section Addressing Comment
BizFed – John Musella, Chair Santa Clarita Valley Chamber/David Fleming, Founding Chair/Tracy Hernandez, Founding CEO/David Englin, President	Letter of Support – With the addition of the two smaller tanks, the Project will be able to provide surge capacity for blending and storage of marine fuels to meet cleaner IMO 2020 standards, and support industries who help our state become more resilient by utilizing recycled materials and using already existing infrastructure to meet our economy’s critical infrastructure demands. Adding storage capacity to the World Oil facilities is in the best interest of California policies.	N/A
World Oil Employees	Letter of Support – Petition signed by 19 employees stating the Project will reduce marine emissions from ships and can be used for renewable fuels in the future. The new storage tanks would meet or exceed all Federal and AQMD emission reduction requirements. The Project will contribute to a cleaner and more sustainable future and secure jobs.	N/A

A Draft EIR was distributed to various government agencies, organizations, and individuals for a 45-day public review period, which started on October 25, 2023, and ended on December 11, 2023 at 4 p.m. The POLB granted a 4-day extension to the public review period, extending it to December 15, 2023. The Draft EIR was also made available for review at the POLB’s Administration Building, various public libraries, and online at the POLB website. Two public hearings were held during the public review period for the Draft EIR on November 8, 2023 (virtual), and November 9, 2023 (in-person at the POLB Administration Building, Multi-Purpose Room). During the public review period, 16 comment letters were received, five people spoke at the virtual public hearing, and one person spoke at the in-person public hearing. CCC Staff submitted a written comment letter dated December 27, 2023, specifically addressing Coastal Act and PMP Consistency Analysis in the Draft ASR.

These letters will be maintained as part of the project record; formal responses are provided in Chapter 9 (Comments Received and Responses to Comment) of this Final EIR. Responses to the comments on Coastal Act and the PMP are provided in Section 8 of the Final ASR.

ES.7 Areas of Controversy

Areas of controversy identified by the POLB include air quality and health risk; GHG emissions impacts associated with Project operations; sea-level rise; transportation; global climate change; geology and soils; and hazards and hazardous materials. During the scoping period concerns were expressed that emissions generated during construction and operation of the proposed Project may potentially exceed SCAQMD thresholds, impacts related to criteria air pollutants may be significant, and that the new tanks would result in a considerable contribution to the cumulative air quality impacts from storage tanks operated throughout Southern California. There are concerns that operational traffic would exacerbate existing local traffic congestion. Commenters also expressed concerns over the Project’s role, as a part of the fossil fuel industry, in contributing to cumulative impacts on climate change. There are also concerns regarding the geology of the Project site and its ability to support the proposed tanks. An additional concern involves the proper handling and storage of hazardous material at the Project site.

ES.8 Issues to be Resolved

There are no outstanding issues to be resolved. The analysis provided in this EIR responds to all substantial issues identified by the public and regulatory agencies.

ES.9 Environmental Impacts and Mitigation Measures

Table ES-2 presents a summary of the impacts of the proposed Project evaluated in this EIR and their corresponding significance conclusions. Refer to Section 3.1 through 3.5. of this EIR for a detailed description of the environmental analysis for the Project. As shown in the table, all Project impacts would result in either a less-than-significant impact or no impact. No mitigation measures are required.

Table ES-2. Summary of the Proposed Project's Environmental Impacts

Impact	Significance Conclusion
Air Quality and Health Risk	
Impact AQ-1: Construction conflicts with or obstructs implementation of the applicable air quality plan.	Less than Significant
Impact AQ-2: Construction results in a cumulatively considerable net emission increase exceeding any of the South Coast Air Quality Management District (SCAQMD) thresholds of significance.	Less than Significant
Impact AQ-3: Construction results in off-site ambient air pollutant concentrations exceed a SCAQMD Localized Significance Threshold.	Less than Significant
Impact AQ-4: Construction exposes sensitive receptors to substantial levels of toxic air contaminants (TACs).	Less than Significant
Impact AQ-5: Construction creates objectionable odors during construction affecting a substantial number of people.	Less than Significant
Impact AQ-6: Operation conflicts with or obstruct implementation of the applicable air quality management plan.	Less than Significant
Impact AQ-7: Operation results in a cumulatively considerable net emission increase exceeding any of the SCAQMD thresholds of significance.	Less than Significant
Impact AQ-8: Off-site ambient air pollutant concentrations from operations exceed a SCAQMD Localized Significance Threshold.	Less than Significant
Impact AQ-9: Operations exposes sensitive receptors to substantial levels of TACs.	Less than Significant
Impact AQ-10: Operations creates objectionable odors affecting a substantial number of people.	Less than Significant
Geology and Soils	
Impact GEO-1: 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. ii) Strong seismic ground shaking iii) Seismic-related ground failure, including liquefaction iv) Landslides	Less than Significant
Impact GEO-2: Construction results in substantial soil erosion or the loss of topsoil.	Less than Significant
Impact GEO-3: Operations results in substantial soil erosion or the loss of topsoil.	Less than Significant
Impact GEO-4: 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 GEO-5: 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	Significance Conclusion
Greenhouse Gas Emissions	
Impact GHG-1: Generate GHG emissions, either directly or indirectly, during construction that may have a significant impact on the environment.	Less than Significant
Impact GHG-2: Generate GHG emissions, either directly or indirectly, during operations that may have a significant impact on the environment.	Less than Significant
Impact GHG-3: Conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of GHG.	Less than Significant
Hazards and Hazardous Materials	
Impact HAZ-1: Construction creates a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Less than Significant
Impact HAZ-2: Construction creates 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
Impact HAZ-3: Operation creates a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Less than Significant
Impact HAZ-4: Operation creates 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
Hydrology, Water Quality, and Sea-Level Rise	
Impact HWQ-1: Result in a risk of pollutant release due to inundation by flood or tsunami, and these risks would be exacerbated due to the effects of sea-level rise.	Less than Significant

CHAPTER 1. INTRODUCTION AND PROJECT DESCRIPTION

1.1. Introduction

Ribost Terminal LLC, doing business as (dba) World Oil Terminals (Ribost) submitted a Harbor Development Permit to the Port of Long Beach (Port or POLB) on August 14, 2019, to construct and operate two new 25,000 barrel (bbl)-capacity internal floating roof petroleum storage tanks with foundations, pumps, and connections to existing utilities, such as electrical lines and petroleum piping at the existing Ribost Terminal in the Port located at 1405 Pier C Street, Long Beach, California (Project). Ribost Terminal does not produce or refine crude oil or natural gas.

Ribost operates seven existing storage tanks at its facility under Permits to Operate issued by the South Coast Air Quality Management District (AQMD). The existing tanks would continue to operate as currently permitted, which includes the storage of petroleum products. Ribost would also seek permits from the AQMD for the construction and operation of the two new smaller tanks to store petroleum oil products transported to and from World Oil Refining in South Gate instead of two currently underutilized, larger tanks. Two existing underutilized tanks that currently store oil products transported to and from World Oil Refining in South Gate would then be available to lease to customers to store fuels to be transported to and from the facility via existing pipeline. There are no proposed improvements to the existing pipelines, truck loading racks, or to customer facilities.

The City of Long Beach, acting by and through its Board of Harbor Commissioners, (POLB) has prepared this Environmental Impact Report (EIR) as required under the California Environmental Quality Act (CEQA) to analyze potential environmental impacts associated with implementation of the proposed Project.

The Port is the lead agency under CEQA. This EIR fulfills the requirements of CEQA (Public Resources Code [PRC], Section 21000 et seq.), CEQA Guidelines (14 California Code of Regulations [CCR], Section 15000 et seq.), and Port Procedures for Implementation of the CEQA (Resolution No. HD-1973). According to CEQA Guidelines Section 15121(a) (CCR, Title 14, Division 6, Chapter 3), the purpose of an EIR is to serve as an informational document that:

...will inform public agency decision-makers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

This EIR evaluates the direct, indirect, and cumulative effects of the Project in accordance with the provisions set forth in the CEQA Guidelines. It will be used to address potentially significant environmental issues, and to recommend adequate and feasible mitigation measures that, where possible, could reduce or eliminate significant environmental impacts. Other state and local agencies that have jurisdiction or regulatory responsibility over components of the Project will also rely on this EIR for CEQA compliance as part of decision-making processes. This chapter discusses the Project background (Section 1.2), Project location (Section 1.3), Project objectives (Section 1.4), Project characteristics (Section 1.5), Project alternatives (Section 1.7), Intended Uses of the EIR (Section 1.8), environmental resources not affected by the proposed Project, public involvement, and the permits and approvals needed for the proposed Project (Section 1.8).

1.2. Project Background

1.2.1. Site History

The existing 6-acre site at 1405 Pier C Street has been privately owned and operated as a petroleum storage facility since 1964. The property was originally owned and operated by Powerine Oil Company from 1964 to 1983. In 1983, Ribost purchased the 6 acres of land from Powerine and leased it back to Powerine from February 1983 to December 1996, at which point Ribost assumed operational control.

1.2.2. Existing Project Site Conditions and Operations

The Ribost Terminal is approximately 261,000 square feet (6 acres) and contains seven existing petroleum tanks within the existing 12.5- to 13-foot containment wall. 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 (see Figure 1-1). Currently four of the seven tanks are available for lease to customers. Three tanks are dedicated to Ribost Terminal operations and contain crude oil.

World Oil Corp., the parent company to Ribost and Lunday-Thagard Company dba World Oil Refining (World Oil Refining), primarily recycles oil-based waste including used motor oil, antifreeze, and oily wastewater into motor oil, marine diesel fuel, new antifreeze, and paving and roofing asphalt blending components. The asphalt blending components are then used at World Oil Refining in South Gate, California. However, current operations at the Ribost Terminal do not involve these activities, nor are on-site processing of material proposed.

The proposed Project to construct and operate two additional 25,000-bbl storage tanks at the facility would ultimately provide for more efficient terminal operations by providing the appropriate crude oil storage capacity for World Oil Refining, the paving/roofing asphalt refinery in South Gate. World Oil Refining purchases crude from the Ribost Terminal. Upon construction of the proposed two smaller tanks, two of the three existing tanks which currently store crude oil would then be available for lease by customers for storage of fuel oils, thereby increasing petroleum storage capacity. Storage of petroleum products is permissible under the Ribost Terminal's Permit to Operate issued by the South Coast AQMD. At this time, customers for this additional petroleum storage capacity have not yet been identified and are unknown. However, pipeline transfers to these tanks would occur as is done currently. Due to the speculative nature regarding the future destination(s) and use(s) of the petroleum products, an assessment of this topic cannot be reasonably forecast per *State CEQA Guidelines* Section 15145.

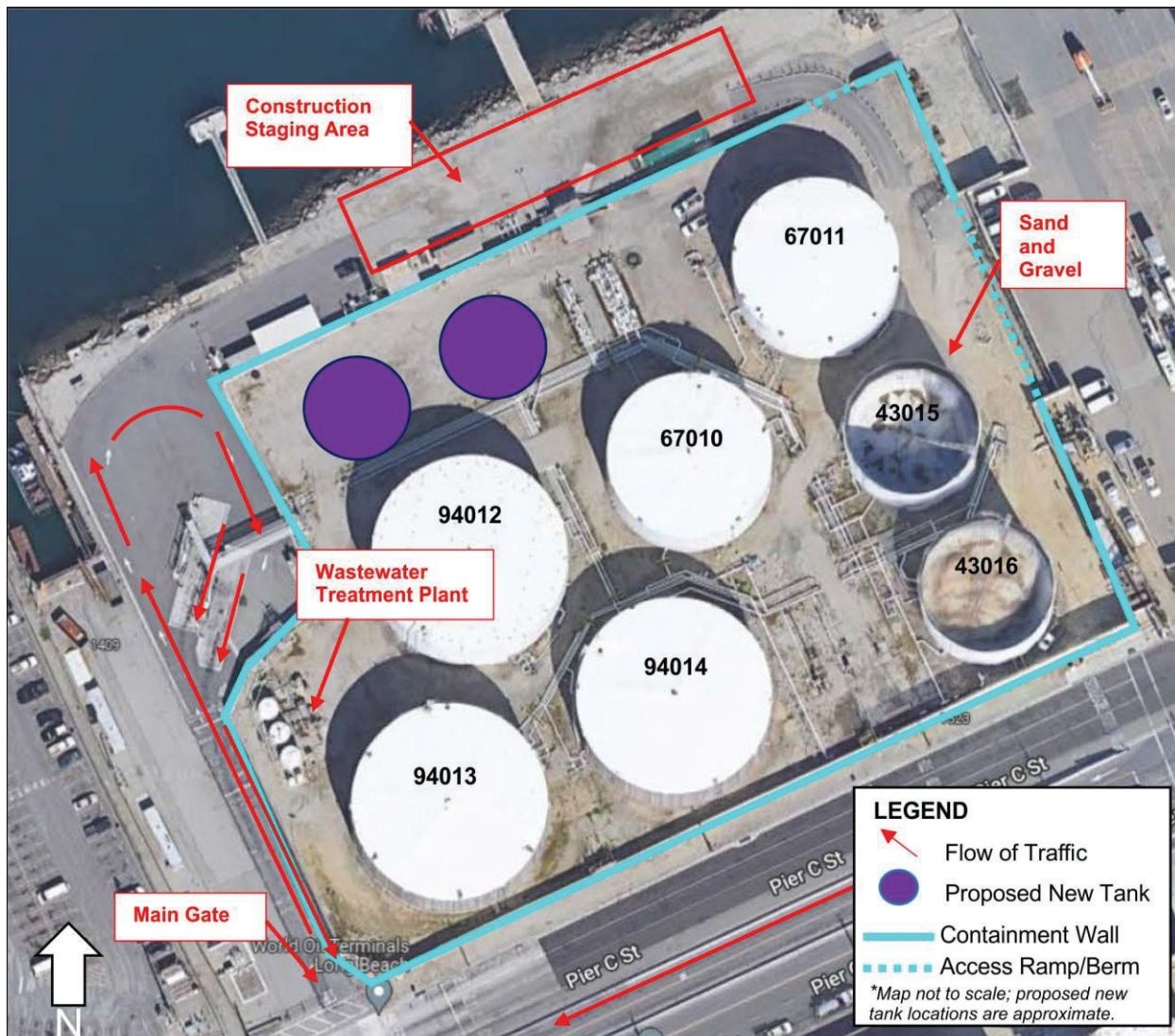
The majority of the 6-acre site is unpaved and covered with sand and gravel, whereas 0.83 acre is paved with concrete. The unpaved gravel surface lies atop riprap and fill. The paved surfaces cover the western portion of the terminal and provide access for trucks to enter the site, load or unload, and exit from the same access point located on Pier C Street (one-way in, one-way out), as shown on Figure 1-2. Each on-road transport truck has a capacity of approximately 6,700

Figure 1-1. Existing Tanks



gallons (160 bbl). The terminal can accommodate a maximum truck capacity of five trucks due to the limited available area for truck queuing and the required clearance for emergency and fire lane access. The loading area is equipped with a berm capable of containing the equivalent of one truckload (approximately 6,700 gallons) of crude oil in the event of an accidental spill. A drainage device in the center of the berm collects the oil into a processing area to prevent oil from permeating soil or contaminating seawater.

Figure 1-2. Project Site Plan – World Oil Tank Installation Project



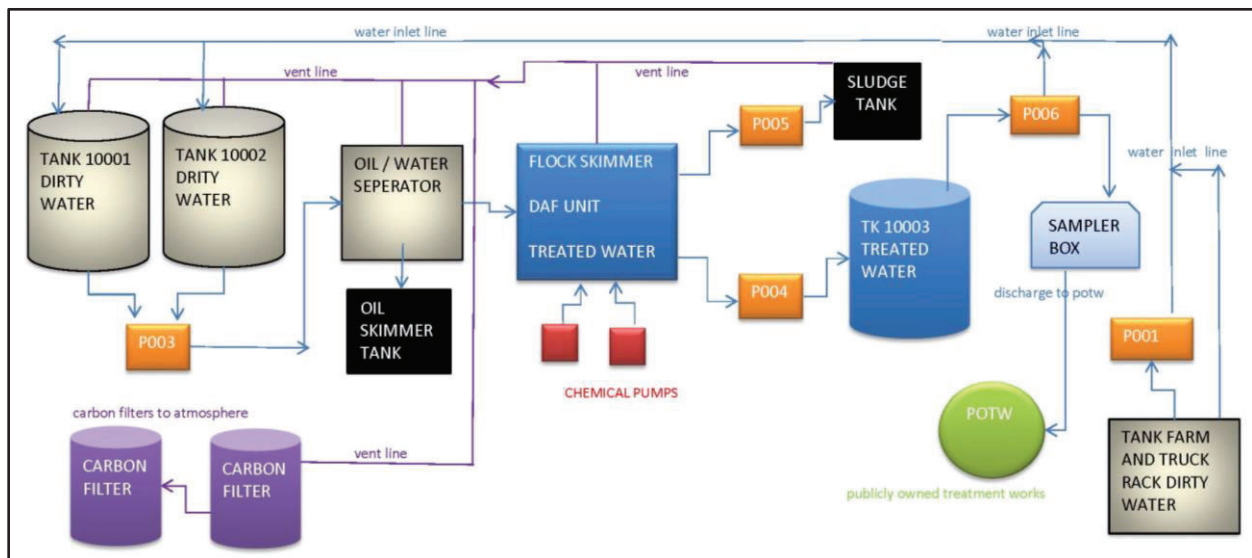
Existing tanks allocated to the Ribost Terminal (Tanks 43015, 43016, and 67011, as shown in Figure 1-2) store crude oil that is transmitted to and from the tanks by a dedicated receive-only pipeline and daily on-road transport truck trips to and from the terminal to World Oil Refining located in South Gate, California. Periodically, crude oil may be returned to the tanks by on-road transport trucks for refinery crude balancing. In the current tanks leased to customers, different grades of marine fuels, such as marine diesel oil, high and low sulfur vacuum gas oil, bunker fuel oil, and low sulfur fuel oil have been stored (World Oil Terminals, 2023 – Material Throughput). The Ribost Terminal does not receive or transport any asphalt or asphalt blending materials

(World Oil Terminals, 2023). All seven existing tanks are within a containment wall or berm (see Figure 1-2) designed to hold the largest tank's capacity (90,000 bbl) plus a 100-year storm event.

Product is transmitted via two existing 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. During atypical periods when the pipelines are being serviced, product may be transported to/from the leased tanks by on-road transport trucks via the existing truck loading rack. Existing operations also involve use and disposal of hazardous and non-hazardous materials including granulated activated carbon (air pollution control device), WW-6000 (wastewater treatment plant [WWTP] additive to aid in removal of suspended solids in wastewater), and PL-135 (weak aqueous acid to adjust wastewater pH) (World Oil Terminals, 2023 – Material Throughput).

The terminal contains an on-site WWTP that collects, stores, and treats dewatered wastewater from the existing crude tanks and stormwater from the truck loading racks, driveway, and tank containment area (Figure 1-2). The WWTP is a batch operation and only run as needed. All wastewater is transferred into holding Tanks 10001 and 10002 (see Figure 1-3). Water is then pumped to the oil/water separator to remove free-floating oil. The oil is returned to the crude oil tanks, and water is pumped to the dissolved air flotation (DAF) unit where flocculant (also known as WW-6000) is added to aid in the removal of particles and other suspended solids. The suspended solids are skimmed off the top and sent to the sludge tank. From the DAF, water is pumped to Tank 10003 for holding. Prior to discharging to the sewer, the water is sampled to ensure no sheen and correct pH via the sampler box. See Figure 1-3 for the full WWTP process.

Figure 1-3. On-Site Wastewater Treatment Plant Flowchart



For additional information on tank maintenance see Section 1.5.2, *Project Operation and Maintenance*.

1.3. Project Site and Vicinity

The proposed Project is located in the southern portion of the County of Los Angeles in the Northeast Harbor Planning District (District 2) of the Long Beach Harbor (POLB, 1990). The proposed Project would be located within the existing Ribost Terminal at 1405 Pier C Street in Long Beach, California. The terminal is approximately 0.2 mile west of the Long Beach Freeway (I-710) and the Los Angeles River. The two new tanks would be installed in the vacant northwest corner of the existing petroleum bulk station and terminal. Figure 1-4 depicts a map of the Project site within the regional context of the vicinity.

1.3.1. Project Vicinity and Surrounding Land Uses

The Port is the second-largest container port in the US and consists of industrial and heavy commercial cargo shipping and trucking activity. The overall landscape is highly developed, with surrounding industrial 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, the Tesoro Marine Terminal 3 Facility and Inner Harbor Channel to the south, and the Matson Container Yard operated by SSA Terminals to the immediate west.

1.4. Project Objectives

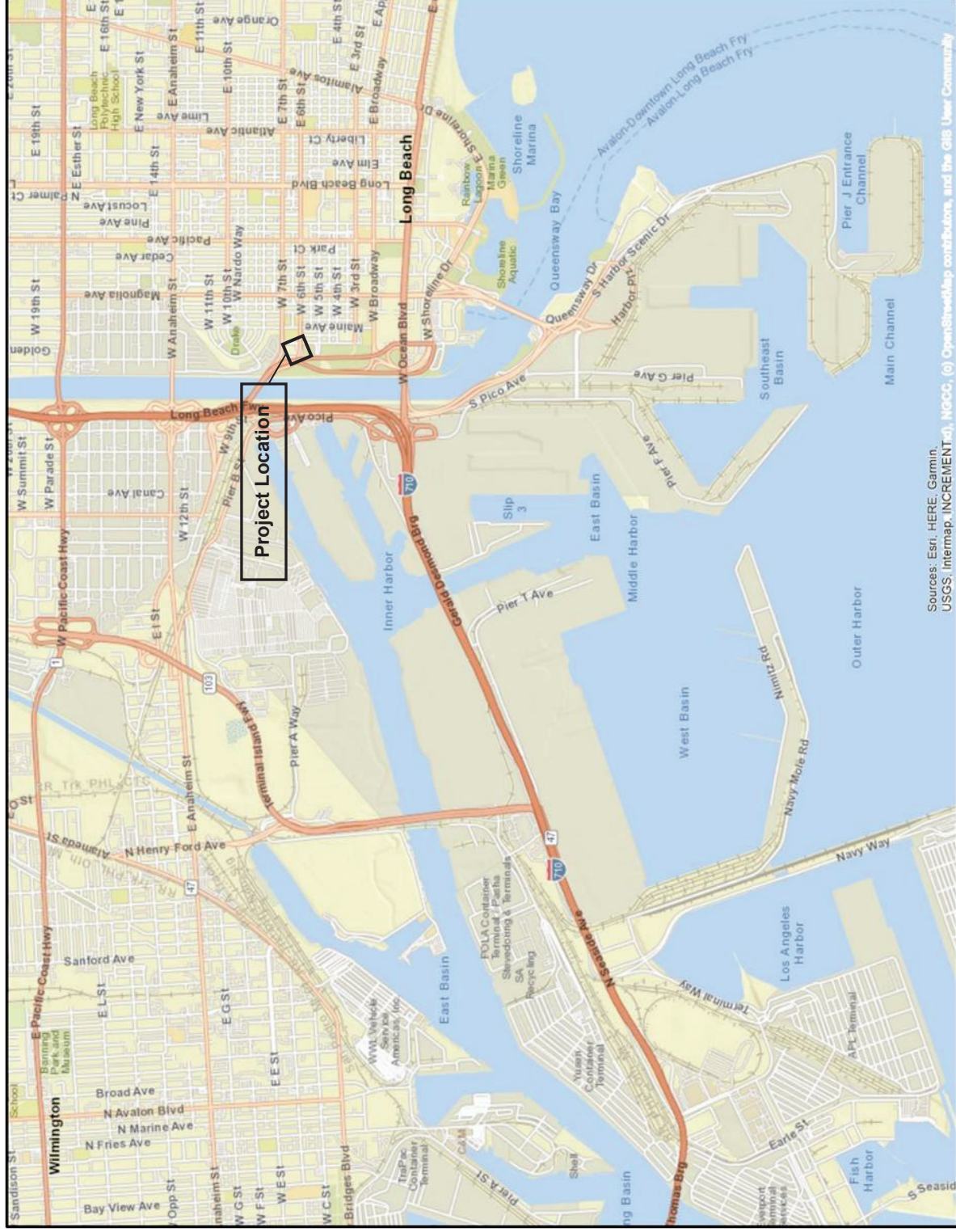
The objectives of the proposed Project are to:

- Increase efficiency of terminal operations;
- Realign storage capacity needs; and
- Make more existing tanks available for lease by customers.

1.5. Project Characteristics

Ribost currently operates seven tanks at the facility, three of which are dedicated to Ribost Terminal operations (Tanks 43015, 43016, and 67011, as shown in Figure 1-2), and proposes to construct and operate two additional, new 25,000-bbl petroleum storage tanks with internal floating roofs, new tank foundations, and piping connections to existing facility infrastructure, including the truck loading racks. The two new, smaller tanks would be located within the existing containment/berm area. These new tanks would realign and provide more adequate storage capacity for Ribost's operations by moving the crude oil currently stored for World Oil Refining, the paving/roofing asphalt refinery in South Gate, from two of the three existing larger tanks at the site. Two underutilized existing tanks would then be removed from Ribost's dedicated paving/roofing asphalt refinery service and made available to lease by customers for storage of fuel oils, such as marine fuels and marine fuel blending components, as is currently done for four of the existing tanks at the facility. No new pipelines, truck loading racks, or other facility modifications are being proposed at the Ribost Terminal, World Oil Refining in South Gate, or the customers' facilities.

1 Figure 1-4. Project Vicinity – World Oil Terminal Tank Installation Project



1.5.1. Project Construction Activities, Equipment, and Schedule

The site would be prepared for tank installation by clearing debris, such as concrete and abandoned underground components. 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 1-5 shows the existing area where the tanks would be installed. An existing out-of-service concrete oil/water separator sump at the Project site would be demolished to accommodate the new tanks (see Figure 1-6).

Figure 1-5. Project Site – View Looking West



Figure 1-6. Concrete Oil/Water Separator Sump (to be demolished)



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. Excavation for the new tanks would be conducted in accordance with World Oil Corp.'s Soil Management Plan and standard operating procedures.

During excavation, soil would be monitored for the presence of hydrocarbons using visual and olfactory observations (sight and smell), as well as using a handheld monitor for detection of hydrocarbon vapors as required by South Coast AQMD regulations. All excavated soil would be set aside for sampling and analysis prior to disposal. Any soil suspected of contamination or observed to be contaminated would be stockpiled separately from the main stockpile. All excavated soil would be disposed of in accordance with Federal and State waste disposal regulations after being analyzed and properly profiled. Clean fill would be imported and compacted pursuant to the tank foundation construction plans.

Existing materials that are determined to be non-hazardous 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). These ground improvement systems are common construction methods for soft ground conditions such as those at the Port. 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 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 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 linear feet (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.

Prior to operation, the two proposed new 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 and discharged to Los Angeles County Sanitation District sanitary sewer. As per current practice, test waters are not re-used.

Prior to installation, the exteriors of the new tanks would be shop-blasted and painted off site with primer, and then upon installation, the tanks would be 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 1-1, starting in 2023 at the earliest 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 1-1. Construction Schedule and Personnel

Proposed Project Construction Phase	Work Activity (subphase)	Duration	Duration (Workdays)	Shifts ¹	Workers Per Day
Phase 1	Excavation/Foundation	4.5 mo.	91	1/10	8
Phase 2	Tank Erection/Painting	6.5 mo.	134	1/10	8

¹ Five-day work weeks; Phases 1 and 2 overlap by approximately 0.5 month, so the total duration is 10 months.

Equipment. The proposed Project would require the use of both on-road heavy-duty trucks and off-road trucks and equipment for construction activities. Table 1-2 shows the breakdown of equipment to be used during construction activities.

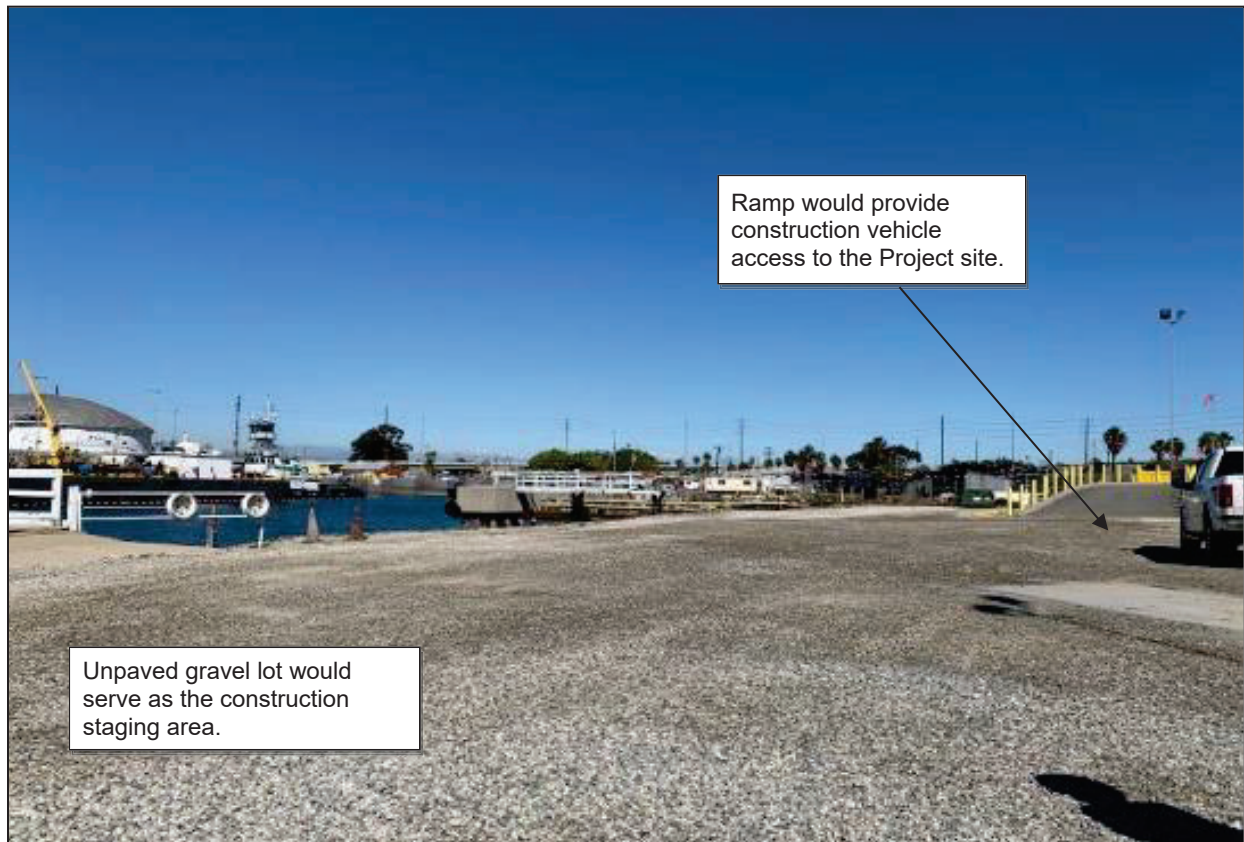
Table 1-2. Construction Equipment

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	55
	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, gated entrance to the Ribost Terminal property, which would be gated for the duration of Project construction and continued 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 Figures 1-2 and 1-7).

Figure 1-5. Staging Area



1.5.2. Project Operation and Maintenance

The existing tanks leased by customers have historically stored different grades of marine fuels, such as marine diesel oil, high and low sulfur vacuum gas oil, bunker fuel oil, and low sulfur fuel oil (World Oil Terminals, 2023 – Material Throughput). The Ribost Terminal does not receive or transport any asphalt or asphalt blending materials (World Oil Terminals, 2023).

Existing tanks converted to 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 Ribost and is a receive-only pipeline that would deliver crude oil to the proposed 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 Ribost 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. No improvements to pipelines to or from the facilities at the Marathon Petroleum Carson Refinery or Glencore's Long Beach Marine Terminal or Carson Marine Terminal are proposed as part of the proposed Project. Therefore, refinery capacity and processes would not be influenced by the proposed Project's storage capacity.

In addition, ongoing operations currently use and dispose of hazardous and non-hazardous materials including granulated activated carbon (air pollution control device), WW-6000 (WWTP

additive to aid in removal of suspended solids in wastewater), and PL-135 (weak aqueous acid to adjust wastewater pH) (World Oil Terminals, 2023 – Material Throughput).

Each of the existing tanks and loading racks at the Ribost Terminal is subject to a South Coast AQMD Permit to Operate that limits throughput, vapor pressure of materials, and the types of materials (based on volatilities and Reid Vapor Pressure [RVP]) that are permitted to be stored. The proposed Project would not enable the facility to increase throughput of existing pipelines, tanks, or loading racks beyond the permitted limits.

The following throughput limits are enforced by South Coast AQMD in the facility's Permits to Operate for each piece of equipment (SCAQMD, 2019):

- 107,500 bbl/month for the 43,000-bbl capacity tanks
- 167,500 bbl/month for the 67,000-bbl capacity tanks
- 235,000 bbl/month for the 94,000-bbl capacity tanks
- 10,000 bbl/day of total throughput for the two truck loading racks

Ribost would need to obtain new Permits to Construct and Permits to Operate from South Coast AQMD for each of the two new storage tanks. The existing tanks would continue to operate as currently permitted. No changes to conditions in Ribost's existing Permits to Operate for the existing tanks are proposed or needed to implement the proposed Project. Although two more of the existing storage tanks would be leased to customers, Ribost would continue to be responsible for compliance with the permits. Additionally, the Ribost Terminal is limited to loading up to 10,000 bbl/day of crude oil into trucks. This limit would not change with implementation of the proposed Project.

New Permits to Construct and Permits to Operate for each of the two new storage tanks would be required from the South Coast AQMD, reflecting the requirements of the South Coast AQMD New Source Review program. The new air permits would identify throughput limits and the types of materials to be stored in the new tanks. The permittee would also be required to incorporate the Best Available Control Technology for limiting air emissions. The air permits would also include conditions requiring proper installation and maintenance of the tanks and floating roofs, use of emissions controls during roof landings during tank cleaning and degassing, and recordkeeping and reporting to verify proper use and maintenance of the tanks.

After proposed Project implementation, the newly leased tanks may also ship product through the truck loading racks during atypical conditions such as when a pipeline is being serviced, as is currently done with existing leased tanks. To account for this, it is estimated that truck trips would increase approximately 10 percent over baseline truck counts. Table 1-3 displays the existing monthly and daily average loading rack truck count and barrels transported. Table 1-4 displays the projected future monthly and daily average loading rack truck count and barrels transported including this 10 percent increase.

Table 1-3. Existing Loading Rack Truck Traffic

2017-2022	Average Truck Count		Barrels	
	Monthly	Daily	Monthly	Daily
Minimum	344	0	54,071	0
Maximum	1,228	53	202,279	8,542
Overall Average	780	26	124,971	4,109

Table 1-4. Proposed New Loading Rack Truck Traffic

	Average Truck Count		Barrels	
	Monthly	Daily	Monthly	Daily
Minimum	378	0	59,478	0
Maximum	1,351	58	222,507	9,396
Overall Average	858	29	137,468	4,520

World Oil's existing emergency contingency plans include the Emergency Response/Contingency Plan; Facility Response Plan; Illness and Injury Prevention Plan; Spill Prevention, Control, and Countermeasure (SPCC) Plan; Hazardous Waste Operations and Emergency Response Plan; Fire Prevention and Protection Plan; and Stormwater Pollution Prevention Plan. As appropriate, these existing plans would be updated to reflect the additional tanks and continue to be implemented. Ribost would continue to conduct annual training and quarterly/annual emergency drills, have evacuation plans, and shutdown procedures.

Additionally, World Oil Corp. has a Soil Management Plan (SMP) covering World Oil-owned and affiliated facilities. This over-arching SMP requires preparation of a site-specific SMP whenever soil grading, excavations, or soil/fill removal will be performed with the potential to encounter buried debris or features that may be considered a contaminant, may contain contaminants, or be the source of contaminants in soil (World Oil Corp., 2023). Thus, a site-specific SMP would be prepared for the Project.

Tank Maintenance

Typical 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 AQMD Air Quality Permit. Ribost would adopt all existing maintenance procedures for the proposed new tanks. Pumps and piping would be inspected, repaired, replaced, or upgraded as needed. Currently, approximately 300 gallons of water are dewatered from each tank daily, 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. For a full discussion on existing on-site wastewater treatment at the Project site, please refer to Section 1.2.1, *Existing Project Site Conditions and Operations*.

Approximately every 10 years, the tanks would be cleaned of sludge, repaired, and/or hydro-tested. Existing 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 (TSDF) such as a US Ecology waste facility. TSDFs may be in any number of locations in the US 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. Although typical tank cleaning and emptying occurs approximately every 10 years, other maintenance activities may be conducted sooner, as needed. Reasons for emptying and/or cleaning a tank could include, but are not limited to, the following:

- Product in a tank does not satisfy the quality requirements or standards,
- The type of product stored in the tank is changed, and the new product is not compatible with or would be contaminated by existing product in the tank, or
- Tank repair is required.

As discussed in Section 1.2.1, the on-site WWTP collects and treats stormwater in the truck loading racks, driveway, and tank containment area. The Project site is also graded to prevent stormwater from industrial areas from draining into Channel 2 (World Oil Terminals, 2023 – Surface and Water Drainage Plan Attachment).

1.6. Project Alternatives

1.6.1. Background to the Alternatives

CEQA Guidelines (Section 15126.6) requires that an EIR examine alternatives to a project in order to explore a reasonable range of alternatives that meet most of the basic project objectives, while reducing the severity of potentially significant environmental impacts. An EIR should also evaluate the comparative merits of the alternatives.

Alternatives usually take the form of reduced project size, different project design and/or operations, suitable alternative project sites, as well as a no project alternative. The range of alternatives discussed in an EIR is governed by a “rule of reason” that requires the identification of only those alternatives necessary to permit a reasoned choice between the alternatives and the proposed project.

The range of feasible alternatives is selected and discussed in a manner to foster meaningful public participation and informed decision-making. Among the factors that may be taken into account when addressing the feasibility of alternatives (as described in CEQA Guidelines Section 15126.6(f)(1)) are environmental impacts, site suitability, economic viability, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the proponent could reasonably acquire, control, or otherwise have access to the alternative site. An EIR need not consider an alternative that is infeasible, whose effects could not be reasonably identified, whose implementation is remote or speculative, or would not achieve the basic project objectives.

In order to comply with CEQA's requirements, each alternative that has been suggested or developed for this Project has been evaluated in the three following ways:

- Does the alternative accomplish all or most of the basic project objectives?
- Is the alternative potentially feasible (from economic, environmental, legal, social, technological standpoints)?
- Does the alternative avoid or substantially lessen any significant effects of the proposed Project (including consideration of whether the alternative itself could create significant effects greater than those of the proposed Project)?

Five preliminary alternatives to the proposed Project were considered, including various alternatives that reduce the number of tanks and tank volume, optimize the size of a single tank, and use alternative sites. In addition to the No Project Alternative required by CEQA, the proposed Project and the Single Tank Alternative (see Section 1.6.3) are evaluated in this EIR. The other alternatives considered, but not carried forward for detailed analysis, are discussed in Section 1.6.2.

1.6.2. Alternatives Considered but Not Carried Forward for Detailed Analysis

This section discusses the four alternatives considered but eliminated from further discussion, including the rationale for decisions to eliminate alternatives from detailed analysis. These alternatives are:

- Reducing the number of tanks to one large tank with equal overall volume to the two proposed tanks (50,000 bbl);
- Reducing the size of both the tanks so that capacity is less than 25,000 bbl each;
- Increasing the size of one tank and reducing the size of the second tank such that total capacity is 50,000 bbl; and
- Placing the tanks at another facility.

To comply with CEQA requirements, each alternative must accomplish all or most of the basic Project objectives discussed in Section 1.4.

Single Large Tank Alternative

This alternative was identified to potentially reduce air quality impacts associated with the construction of two tanks. A single 50,000 bbl tank would be constructed as opposed to two tanks. Constructing a single tank with a capacity of 50,000 bbl would require a tank with a greater height and diameter compared to proposed dimensions of the two 25,000-bbl tanks. As such, doubling the capacity would mean constructing a tank that is twice the height of the proposed tanks, which is not feasible. Due to space limitations at the Project site, a larger diameter tank is not feasible, and this alternative has been eliminated from further consideration.

Reduced Size Tanks Alternative

Under the Reduced Size Tanks Alternative, two new tanks equal in capacity, but less than 25,000 bbl each would be constructed. Reducing the size of the tanks would potentially reduce construction air quality emissions. However, crude oil deliveries via pipeline at the Project site are typically approximately 25,000 bbl each. Each of the proposed Project tanks is sized to receive one crude oil shipment. Two tanks smaller than 25,000 bbl would require a single crude delivery to be divided among two tanks. Crude oil contains a small amount (~1 percent) of emulsified water, which if not removed prior to delivery to refineries, can instantly flash to steam at refinery operating temperatures and pressures, causing equipment damage and/or over-pressurization. Typical operation requires resting new deliveries of crude oil to allow for the water and oil to separate and to pump out the water layer. This would alter the terminal's dewatering operations, and possibly require a fourth tank to be in crude oil service to ensure adequate dewatering is accomplished. This would limit terminal efficiency and the ability to lease tanks to customers, two critical objectives of the proposed Project. As such, this alternative does not meet Project objectives and has been eliminated from further consideration.

Tank Optimization Alternative

This alternative would construct one larger tank and one smaller tank, with a combined volume of 50,000 bbl, where one has a capacity greater than 25,000 bbl and one has a capacity of less than 25,000 bbl. The Project site can only accommodate tank sizes up to 25,000 bbl due to limitations on diameter and height such that this combination would not be feasible. Also, as described for the Reduced Size Tanks Alternative, having a tank with a capacity of less than 25,000 bbl would alter the terminal's dewatering operations and therefore require additional tanks to be in crude oil service limiting terminal efficiency and the ability to lease tanks to customers, which are two critical

objectives of the proposed Project. As such, this alternative has been eliminated from further consideration.

Alternative Siting Alternative

Under this alternative, the proposed tanks would be constructed at another site to reduce potentially cumulative construction and operation impacts. For another site to be suitable, the location would need to meet the following criteria:

- Connection to an existing crude oil pipeline that is capable of moving local THUMS (acronym for the collective oil companies at the Wilmington Oil Field – Texaco, Humble [Exxon], Union Oil [Chevron], Mobil, and Shell) crude oil to the site.
- Sufficient space to build three or more new crude oil storage tanks to adequately dewater the crude. Each tank would need to be at least 25,000 bbl so that one tank could receive a single crude delivery.
- Secondary containment of adequate size or the space available to construct the required secondary containment walls.
- A WWPT to treat the water drawn from tank bottoms after dewatering is complete.
- Connection to sewer to receive the discharge from the WWTP. In addition, the sewer needs to be connected to a publicly owned treatment system that is designed, and with sufficient capacity, to safely receive and treat the wastewater discharged from the site, in the quantities that will be generated by the crude dewatering process.
- Truck loading rack(s) with a vapor collection system and a vapor combustion unit designed to capture and control vapors displaced from trucks, so that the crude oil can be delivered to World Oil Refining in South Gate.
- Natural gas supply to operate the vapor combustion unit for control of the truck loading rack vapors.

There are no other nearby World Oil terminals that meet the above criteria. For example, World Oil Refining in South Gate does not have sufficient space to build new crude oil tanks for the storage and dewatering of crude oil. The largest tanks at the refinery are 10,000 bbl each. Constructing the Project at other World Oil terminals or purchasing another site would not substantially avoid or lessen the impacts of the Project, as construction and operation impacts would still occur at the alternative site. As such, using another site would be infeasible, and similar impacts would likely still occur. Therefore, this alternative has been eliminated from further consideration.

1.6.3. Alternatives Evaluated in this EIR

In addition to the proposed Project, the EIR evaluates a Single Tank Alternative and the No Project Alternative, as described below.

1.6.3.1. Alternative 1: Single Tank Alternative

This alternative was identified to potentially reduce air quality impacts associated with the construction and operation of two tanks. A single 25,000 bbl tank would be constructed as opposed to two tanks. However, having a single tank would reduce the terminal's crude dewatering capability, which is a critical operation. Crude oil contains a small amount (~1 percent) of emulsified water, which if not removed prior to delivery to refineries, can instantly flash to steam at refinery operating temperatures and pressures, causing equipment damage and/or over-pressurization. Typical operation requires resting new deliveries of crude oil to allow for the water and oil to separate and to pump out the water layer. Tank redundancy is also needed when tanks are

removed from service for inspection or repair. Given the quantity of the existing crude deliveries, the time it takes to allow the oil/water to naturally separate, and the fact that storage tanks require routine maintenance which periodically removes them from service, a minimum of three tanks need to be in service for crude oil at the terminal to ensure uninterrupted crude operations. If only one new tank is constructed, two existing tanks would remain in crude service, leaving only one tank available for leasing to customers. This alternative would at least partially realign storage capacity needs, provide for some marginal improvement in the efficiency of terminal operations, and would provide for one tank to be available for lease to customers. Therefore, this alternative does partially meet the Project objectives and is feasible. This alternative has been carried forward for analysis in this EIR. See analysis in Sections 3.1 through 3.4.

1.6.3.2. Alternative 2: No Project Alternative

Under CEQA, the No Project Alternative must consider the conditions that would exist if a project does not proceed, which includes consideration of predictable actions, such as the proposal of some other project (State CEQA Guidelines §15126.6(e)(3)(B)). The No Project Alternative considers the scenario of Ribost continuing existing operations without constructing the two new tanks, tank foundations, pumps, or connections to the pipeline system. The seven existing petroleum tanks would continue to store petroleum products including crude oil and different grades of marine fuels. Loading rack truck traffic and barrels transported would remain the same as existing conditions. No additional flexibility in operations would be achieved and no additional tanks would be available to lease to customers. See analysis in Sections 3.1 through 3.4.

1.7. Intended Uses of the EIR

The POLB has prepared this EIR as required under CEQA to analyze potential environmental impacts associated with implementation of the proposed Project.

The Port is the lead agency under CEQA. This EIR fulfills the requirements of CEQA (PRC, Section 21000 et seq.), CEQA Guidelines (14 CCR, Section 15000 et seq.), and Port Procedures for Implementation of the CEQA (Resolution No. HD-1973). According to CEQA Guidelines Section 15121(a) (CCR, Title 14, Division 6, Chapter 3), the purpose of an EIR is to serve as an informational document that:

...will inform public agency decision-makers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

This EIR evaluates the direct, indirect, and cumulative effects of the Project in accordance with the provisions set forth in the CEQA Guidelines. It will be used to address potentially significant environmental issues, and to recommend adequate and feasible mitigation measures that, where possible, could reduce or eliminate significant environmental impacts. Other state and local agencies that have jurisdiction or regulatory responsibility over components of the Project may rely on this EIR for CEQA compliance as part of decision-making processes.

1.8. Environmental Resources Not Affected by the Proposed Project

CEQA requires that an EIR be prepared when a Lead Agency determines that it can be fairly argued, based on substantial evidence, that a project may have a significant effect on the environment (CEQA Sections 21080[d], 21082.2[d]). Based upon this requirement and in consultation with appropriate state agencies with jurisdiction over resources affected by the proposed Project, the POLB determined that an EIR for the proposed Project should be prepared. In making this determination, the POLB initially determined the proposed Project could result in significant

impacts to the environmental issue areas of Air Quality and Health Risk, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, and Hydrology and Water Quality. These issue areas are discussed in detail in Chapter 3 of this EIR. In addition to addressing potentially significant environmental effects, CEQA requires that an EIR briefly explain the reasons why certain effects associated with a proposed Project have been determined not to be significant, and thus not discussed in detail in the EIR (CEQA Section 21100[c]). Appendix G of the State CEQA Guidelines (Initial Study Checklist) contains a list of environmental resources and issues to be evaluated when a Lead Agency conducts preliminary environmental review of a Project. In conducting the preliminary environmental review of the Project, the POLB determined that the proposed Project would have either no impacts or less-than-significant impacts to the following resources and issues:

- | | | |
|--------------------------------------|--------------------------|---------------------------------|
| ■ Aesthetics | ■ Land Use and Planning | ■ Recreation |
| ■ Agriculture and Forestry Resources | ■ Mineral Resources | ■ Transportation |
| ■ Biological Resources | ■ Noise | ■ Tribal Cultural Resources |
| ■ Cultural Resources | ■ Population and Housing | ■ Utilities and Service Systems |
| ■ Energy | ■ Public Services | ■ Wildfire |

See Appendix B, Initial Study, for further discussion related to these resources and issues.

1.8.1. Public Involvement

The POLB issued a Notice of Preparation (NOP) on January 30, 2023. The NOP described the Project, potential environmental impacts of the Project, solicited public input on environmental issues to be addressed in the EIR, and announced a public scoping meeting. The POLB conducted two public scoping meetings. The first virtual scoping meeting (WebEx) was held on February 8, 2023, and the second in-person scoping meeting was held on February 15, 2023 at the Port of Long Beach Administration Building Multi-Purpose Room, First Floor.

Table ES.6-1 summarizes the environmental issues identified during the public scoping process and indicates the EIR section(s) in which these issues are addressed.

A Draft EIR was distributed to various government agencies, organizations, and individuals for a 45-day public review period, which started on October 25, 2023, and ended on December 11, 2023 at 4 p.m. The POLB granted a 4-day extension to the public review period, extending it to December 15, 2023. The Draft EIR was also made available for review at the POLB's Administration Building, various public libraries, and online at the POLB website. Two public hearings were held during the public review period for the Draft EIR on November 8, 2023 (virtual), and November 9, 2023 (in-person at the POLB Administration Building, Multi-Purpose Room).

During the public review period, 17 comment letters were received, and five people spoke at the public hearing. These letters will be maintained as part of the project record; formal responses are provided in Chapter 9 (Comments Received and Responses to Comment) of this Final EIR. CCC Staff submitted a written comment letter dated December 27, 2023, specifically addressing Coastal Act and PMP Consistency Analysis in the Draft Application Summary Report (ASR). Responses to the comments on Coastal Act and the PMP are provided in Final ASR, Section 8.

1.8.2. Permits and Approvals Needed

In accordance with Sections 15050 and 15367 of the State CEQA Guidelines, POLB is the Lead Agency for the proposed Project and has principal authority and jurisdiction for CEQA actions and Project approval.

The discretionary actions to be considered by POLB as part of the proposed Project include the following:

- Approval and certification of the environmental impact report required under CEQA; and
- Approval of a Harbor Development Permit (HDP) that would allow for the construction activities.

In addition to the Harbor Development Permit, the approvals or permits from other federal, state, local, and/or regional agencies that may be required to implement the proposed Project include but are not limited to those listed in Table 1-5.

Table 1-5. Permits that May Be Required for the Proposed Project

Agency	Jurisdiction	Requirements
Federal		
US Environmental Protection Agency Region 9	Hazardous Waste	Facility has EPA ID, storage <90 days
State		
California Department of Toxic Substances Control	Hazardous Waste	Facility has EPA ID, storage <90 days
State Water Resources Control Board	Water quality	National Pollutant Discharge Elimination System (NPDES) General Construction Activities Storm-water Permit (GCASP)
Local		
South Coast Air Quality Management District	Air quality	Permit to Construct, Permit to Operate. Limits on throughputs and types of materials to be stored; recordkeeping and reporting to verify proper use and maintenance of the new tanks
Los Angeles Regional Water Quality Control Board	Tank hydrotest water Construction	Discharge to Long Beach Harbor Discharge of Storm Water
Los Angeles County Sanitation District	Wastewater treatment	Wastewater discharge limits
City of Long Beach Planning and Building Permit	Construction	Tank construction building codes
City of Long Beach Fire Department	Demolition of out-of-service oil/water concrete separator sump	Underground Storage Tank Permit

CHAPTER 2. RELATED PROJECTS AND RELATIONSHIP TO LOCAL AND REGIONAL PLANS

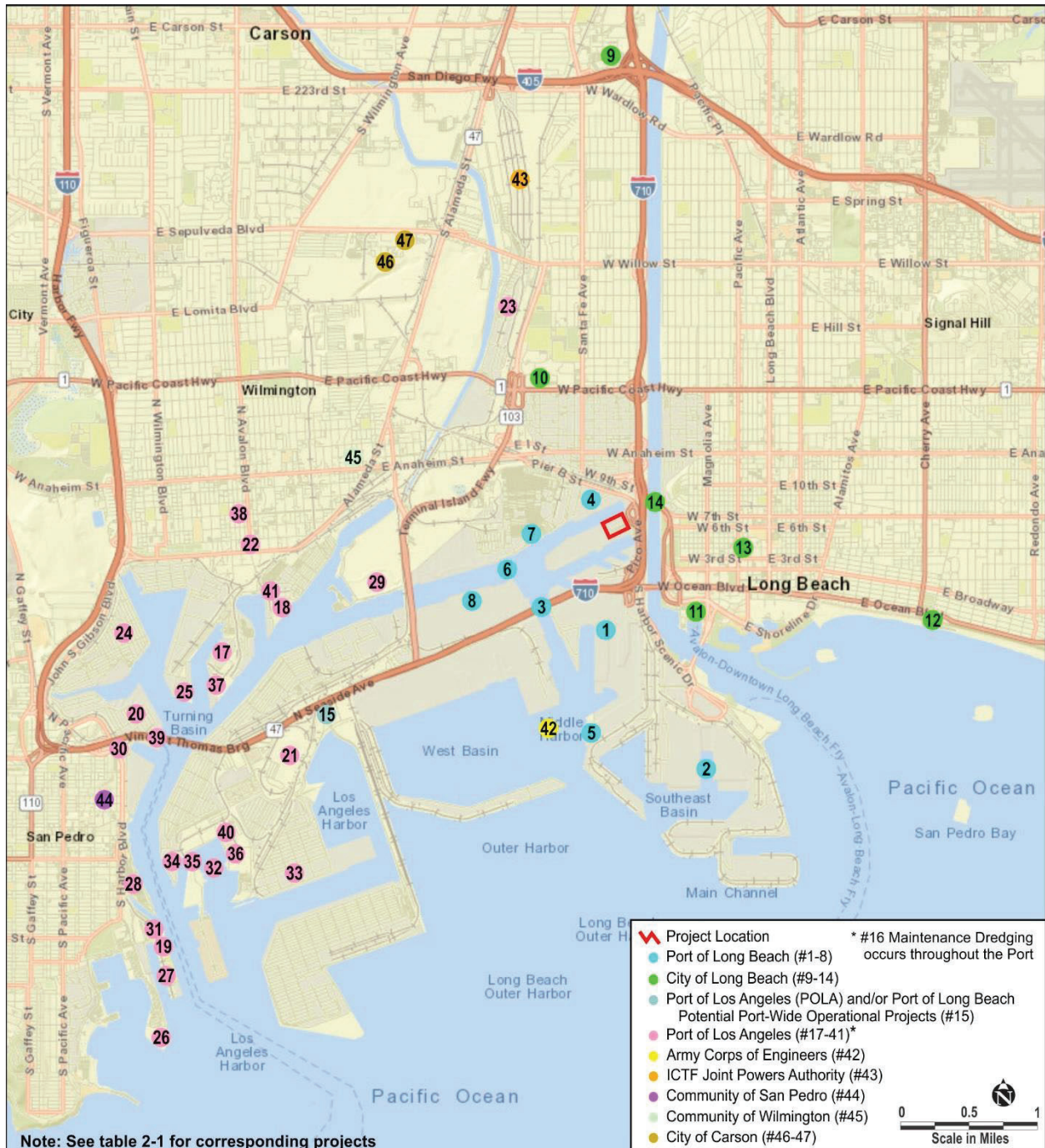
This chapter describes the projects considered in the cumulative impact analysis and presents a synopsis of the local and regional plans, programs, and requirements presented in subsequent sections of this Environmental Impact Report (EIR).

2.1. Related Projects Contributing to Cumulative Effects

In accordance with CEQA (State CEQA Guidelines Section 15130 et seq.), this EIR includes an analysis of cumulative impacts. Per CEQA, “cumulative impacts” refers to two or more individual effects, which are considerable when combined, or which compound or increase other environmental impacts (State CEQA Guidelines Section 15355). To comply with CEQA, a cumulative scenario has been developed as a part of this EIR in order to identify projects that have recently been completed or are reasonably foreseeable and could be constructed or commence operation during the timeframe of activity associated with the proposed Project. This information will be used to determine if the impacts of the proposed Project have the potential to combine with similar impacts of the other projects, thereby resulting in cumulative effects.

The projects considered to be part of the cumulative scenario include past, present, and probable future projects producing related or cumulative impacts, as shown in Figure 2-1, and summarized in Table 2-1. The analyses of cumulative effects for each issue area utilizes this information, as appropriate, to estimate the potential for combined effects of the proposed Project and other projects in the vicinity. However, the geographic scope of analysis varies for each issue area and, therefore, only a subset of the listed projects may be considered in the cumulative analyses for various issue areas. The geographic scope of analysis considered for each issue area are described at the beginning of the cumulative impact sections for each issue area in Chapter 3.

1 **Figure 2-1. Location of Related and Cumulative Projects**



2

1 **Table 2-1. Related and Cumulative Projects**

No. in Figure	Project Title / Location	Project Description	Project Status
Port of Long Beach Projects			
1	Middle Harbor Terminal Redevelopment	Consolidation of two existing container terminals into one 345-acre terminal. Construction includes landfill, dredging, and wharf construction; construction of an intermodal rail yard; and reconstruction of terminal buildings.	Approved project. In operation as of 2016. Construction is expected to be completed by the end of 2025.
2	Piers G & J Terminal Redevelopment Project	The project is in the Southeast Harbor Planning District area of the Port of Long Beach. The project will develop a marine terminal of up to 315 acres by consolidating two existing marine container terminals on Piers G and J and several surrounding parcels. Construction will occur in four phases and will include approximately 53 acres of landfills, dredging, concrete wharves, rock dikes, and road and railway improvements.	Approved project. Construction ongoing.
3	Gerald Desmond Bridge Replacement Project	Replacement of the existing 4-lane Gerald Desmond highway bridge over the Port of Long Beach Back Channel with a new 6- to 8-lane bridge.	FEIR/EA certified in 2010. Construction completed in 2020. Demolition of old bridge underway.
4	Pier B Rail Yard Expansion (On-Dock Rail Support Facility)	Expansion of the existing Pier B Rail Yard in two phases, including realignment of the adjacent Pier B Street and utility relocation.	FEIR certified February 2018. Construction pending.
5	Mitsubishi Cement Corporation Facility Modifications	Facility modification, including the addition of a catalytic control system, construction of four additional cement storage silos, and upgrading existing cement unloading equipment on Pier F.	Project approved in April 2015. Construction commenced June 2021.
6	Southern California Edison Transmission Tower Replacement Project	Replace a series of transmission towers across the Cerritos Channel.	FEIR certified in 2017. Construction completed in August 2021. Demolition of old towers underway.
7	Toyota Facility Improvements Project	Construction of a new consolidated Vehicle Processing and Distribution Center, Hydrogen Call and Generator Facility, and Fueling Station. Demolition of some existing facilities.	Mitigated Negative Declaration adopted in 2018. Construction ongoing.
8	Pier S Container Support Facility Project	Development of an approximately 50-acre container support facility located at Pier S.	Environmental review underway. Construction is expected to begin February 2024.
City of Long Beach Projects			
9	River Park Residential Development Project	Includes 226 detached and attached single-family units on the southern 15 acres of the 20-acre project site and 5 acres of Public Open Space on the northern portion of the site. The project would include 74 detached single-family condominium units, 99 attached townhouse units, and 53 attached condominium units. The proposed density is approximately 14.6 dwelling units/acre. The residential development would also include a clubhouse and pool and a 5-acre park.	Project approved November 2022. Construction is expected to begin in summer 2023.
10	Century Villages at Cabrillo Specific Plan	The proposed Project would redevelop portions of the existing Century Villages at Cabrillo. The Specific Plan is part of a collection of planning documents that effectively guide the services, housing, amenities, and programming for the project site.	Project approved September 2022. Construction is expected to begin in early 2023.

No. in Figure	Project Title / Location	Project Description	Project Status
11	Golden Shore Master Plan	Master Plan for new residential, office, retail, and potential hotel uses, along with associated parking and open space.	NOP issued November 2008. Final EIR was released January 2010. In process for entitlement. Construction pending.
12	2010 E. Ocean Blvd. Project	Development of a 4-story, 56-unit condominium complex, 40 hotel rooms, and 168 parking spaces in a subterranean garage.	Under construction.
13	Pine – Pacific, bounded by Pine and Pacific Avenues, and 3rd and 4th Streets	Phase 1 would consist of a 5-story residential project with 175 living units and 7,280 square feet of retail space. Phase 2 is slated as a 12-story mid-rise residential development with 186 units and 18,670 square feet of retail.	Under construction.
14	Shoemaker Bridge Replacement, between Shoreline Drive and 9th Street	Build a new bridge structure and demolish or turn the existing bridge into a park that would connect to Drake Park and Chavez Park.	Project approved. Construction is expected to begin in early 2023 and to be completed by 2025.
Port of Los Angeles (POLA) and/or Port of Long Beach Potential Port-Wide Operational Projects			
15	Navy Way/Seaside Avenue Interchange	Construction of a new flyover connector from north-bound Navy Way to westbound Seaside Avenue and eliminate an existing traffic signal. This project is included in the 2016 Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) as RTP ID 1M0430, to be implemented by 2028.	Conceptual planning stage.
16	Maintenance Dredging	Routine removal of accumulated sediment from channel beds to maintain the design depths of navigation channels, harbors, marinas, boat launches, and port facilities. This is conducted regularly for navigational purposes (at least once every five years).	Continuous, but intermittent on average every 3-5 years.
POLA Projects			
17	Berth 163-164 [Nustar-Valero] Marine Oil Terminal Wharf Improvements Project	Demolish the existing 19,000-square-foot timber wharf and construct a new, steel and concrete loading platform, access trestles, mooring and berthing structures, and necessary utilities to comply with the Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS). The project also consists of a 30-year lease for the facility.	IS/MND adopted September 2021. Construction pending.
18	Berths 191-194 (Ecocem) Low-Carbon Cement Processing Facility	Construction and operation of a dry bulk terminal for vessel unloading, raw material milling, and storage and loading onto trucks of low-carbon construction binder.	NOP released in March 2022. EIR in progress.
19	Westway Decommissioning	Decommissioning of Westway Terminal along the Main Channel (Berths 70–71). Work includes decommissioning and removing 136 storage tanks with total capacity of 593,000 barrels and remediation of the site.	Decommissioning completed in 2013. Remediation is in permitting phase.
20	Berths 97–109, China Shipping Development Project	Development of the China Shipping Terminal Phase I, II, and III including wharf construction, landfill and terminal construction, and backland development, including operation under a revised project to modify certain mitigation measures.	Final Supplemental EIR (FSEIR) completed in 2019.

No. in Figure	Project Title / Location	Project Description	Project Status
21	Harbor Performance Enhancement Center	Construction and operation of a secondary cargo staging area to provide cargo sorting and congestion relief for all container terminals in Port of LA and Port of Long Beach. Located at the LAXT loop on Terminal Island.	IS/NOP released May 2018. Project on hold due to litigation.
22	Wilmington Waterfront Master Plan (Avalon Boulevard Corridor Project)	Planned development intended to provide waterfront access and promote development specifically along Avalon Boulevard. Project elements include a promenade, waterfront park, pedestrian bridge, location for the Wilmington Youth Sailing and Aquatic Center, public pier, and other visitor serving uses.	Construction underway in phases.
23	Southern California International Gateway Project (SCIG)	Construction and operation of a 157-acre dock railyard intermodal container transfer facility (ICTF) and various associated components, including the relocation of an existing rail operation.	Final EIR certified May 2013. Revised EIR completed in 2021. Project on hold due to litigation.
24	Berths 121–131 Container Terminal Improvements Project	Demolish existing wharf at Berths 126-129, construct a new wharf, install up to 10 new wharf cranes, reconstruct the shoreline, dredge and dispose of up to 310,000 cubic yards of sediments to deepen the berth, expand the existing on-dock railyard and install electric-powered RMG cranes for railcar loading/unloading.	NOI/NOP released in 2014. Draft EIR/EIS in progress.
25	Berths 148-151 (Phillips 66) Marine Oil Terminal Improvement Project	Various wharf and seismic ground improvements that are required in order to comply with MOTEMS and a new 20-year entitlement.	IS/NOP released March 2022. EIR in progress.
26	Outer Harbor Cruise Terminal and Outer Harbor Park	Construction of two new cruise terminals that would total up to 200,000 square feet (approximately 100,000 square feet each) and parking at Berths 45-47 and 49-50 in the Outer Harbor. The terminals would be designed to accommodate the berthing of a Freedom Class or equivalent cruise vessel (1,150 feet in length). A proposed Outer Harbor Park would encompass approximately 6 acres at the Outer Harbor. This project was evaluated in the San Pedro Waterfront Project EIS/EIR certified in September 2009.	Request for Proposal for future development released in 2023.
27	City Dock No. 1 Marine Research Project (AltaSea)	Development of a marine research center within a 28-acre area located between Berths 57-72. This project would change the break bulk areas east of East Channel (Berths 57-72) to institutional uses.	Phase I development in progress since 2017.
28	West Harbor Modification Project (formerly San Pedro Public Market)	Redevelopment of 30-acres, formerly known as the Ports O' Call Village, which include an 108,000 square foot outdoor amphitheatre, an 2.5-acre entertainment venue, a 100-foot diameter Ferris wheel with an approximately 150-foot tall by 50-foot wide tower attraction, and other visitor-serving commercial uses. This project was evaluated in the San Pedro Waterfront Project EIS/EIR certified in September 2009.	NOP released in April 2022. Conceptual planning by private developer ongoing.
29	Anchorage Road Soil Storage Site (ARSSS) Open Space	Creates approximately 30 acres of passive open space at the ARSSS. The project may also include undergrounding utilities and roadway improvements at the Anchorage and Shore Road intersection.	On hold.

No. in Figure	Project Title / Location	Project Description	Project Status
30	SR-47/Vincent Thomas Bridge & Front St./Harbor Blvd. Interchange Reconfiguration	Reconfigure the existing interchange at State Route 47/Vincent Thomas Bridge and Harbor Boulevard/ Front Street to improve safety and operation for vehicles exiting the highway. Improvements also include modifications of the eastbound entrance ramps and modification of Harbor Boulevard and Front Street approaching and between the ramp termini.	Design underway. Construction estimated to begin in summer 2023.
31	Relocation of Jankovich Marine Fueling Station	This project would develop a new fueling station at Berth 73. The proposed improvements would include new storage tanks.	Project completed; site remediation ongoing.
32	Al Larson Boat Shop Improvement Project	Modernization of existing boat yard and 30-year lease extension. This project was evaluated in a Final EIR certified in 2009.	Project on hold.
33	Berths 302–306 [APL now known as Fenix Marine] Container Terminal Project	Improvements and expansion of the existing terminal, including the addition of cranes, modifications to the main gate, converting an existing dry container storage unit to a refrigerated unit, and the expansion of the terminal onto 41 acres adjacent to the existing terminal. Revised project includes continued operations with minor modifications to the terminal and a 15-year lease extension through 2043. This project was evaluated in a Final EIR in 2012 and Addendum in 2016.	Expansion project on hold, revised project ongoing.
34	Berths 238-239 [PBF Energy] Marine Oil Terminal Improvement Project	Demolition of the existing Berth 238 loading platform and construction of a new platform and associated mooring structures at Berth 238, and installation of landside improvements.	Construction estimated to begin in January 2023.
35	So Cal Ship Services Permit Renewal at 971 South Seaside Avenue	Project involves tenant lease renewal and minor construction modifications.	Final MND adopted in 2018. Second addendum posted March 2022.
36	Star-Kist Cannery Facility	Demolition of 14-acre site for future use as cargo support or container chassis storage.	Mitigated Negative Declaration adopted February 2023.
37	Berths 167-169 [Shell] Marine Oil Terminal Wharf Improvements Project	Various wharf and seismic ground improvements that are required in order to comply with MOTEMS, as well as other landside elements and a new 30-year lease. This project was evaluated in a Final EIR certified in 2018.	Construction is ongoing.
38	Avalon and Fries Street Segments Closure Project	Physical closure of segments of Avalon Boulevard and Fries Avenue by installing street modifications that include culs-de-sac, curbs and gutters, and fencing and signage.	On hold.
39	Avalon Freight Services Relocation Project	Shifting existing Catalina Island freight operations from Berth 184 in Wilmington to Berth 95 in San Pedro.	Construction estimated to begin November 2022.
40	Fisherman's Pride Fish Processing Facility Project	Redevelop a vacant and under-utilized industrial space into a state-of-the-art commercial seafood processing facility.	Mitigated Negative Declaration adopted in 2014. Project is underway.
41	Berths 187-191 (Vopak) Liquid Bulk Terminal Wharf Improvements and Cement Terminal Project	Various wharf and improvements that are required in order to comply with MOTEMS, improvements to an adjacent wharf to facilitate resumption of cement terminal operations on the site, and a new 30-year entitlement.	IS/NOP issued July 2022.

No. in Figure	Project Title / Location	Project Description	Project Status
U.S. Army Corps of Engineers			
42	Port of Long Beach Deep Draft Navigation and Main Channel Deepening Project	Dredge up to 10 million cubic yards of material to deepen channels, basins, and standby areas to improve waterborne transportation efficiencies and navigational safety for vessel operations. A new dredge substation will be constructed to provide electricity to dredge equipment.	POLB NEPA EIS Record of Decision issued July 2022; CEQA EIR certified by POLB in September 2022. Construction estimated to commence in 2027
ICTF Joint Powers Authority			
43	Union Pacific Railroad ICTF Modernization and Expansion Project	Union Pacific proposal to modernize existing intermodal yard 4 miles from the Port.	Draft EIR on hold.
Community of San Pedro Projects			
44	Pacific Corridors Redevelopment Project, San Pedro	Development of commercial/retail, manufacturing, and residential components. Construction underway of four housing developments and Welcome Park.	Project underway. Estimated 2032 completion year according to City of Los Angeles Planning Department.
Community of Wilmington Projects			
45	Wilmington Redevelopment Plan Amendment/Expansion Project, Wilmington	The existing Wilmington Industrial Park would be expanded by an additional 2,487 acres, for a total of approximately 2,719 acres. Under the probable maximum level of development, the overall project area could support up approximately 7,326 residential units (primarily multi-family; zone changes under the Plan would permit multi-use and higher density residential development). In addition to the residential development, the Project could accommodate up to approximately 207 acres (9 million square feet) of commercial development and up to 333 acres (14.5 million square feet) of industrial development.	NOP for Program EIR released for public review in August 2010. Currently on hold.
City of Carson			
46	Phillips 66 Los Angeles Carson Plant – Crude Oil Storage Capacity Project	Increase crude oil storage capacity at the Los Angeles Refinery Carson Plant by installing one new 615,000-barrel crude oil storage tank with a geodesic dome, increasing the annual permit throughput limit of two existing 320,000-barrel crude oil storage tanks, and installing geodesic domes on the same two existing 320,000-barrel crude oil storage tanks. Tie-ins to the Pier “T” crude oil delivery pipeline from Berth 121 would be installed.	Construction completed in 2024.
47	Shell Carson Facility Ethanol (E10) Project	Conversion of existing 69,000 bbl gasoline storage tanks to ethanol service. The EIR for this project included the following project objectives: 1. Increase the Carson Facility’s ethanol storage capacity by approximately 75 percent; 2. Increase ethanol tanker-truck loading capacity by at least 75 percent; 3. Include modifications that would minimize impacts to its existing capacity to receive, store and deliver other petroleum products at current levels; and 4. Maintain operational efficiency, safety, and flexibility.	FEIR published December 2012. Design completed June 2022.

Source: CEQANet, 2022; City of Long Beach, 2018, 2022; Construction Journal, 2022; Fiedler Group, 2022; Long Beach Post News, 2020, 2023; Pacific Maritime Magazine, 2023; POLA, 2023a, 2023b; POLB, 2022a, 2023a, 2023b, 2023c; PR Newswire, 2019; Press-Telegram, 2022; StormTrap, 2020.

2.2. Relationship to Statutes, Plans and Other Requirements

One of the primary objectives of the CEQA process is to ensure that a proposed project and alternatives are integrated with other applicable federal, State, and local environmental laws, regulations, ordinances, executive orders, plans, and similar requirements. Laws and regulations applicable to the environmental issue areas specifically addressed in this EIR are summarized in this section. Detailed discussion of these laws and regulations, including discussion of the project's consistency with applicable laws and regulations, is provided in the issue area analyses presented in Chapter 3. As described in Section 1.8, this EIR addresses potential impacts to the issue areas of Air Quality and Health Risk, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, and Hydrology and Water Quality. Laws and regulations which are applicable to the Project location, design, and objectives are discussed in detail below.

2.2.1. Statutes

California Coastal Act (CCA)

The CCA of 1976 recognizes the Port, as well as other California ports, as a primary economic and coastal resource and as an essential element of the national maritime industry. Under the CCA, existing ports are encouraged to modernize and construct as necessary to minimize or eliminate the need for the creation of new ports. Water areas may be diked, filled, or dredged when consistent with a certified Port Master Plan (PMP) and only for specific purposes.

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]).

California Endangered Species Act (Cal-ESA)

The Cal-ESA (CDFW Code Section 2050 et seq.) provides for the protection of rare, threatened, and endangered plants and animals, as recognized by the California Department of Fish and Wildlife (CDFW), and prohibits the taking of such species without authorization by CDFW under Section 2081 of the Fish and Game Code. Lead agencies must consult with CDFW during the CEQA process if State-listed threatened or endangered species are present and could be affected by a project. As discussed in the Appendix B, Initial Study, no impacts would occur to special-status plants and impacts to wildlife would be less than significant.

California Fish and Game Code (CDFG Code)

California Department of Fish and Game (CDFG) Code is implemented by the California Fish and Game Commission (Commission), as authorized by Article IV, Section 20, of the Constitution of the State of California. The POLB is responsible, under the provisions of Sections 200 through 221, for regulating the take of fish and game, but the Project is not applicable, as the Project would not involve the "take" of any species.

California Porter-Cologne Act

The Porter-Cologne Act is the basic water quality control law for California and works in concert with the federal Clean Water Act (CWA). The Porter-Cologne Act is implemented by the State Water Resources Control Board (SWRCB) and its nine regional boards (RWQCB), which implement the permit provisions of Section 402 and certain planning provisions of Sections 205, 208, and 303 of the federal CWA. This means that the State issues a single discharge permit for

purposes of State and federal law. Permits for discharge of pollutants are officially called National Pollutant Discharge Elimination System (NPDES) permits. Anyone who is discharging waste or proposing to discharge waste that could affect the quality of State waters must file a “report of waste discharge” with the governing RWQCB. A detailed discussion is provided in Section 3.5, *Hydrology, Water Quality, and Sea-Level Rise*.

Clean Air Act (CAA)

The federal CAA of 1970 and its subsequent amendments form the basis for the nation’s air pollution control effort. The US Environmental Protection Agency (USEPA) is responsible for implementing most aspects of the CAA. Basic elements of the CAA include the National Ambient Air Quality Standards (NAAQS) for major air pollutants, hazardous air pollutant standards, attainment plans, motor vehicle emission standards, stationary source emission standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The CAA delegates enforcement of the federal standards to the states. In California, the Air Resources Board (ARB) is responsible for enforcing air pollution regulations. In the South Coast Air Basin (SCAB), the South Coast Air Quality Management District (SCAQMD) has this responsibility. As the Project is located within the SCAB, proposed construction and operations are subject to SCAQMD rules and regulations.

Clean Water Act (CWA)

The CWA establishes the basic structure for regulating discharges of pollutants into waters of the U.S. and regulating quality standards for surface waters. The basis for the CWA was enacted in 1948, and was called the Federal Water Pollution Control Act, but this was significantly reorganized and expanded in 1972. The CWA became the common name with amendments in 1977. See Section 3.5, *Hydrology, Water Quality, and Sea-Level Rise*, for further discussion.

Federal Endangered Species Act (ESA)

The ESA of 1973 (16 USC 1531–1543), as amended, provides for the conservation of endangered and threatened species and the ecosystems they inhabit. The U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration (NOAA) Fisheries share responsibilities for administering the federal ESA. Section 9 prohibits “take” of species federally listed as threatened or endangered. “Take” is defined as to harm, harass, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct, and includes habitat modification or degradation that could potentially kill or injure wildlife by impairing essential behavioral patterns, including breeding, feeding, or sheltering. A take incidental to otherwise lawful activities can be authorized under Section 7 when there is federal involvement, and under Section 10 when there is no federal involvement.

Section 7 of the federal ESA requires federal agencies to consult with and seek the assistance of the Secretary of the Interior or Secretary of Commerce to ensure that actions authorized, funded, or carried out by federal agencies do not jeopardize the continued existence of threatened or endangered species, or result in the destruction or adverse modification of critical habitat for these species. The Project does not involve the “take” of species and therefore complies with the federal ESA. See Appendix B, Initial Study, for further discussion.

Federal Toxic Substances Control Act of 1976 (TSCA)

The TSCA provides USEPA with authority to require reporting, record-keeping, testing requirements, and restrictions relating to chemical substances and/or mixtures.

Migratory Bird Treaty Act of 1918 (MBTA)

The MBTA (16 USC 703 712; 50 CFR 10), as amended, prohibits taking of migratory birds, which includes possession, pursuing, hunting, capturing, or killing migratory bird species, unless specifically authorized by a regulation implemented by the Secretary of the Interior, such as designated seasonal hunting. The MBTA also applies to removal of nests occupied by migratory birds during the breeding season. Due to the highly industrialized nature of the Project site being an active petroleum bulk station and terminal, and not conducive to nesting, impacts to nesting birds would be less than significant.

Resource Conservation and Recovery Act (RCRA)

RCRA grants the USEPA the authority to control hazardous waste from the “cradle-to-grave.” This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also sets forth a framework for the management of non-hazardous solid wastes. See Section 3.4, *Hazards and Hazardous Materials*, for further discussion.

2.2.2. Plans, Policies and Other Regulatory Requirements**Air Quality Management Plan (AQMP)**

The USEPA, in enforcing the mandates of the federal CAA, requires each state that does not attain the NAAQS to prepare a plan detailing how these air quality standards will be attained. California requires each air quality district to prepare an AQMP specific for its region. The most recently approved applicable AQMP was adopted by the SCAQMD Governing Board of Directors on December 2, 2022.

California Toxics Rule of 2000 (40 CFR Part 131)

The California Toxics Rule (CTR) establishes numeric criteria for priority toxic pollutants in inland waters and enclosed bays and estuaries to protect ambient aquatic life (23 priority toxics) and human health (57 priority toxics). The toxics rule also includes provisions for compliance schedules to be issued for new or revised NPDES permit limits when certain conditions are met. The numeric criteria are the same as those recommended by the USEPA in its CWA Section 304(a) guidance.

City of Long Beach General Plan

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.” The Regional-Serving Facility PlaceType is composed of public facilities including the Port of Long Beach and Long Beach Airport. 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. The Port of Long Beach is managed and operated by the City of Long Beach Harbor Department and governed by the Long Beach Board of Harbor Commissioners.

City of Long Beach Municipal Code (LBMC)

The LBMC, as amended, codifies and publishes in consolidated form those ordinances of the city governing the establishment of certain offices and boards; the conduct of city government; organization to cope with disasters; fire prevention; police and traffic regulation; public safety; public welfare; public works; buildings and signs; prohibition of certain defined acts and punishment for violation of code provisions; regulation, control, and licensing of businesses, trades, professions, and other occupations; health and sanitation regulations; oil production; use of land in the city; municipal gas service and rates; regulation of city streets; operation of public facilities; and other

matters of general interest (Ordinance C 5831 § 1, 1982). Title 8 (Health and Safety), Chapter 8.80 (Noise) of the Long Beach Municipal Code (LBMC) prescribes exterior noise level limits by land use district.

Codes Governing Human Remains

The disposition of human remains is governed by Section 7050.5 of the California Public Health and Safety Code and PRC Sections 5097.94 and 5097.98 and falls within the jurisdiction of the Native American Heritage Commission (NAHC). If human remains are discovered, the county coroner must be notified immediately and there should be no further disturbance to the site where the remains were found. If the remains are determined by the coroner to be Native American, the coroner is responsible for contacting the NAHC within 24 hours. The NAHC, pursuant to Section 5097.98, must immediately notify those persons it believes to be most likely descended from the deceased Native Americans so they can inspect the burial site and make recommendations for treatment or disposal.

Port of Long Beach Green Port Policy

Adopted in January 2005, the Green Port Policy formalizes five guiding principles for the Port's environmental-protection efforts: (1) protect the local community and environment from harmful Port impacts; (2) employ the best available technology to minimize port impacts and explore and advance technology solutions; (3) promote sustainability in terminal design, development, and operations; (4) distinguish the Port as a leader in environmental stewardship and regulatory compliance; and (5) engage and educate the community about Port development and environmental programs.

Port of Long Beach Port Master Plan

In 1978, the California Coastal Commission certified the POLB PMP as being in conformance with the policies of the CCA of 1976. 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. The PMP addresses environmental, recreational, economic, and cargo-related issues in accordance with the CCA. Because of the dynamic nature of world commerce, many trade and transportation practices change quickly. Accordingly, the PMP was written to encompass broad Port goals and specific projects, while recognizing and planning for change in cargo transport and requirements, throughput demand, available technology and equipment, and available lands for primary Port terminal development. The Port goals, objectives, policies, and statement of permitted uses guide future development within each Harbor Planning District. A finding of consistency with the PMP is required prior to any development within the Harbor District.

San Pedro Bay Ports Clean Air Action Plan (CAAP)

The CAAP describes the measures that the POLB and the POLA will take toward reducing emissions related to Port operations. The CAAP consists of the following eight elements: (1) standards and goals, (2) implementation strategies, (3) control measures, (4) technology advancement program, (5) infrastructure and operational efficiency improvements initiative, (6) estimated emissions reductions, (7) estimated budget requirements, and (8) recommendations. The CAAP was approved by the two harbor commissions in November 2006 and last updated in 2017.

The 2017 CAAP Update contains strategies to reduce emissions from sources in and around the ports, plan for zero-emissions infrastructure, encourage freight efficiency, and address energy resources.

Southern California Association of Governments (SCAG) Regional Plans

The SCAG serves as the area-wide planning agency responsible for regional transportation planning, growth, and land use planning within Southern California, as well as for developing the growth factors used in forecasting air emissions within the SCAB. The SCAG prepares and maintains a Growth Management Plan, a Regional Housing Needs Assessment, and a Regional Mobility Plan, and contributes to the AQMP in cooperation with the SCAQMD. The SCAG developed a Regional Comprehensive Plan and Guide, the 2020-2045 RTP/SCS, and, in cooperation with the SCAQMD, the AQMP.

State Water Resources Control Board Stormwater Permits

The SWRCB has developed a statewide NPDES General Permit for Discharges of Storm Water Associated with Construction Activity and an NPDES Industrial Storm Water General Permit for projects that do not require individual permits for these activities. Under the General Permit for Discharges of Storm Water Associated with Construction Activity, all construction activities that disturb one acre or more must comply with the applicable regulations.

State Water Resources Control Board, Standard Urban Stormwater Mitigation Plans

The City of Long Beach is covered under a Permit for Waste Discharge Requirements for Discharges of Low Threat Hydrostatic Test Water to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties (RWQCB Order No. R4-2019-0052 and NPDES No. CAG674001). This permit authorizes discharges of wastewater generated from hydrostatic tests (i.e., structural integrity testing of pipelines and tanks using water) using potable water. The City of Long Beach must comply with effluent limitations and discharge specifications; specified receiving water limitations; discharge prohibitions; monitoring and reporting; and special and standard provisions.

Stormwater Pollution Prevention Plan (SWPPP)

Ribost Terminals developed a SWPPP for the existing facilities that would be applied to the proposed Project to reduce or avoid effects associated with erosion and other construction-related stormwater impacts. The existing facility's SWPPP BMPs, such as using perimeter controls, would reduce the potential for sediment and stormwater runoff containing pollutants from entering the harbor.

Total Maximum Daily Loads (TMDLs)

The Los Angeles RWQCB has developed a TMDL for toxic pollutants to attain water quality standards for the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters (Harbor Toxics TMDL). The Harbor Toxics TMDL, which became effective March 2012, includes discharge limits for metals, polycyclic aromatic hydrocarbons, polychlorinated biphenyls, and Dichlorodiphenyltrichloroethane (e.g., DDT), designed to protect beneficial uses and aquatic life.

Water Quality Control Policy – Enclosed Bays and Estuaries of California

In 1974, the California SWRCB adopted a water quality control policy that provides principles and guidelines to prevent degradation and to protect the beneficial uses of waters of enclosed bays and estuaries. Long Beach Harbor is considered to be an enclosed bay under this policy. Activities such as the discharge of effluent, thermal wastes, radiological waste, dredge materials, and other materials that adversely affect beneficial uses of the bay and estuarine waters are addressed. Waste discharge requirements developed by the RWQCB, among other requirements, must be consistent with this policy.

1 Water Quality Control Plan – Los Angeles River Basin

2 The Water Quality Control Plan for the Los Angeles River Basin (Region 4) was adopted by the
3 RWQCB in 1978 and updated in 1994. The plan designates beneficial uses of the water resources
4 of the basin and describes water quality objectives, implementation plans, and surveillance
5 programs to protect or restore designated beneficial uses.

CHAPTER 3. ENVIRONMENTAL SETTING AND PROJECT IMPACTS

3.0.1. Introduction

This chapter describes the area of influence, setting (environmental and regulatory), methodology, potential impacts, and mitigation measures used to evaluate effects on environmental resources from the proposed Project and alternatives, in the context of CEQA requirements. The proposed Project and alternatives are compared by resource area to the CEQA baselines presented in Sections 3.1 through 3.5. Chapter 5 provides a comparison of the environmental impacts of the proposed Project and alternatives, as well as identifying the environmentally superior alternative. This EIR evaluates the potential impacts related to Air Quality and Health Risk (Section 3.1); Greenhouse Gas Emissions (Section 3.2); Geology and Soils (Section 3.3); Hazards and Hazardous Materials (Section 3.4), and Hydrology, Water Quality, and Sea-Level Rise (Section 3.5). Issue areas where the proposed Project was determined to have either no impact or less than significant impacts are discussed in Section 1.8 and Appendix B, *Initial Study*.

3.0.2. Environmental Analysis Procedures

The content and format of this EIR are designed to meet the requirements of the State CEQA Guidelines. A discussion of each resource is provided in Sections 3.1 through 3.5 and is organized as follows.

Environmental Setting: This subsection describes the existing conditions for each environmental resource. In addition, this subsection provides the context for assessing potential environmental impacts resulting from construction and operations of the proposed Project and its alternatives.

Impacts and Mitigation Measures: This subsection describes the potentially significant effects or consequences resulting from development of the proposed Project and alternatives. Measures that can mitigate (i.e., minimize, reduce, or avoid) potentially significant adverse environmental effects are proposed as conditions of approval. The methodology used for each issue area impact evaluation is discussed, and significance criteria are described that help evaluate the degree of significance for each potential impact. The criteria used to establish thresholds of significance are consistent with State CEQA Guidelines Appendix G Environmental Checklist. The “threshold of significance” for a given environmental effect is the level at which the Port, as the lead CEQA agency, finds the effects of the proposed Project to be significant. A “threshold of significance” is defined in State CEQA Guidelines Section 15064.7(a) as:

An identifiable quantitative, qualitative, or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant.

The impact evaluation discussion describes potential consequences to each resource that would result from development of the proposed Project and alternatives. For each impact identified in this document, a statement of the level of significance of the impact is provided. The level of significance is determined by applying the threshold of significance presented for each issue area. The following categories for impact significance are used in this analysis:

- A designation of “no impact” is given when no adverse changes in the environment are expected;
- A “less than significant impact” is identified when there would be no substantial adverse change in the environment;

■ A significant (but mitigable) impact would have a substantial adverse impact on the environment, but could be avoided or feasibly mitigated to a less-than-significant level; and

■ A significant unavoidable impact would cause a substantial adverse effect on the environment that cannot be feasibly mitigated or avoided.

Mitigation Measures to avoid, minimize, rectify, reduce, or compensate for potentially significant impacts are presented for each significant impact. Mitigation could include:

■ Avoiding the impact altogether by not taking a certain action or parts of an action;

■ Minimizing the impact by limiting the degree or magnitude of the action and its implementation;

■ Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

■ Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and/or

■ Compensating for the impact by replacing or providing substitute resources or environments.

Mitigation measures would be made conditions of Project approval that would dictate future development of the Project and would be monitored to ensure compliance and implementation.

Significance of Impacts after Mitigation refers to the level of impact after the implementation of mitigation. In the case where a mitigation measure(s) would avoid or reduce a significant impact to a level that is less than significant, a determination would be made that the residual impact would be less than significant. In the case where a mitigation measure(s) would reduce a significant impact somewhat, but would still not reduce it to a level that is less than significant, then a determination would be made that the residual impact would remain significant. A determination that the residual impact would remain significant is used to identify Significant Unavoidable Impacts, as required by Section 15126.2(c) of the State CEQA Guidelines. If a significant impact is reduced to a less-than-significant level by application of a mitigation measure(s), it is termed a Significant but Avoidable Impact.

The *Cumulative Impacts* discussion in each environmental issue section describes potential impacts from Project build-out in combination with development of reasonably foreseeable (proposed and approved, but not built) projects in the area, as described in Chapter 2.

Baseline Used in Environmental Analysis

Section 15125 of the State CEQA Guidelines requires an EIR to include a description of the physical environmental conditions in the vicinity of a project that exist at the time of the Notice of Preparation (NOP). Pursuant to CEQA, this condition will normally be considered the environmental baseline. The NOP for the proposed Project was published on January 30, 2023. For purposes of this EIR, environmental baseline conditions are defined as the conditions that existed on January 30, 2023. A description of the baseline environmental setting for each issue area is presented in Sections 3.1 through 3.5. These CEQA baseline conditions are utilized as the basis for determining significance of impacts for each resource area.

The CEQA baseline represents the setting at a fixed point in time and differs from the No Project Alternative in that the No Project Alternative addresses what is likely to happen over time, starting from the baseline conditions. The No Project Alternative allows for activities at the Project site that could be reasonably expected to occur without additional approvals.

Requirements to Evaluate Alternatives

State CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the Project, or to the location of the Project that could feasibly attain most of the

- 1 basic objectives of the Project but would avoid or substantially lessen any significant environ-
2 mental impacts. The EIR should compare merits of the alternatives and determine an environ-
3 mentally superior alternative.
- 4 Section 1.6 of this EIR sets forth potential alternatives to the proposed Project and describes
5 detailed requirements to evaluate alternatives, as specified by State CEQA Guidelines Section
6 15126.6. As previously indicated, the impacts of each alternative are discussed within Sections
7 3.1 through 3.5 with a comparison of the proposed Project and the alternatives provided in
8 Chapter 5.

3.1. Air Quality and Health Risk

This section provides a discussion of the potential impacts to air quality and health risks associated with construction and operation of the proposed Project. This includes the air quality setting and regulations applicable to the proposed Project.

3.1.1. Environmental Setting

The proposed Project is located in the southwest coastal area of the South Coast Air Basin (SCAB). The air quality area of influence for the proposed Project consists of the SCAB, including the urbanized areas of Los Angeles, Riverside, San Bernardino, and Orange Counties (an area of approximately 6,000 square miles).

The proposed Project is located in the Port of Long Beach. Communities surrounding the Project site include the communities of Wilmington, West Long Beach, and Carson. Under California's landmark environmental justice law Assembly Bill (AB) 617, Wilmington, West Long Beach, and Carson are designated as a clean-air priority, as approximately 300,000 people, more than half of which are Latino and more than a third of which are Asian American or African American, are exposed to air quality impacts (Unzueta, 2022). The following is a brief overview of the demographic data from the US Environmental Protection Agency (USEPA) environmental justice (EJ) mapping and screening tool called EJScreen. EJScreen combines environmental and demographic socioeconomic indicators to help identify areas with minority and low-income populations and environmental quality issues.

Table 3.1-1 provides a summary of approximate demographic data for the affected area (i.e., approximately one-mile buffer around the Project site), the City of Long Beach, and the State of California.

Table 3.1-1. Demographic Data for Affected Area, Long Beach, and State of California

Demographic	Subject	Affected Area ¹	City of Long Beach ²	State of California ³
Population	Total Population	15,588	466,565	39,538,223
	Households	6,778	169,958	13,429,063
Low Income Population		50%	34%	29%
People of Color Population / Minority Populations		81%	72%	63%
Ethnicity	Hispanic or Latino of any Race	55%	44%	39.4%
	White Alone	43%	47%	41.2%
	Black Alone	15%	12%	5.7%
	American Indian Alone	1%	1%	1.6%
	Asian Alone	7%	13%	15.4%
	Pacific Islander Alone	0%	1%	0.4%
	Other Race Alone	25%	18%	21.2%
	Two or more Races Alone	8%	9%	14.6%

¹ Data for Affected Area derived from EJScreen reports.

² Data for City of Long Beach derived from EJScreen reports.

³ Data for State of California derived from EJScreen and U.S. Census Data.

As shown in Table 3.1-1, 50 percent of the individuals in the affected area are considered below the poverty level (i.e., low income). The affected area low-income population percentage is higher than the low-income population in the City of Long Beach (34%) and the State of California (29%). Therefore, the affected area contains a high concentration of a low-income population.

Individuals in the affected area who are people of color or minority make up 81 percent of the population (Table 3.1-1). The affected area minority population percentage is greater than that of the City of Long Beach (72%) and the State of California (63%). Therefore, the affected area contains a high concentration of people of color and minority populations.

3.1.1.1. Climate and Meteorology

The climate of the SCAB is characterized as a Mediterranean climate with warm, dry summers and cool winters with seasonally heavy precipitation that occurs primarily during the winter months. Summers typically have clear skies, warm temperatures, and low humidity.

Winds are an important meteorological parameter as they control both the initial rate of dilution and the direction of pollutants. Sea breezes at the Port typically increase during the morning hours from the southerly direction. They reach a peak in the afternoon as they blow from the southwest and then generally subside after sundown. During the warmest months of the year, however, sea breezes can persist well into the night. Conversely, during the colder months of the year, northerly land breezes increase by sunset and into the evening. Sea breezes transport air pollutants away from the coast and toward the interior regions in the afternoon hours for most of the year.

3.1.1.2. Ambient Air Quality

Air pollutants are defined as two general types: (1) criteria air pollutants, representing six pollutants for which the USEPA and the California Air Resources Board (CARB) have set health- and welfare-protective national and state ambient air quality standards, respectively; and (2) toxic air contaminants (TACs), which may lead to serious illness or increased mortality even when present at relatively low concentrations. TACs do not have ambient air quality standards but are regulated by the local air districts using a risk-based approach.

Criteria Air Pollutants

The federal Clean Air Act (CAA) requires the USEPA to set national ambient air quality standards (NAAQS) for six common air pollutants, known as the “criteria air pollutants.” The criteria pollutants are ozone (O₃), particulate matter less than 10 microns in diameter (PM₁₀), particulate matter less than 2.5 microns in diameter (PM_{2.5}), carbon monoxide (CO), nitrogen dioxide (NO₂), and sulfur dioxide (SO₂). Of the pollutants of concern, ozone is a secondary pollutant, formed from emissions of precursor pollutants, volatile organic compounds (VOC) and nitrogen oxides (NO_x), that react in the presence of sunlight to form O₃. Because of the photochemical nature of formation, ozone levels usually peak several hours after the precursors are emitted and many miles downwind of sources. Because of the complexity and uncertainty in predicting photochemical pollutant concentrations, O₃ impacts are indirectly addressed by comparing Project-generated emissions of VOC and NO_x to emission thresholds set by SCAQMD.

Air quality at a given location can be described by the concentrations of criteria air pollutants in the atmosphere near ground level. The significance of a pollutant concentration is determined by comparing it to an appropriate national and/or state ambient air quality standard. These standards represent the allowable atmospheric concentrations at which the public health and welfare are protected and include a reasonable margin of safety to protect the more sensitive individuals in the population. The national ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS) relevant to the proposed Project are provided in Table 3.1-2.

Table 3.1-2. California and National Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards	Health Effects
Ozone (O ₃)	1-hour	0.09 ppm	—	Breathing difficulties, lung tissue damage
	8-hour	0.070 ppm	0.070 ppm	
Respirable particulate matter (PM ₁₀)	24-hour	50 µg/m ³	150 µg/m ³	Increased respiratory disease, lung damage, cancer, premature death
	Annual	20 µg/m ³	—	
Fine particulate matter (PM _{2.5})	24-hour	—	35 µg/m ³	Increased respiratory disease, lung damage, cancer, premature death
	Annual	12 µg/m ³	12.0 µg/m ³	
Carbon monoxide (CO)	1-hour	20 ppm	35 ppm	Chest pain in heart patients, headaches, reduced mental alertness
	8-hour	9.0 ppm	9 ppm	
Nitrogen dioxide (NO ₂)	1-hour	0.18 ppm	0.100 ppm	Lung irritation and damage
	Annual	0.030 ppm	0.053 ppm	
Sulfur dioxide (SO ₂)	1-hour	0.25 ppm	0.075 ppm	Increases lung disease and breathing problems for asthmatics
	3-hour	—	0.5 ppm	
	24-hour	0.04 ppm	—	
Lead (Pb)	30-day	1.5 µg/m ³	—	Learning disabilities; impairment of blood formation and nerve function; cardiovascular effects, including coronary heart disease and hypertension
	3-months rolling	—	0.15 µg/m ³	
Hydrogen Sulfide (H ₂ S)	1-hour	0.03 ppm	—	Odor can induce tearing of the eyes and symptoms related to overstimulation of the sense of smell, including headache, nausea, or vomiting

Source: CARB, 2016; CARB, 2023.

Acronyms: ppm = parts per million; µg/m³ = micrograms per cubic meter; “—” = no standard.

The USEPA, CARB, and local air districts classify an area as attainment, unclassified, or non-attainment depending on whether the monitored ambient air quality data show compliance, lack of data, or noncompliance with the ambient air quality standards, respectively. Table 3.1-3 summarizes the federal attainment status of criteria pollutants in the Los Angeles County portion of the SCAB based on the CAAQS and NAAQS.

Table 3.1-3. SCAB Attainment Status

Pollutant	State-level Attainment Status	Federal Attainment Status
Ozone	Nonattainment	Extreme Nonattainment
PM ₁₀	Nonattainment	Attainment/Maintenance
PM _{2.5}	Nonattainment	Serious Nonattainment
CO	Attainment	Attainment/Maintenance
NO ₂	Attainment	Attainment/Maintenance
SO ₂	Attainment	Attainment
Pb	Attainment	Nonattainment (partial, select sources)

Source: SCAQMD, 2018.

Toxic Air Contaminants

TACs are airborne compounds that are known or suspected to cause adverse human health effects after long-term (i.e., chronic) and/or short-term (i.e., acute) exposure. Cancer risk is associated with chronic exposure to some TACs, and noncancer health effects can result from either chronic or acute exposure to various TACs. Examples of TAC sources in the SCAB include diesel- and gasoline-powered internal combustion engines in mobile sources and facilities with stationary sources that include fuel combustion, industrial processes, solvent use, waste disposal, and petroleum production and marketing, including refineries.

Cancer risk associated with TACs has declined in the SCAB as a result of federal, state, and local regulations. SCAQMD initiated regional urban toxic air pollution studies, known as the Multiple Air Toxics Exposure Study (MATES) in 1998. The MATES program uses a comprehensive monitoring program, an air toxics emissions inventory, and a modeling component to assess overall long-term trends in community air toxic levels. The most-recent iteration of study (MATES-V) shows a continuing decline in the air toxics cancer risk throughout the SCAB with a 40 percent decrease in risk since 2012-2013 based on data from the monitoring stations. The MATES-V study presents the modeled air toxics cancer risk as 424 chances per million on the SCAB-average population-weighted basis, and this can be compared with a modeled air toxics cancer risk of 615 chances per million at the West Long Beach monitoring station (SCAQMD, 2021b).

Diesel Particulate Matter (DPM) is classified as a TAC because many toxic compounds adhere to diesel exhaust particles. Statewide and local programs focus on managing this pollutant through motor vehicle fuels, engine, and tailpipe standards. Due to the prevalence of diesel-powered sources that operate at the Port of Long Beach and Port of Los Angeles (San Pedro Bay Ports), the SCAQMD has identified the San Pedro Bay Ports area as having the highest TAC-related cancer risks in the SCAB. However, the simulated inhalation air toxics cancer risk in the area of the ports decreased by approximately 57 percent between the prior MATES-IV and MATES-V time periods. The reduction in DPM emission has resulted in significant improvements in cancer risk in areas adjacent to the ports, which was the area with the highest cancer risks in previous MATES, dominated by DPM (SCAQMD, 2021b). This decrease in risk reflects policies to reduce DPM emissions that have resulted in substantial improvement in cancer risks in the areas adjacent to the ports (SCAQMD, 2021b).

Odors

Odors are generally regarded as a nuisance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and is subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be acceptable to another. An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. A person can become desensitized to odors and recognition occurs with an alteration in the intensity. The occurrence and severity of odor impacts depends on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

The storage and handling of petroleum liquids can produce odors that may be determined to be nuisances. Sulfur compounds, found in petroleum oil and gas, have very low odor threshold levels. Hydrogen sulfide (H₂S) is produced during the decay of organic material and is also found naturally in petroleum and natural gas. H₂S is a hazardous and odorous gaseous compound that can be detected by humans at concentrations that are substantially lower than the concentrations that could affect human health. California regulates H₂S as a potential nuisance based on its odor detection level (CARB, 2023). For issuance of Permits to Construct/Permits to Operate, the SCAQMD also considers the potential for H₂S odor complaints.

3.1.1.3. Sensitive Receptors

The impact of air emissions on sensitive members of the population is a special concern. Sensitive receptor groups include children and infants, pregnant women, the elderly, and the acutely and chronically ill. According to SCAQMD guidance, sensitive receptor locations typically include schools, hospitals, convalescent homes, child-care centers, and other locations where children, chronically ill individuals, or other sensitive persons could be regularly exposed. Sensitive individuals could also be present at any residence.

The nearest residential receptors (911 W. Chester Place, Long Beach) are located approximately 0.5 mile (800 meters) from the area of the proposed new tanks. The nearest school, Edison Elementary School, is located more than a half-mile (over 880 meters) from the area of the proposed new tanks. The nearest hospital and known daycare facility are located farther than the nearest residences and school. Dignity Health - Saint Mary Medical Center (1050 Linden Ave, Long Beach) is approximately 1.5 miles (2,405 meters) from the Project site, and Childtime of Long Beach (One World Trade Center #199, Long Beach) is approximately 0.58 mile (1,284 meters) from the Project site.

3.1.1.4. Site Conditions

The baseline and environmental setting for the proposed Project includes the existing Ribost Terminal on a site that has operated as a petroleum storage facility since 1964. The overall landscape is highly developed, with surrounding industrial land uses. The existing Ribost Terminal site maintains air permits to operate seven existing petroleum storage tanks, truck loading racks, and an oil/water separator. In data reported to the SCAQMD for annual emissions reporting purposes, the sources at the existing Ribost Terminal caused between 1.5 to 3.4 tons of VOC emissions each year from 2019 to 2021. The site emissions and potential to emit are less than 10 tons per year of VOC. Accordingly, the site is not a “major polluting facility” for VOC or any other pollutant under SCAQMD Regulation XIII, Rule 1302.

Table 3.1-4 summarizes the facility-wide emissions inventory for the existing Ribost Terminal.

Table 3.1-4. Existing Stationary Source Emissions, Ribost Terminal

Pollutant	2019 Annual Emissions (ton/year)	2020 Annual Emissions (ton/year)	2021 Annual Emissions (ton/year)
Carbon Monoxide	0.296	0.238	0.260
Nitrogen Oxides	0.373	0.298	0.326
Particulate Matter	0.022	0.017	0.019
Sulfur Oxides	0.001	0.001	0.001
Volatile Organic Compounds	3.314	3.378	1.510

Source: EIR Appendix C, *Air Pollutant Emissions Data*.

Basis: SCAQMD Annual Emissions Reporting data accessed October 19, 2022 & May 1, 2023. Facility ID: 111238.

Notes: The variation in VOC emissions between 2019 and 2021 is normal, as VOC emissions vary year-to-year with the tanks' throughput and the types of materials moving through the terminal. For example, VOC emissions for 2018 were 3.699 ton/year and 1.86 ton/year for 2022. The combustion emissions (NOx, CO, etc.) have less variation, because they come from the burner in the oxidizer that runs more steadily.

3.1.2. Regulatory Setting

Sources of air emissions in the SCAB are regulated by the USEPA, CARB, and SCAQMD. In addition, regional and local jurisdictions play a role in air quality management. The role of each regulatory agency is discussed below.

3.1.2.1. Federal

Clean Air Act

The federal CAA of 1963 and its subsequent amendments form the basis for the nation's air pollution control effort. The USEPA is responsible for implementing most aspects of the CAA. Basic elements of the act include the NAAQS for major air pollutants, hazardous air pollutant standards, attainment plans, motor vehicle emission standards, stationary source emission standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The CAA delegates the enforcement of the federal standards to the states. In California, the CARB is responsible for enforcing air pollution regulations. CARB, in turn, delegates the responsibility of regulating stationary emission sources to local air agencies. In the SCAB, the SCAQMD has this responsibility.

State Implementation Plan

For areas that do not attain the NAAQS, the CAA requires the preparation of a State Implementation Plan (SIP), detailing how the State will attain the NAAQS within mandated timeframes. The SCAQMD develops the SIPs for the region through the Air Quality Management Plan (AQMP), most-recently adopted December 2, 2022, by the SCAQMD Governing Board (SCAQMD, 2022). The focus of the AQMP is to demonstrate attainment of the NAAQS, while making progress toward attainment of State standards. The 2022 AQMP focuses on attainment of the ozone NAAQS through the reduction of precursor NO_x emissions, while building on measures in place from previous AQMPs to reduce ozone and PM_{2.5} concentrations.

New Source Performance Standards (NSPS)

The USEPA establishes source category specific standards in the Code of Federal Regulations (CFR) to ensure proper design and operation of stationary sources, including storage tanks. Under NSPS (40 CFR 60), Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels, the proposed tanks would be subject to federally-enforceable design standards and inspection and recordkeeping requirements to minimize VOC emissions.

3.1.2.2. State

California Clean Air Act

In California, the CARB is designated as the responsible agency for all air quality regulations. The CARB is responsible for implementing the requirements of the federal CAA, regulating emissions from motor vehicles and consumer products, and implementing the California Clean Air Act of 1988 (CCAA). The CCAA outlines a program to attain the CAAQS by the earliest practical date. Since the CAAQS are often more stringent than the NAAQS, attainment of the CAAQS requires further emission reductions and additional time than what is required to demonstrate attainment of the NAAQS (SCAQMD, 2022).

USEPA/CARB Off-Road Mobile Sources Emission Reduction Program

The CCAA mandates that CARB achieve the maximum degree of emission reductions from all diesel-fueled off-road mobile sources to attain the state ambient air quality standards. Off-road mobile sources include construction equipment. The earliest (Tier1 diesel off-road engine standards for large compression-ignition engines used in off-road mobile sources became effective in California in 1996. Since then, the Tier 3 diesel off-road engine standards for large compression-ignition engines used in off-road mobile sources went into effect in California for most engine

classes in 2006. The Tier 4 Interim (4i) and Tier 4 Final diesel off-road engine standards became applicable to off-road diesel engines from model years 2012 and 2015, respectively, and newer. These model year standards and standards applicable to in-use fleets together serve to reduce NOx and toxic particulate matter emissions from diesel use throughout the State.

In-Use Off-Road Diesel-Fueled Fleets Regulation

The In-Use Off-Road Fleets Regulation controls emissions of DPM and criteria pollutant emissions from diesel equipment fleets, with fleet-wide target emission standards (Cal. Code Regs., Title 13, Article 4.8, Chapter 9, Section 2449). Specific requirements include a limit on idling, reporting of fleet vehicles to the CARB Diesel Off-Road Online Reporting System, restrictions on the addition of older vehicles into fleets, and requirements to continue fleet upkeep by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits).

Truck and Bus Regulation

CARB's Truck and Bus Regulation requires heavy-duty diesel vehicles that operate in California to reduce TAC emissions from their exhaust. By January 1, 2023, drayage trucks are required to have 2010 or newer model year engines to reduce particulate matter (PM) and NOx emissions. Starting in 2020, only vehicles compliant with this regulation will be registered by the California Department of Motor Vehicles (DMV). Trucks visiting the Ribost Terminal would be subject to the applicable provisions of the CARB Truck and Bus Regulation.

Heavy-Duty Diesel Truck Idling Regulation

The CARB initially adopted an air toxic control measure (ATCM) to limit truck idling in 2005 (13 Cal. Code Regs., Section 2485). This rule prohibits heavy-duty diesel trucks from idling their main engines or auxiliary power system engines for longer than five minutes at a time, unless they are queuing, and provided the queue is located beyond 100 feet from any restricted areas. Restricted areas are defined as "... property zoned for individual or multifamily housing units, schools, hotels, or motels, hospitals, senior care facilities or child-care facilities."

Statewide Portable Equipment Registration Program (PERP)

The Statewide PERP establishes a uniform program to regulate portable engines and portable engine-driven equipment. Eligible equipment must use engines that are certified to current emission tier standards. Once a portable source is registered in the PERP, the engines and equipment may operate throughout California without the need to obtain individual permits from local air districts as long as the equipment is located at a single location for no more than 12 months. Diesel engines used in portable equipment fleets are also subject to ATCM standards for DPM emissions, generally requiring use of only newer engines or verified add-on particulate filters (17 Cal. Code Regs., Section 93116).

3.1.2.3. Local Rules, Regulations, Policies, and Plans

SCAQMD 2022 AQMP

SCAQMD is primarily responsible for planning, implementing, and enforcing federal and State ambient standards within the SCAB. As part of its planning responsibilities, SCAQMD prepares the AQMP based on the attainment status of the air basins within its region. SCAQMD is also responsible for permitting and controlling stationary sources of criteria pollutants and air toxics.

Through the attainment planning process, SCAQMD develops the SCAQMD Rules and Regulations to regulate sources of air pollution in the SCAB. Petroleum facilities and organic liquid storage tanks, including those proposed, are subject to existing SCAQMD rules including:

- **SCAQMD Rule 402, Nuisance.** Rule 402 states that a person shall not discharge from any source whatsoever, such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause injury or damage to business or property.
- **SCAQMD Rule 463, Organic Liquid Storage.** This rule reduces VOC and TAC emissions from the storage of organic liquid in stationary above-ground tanks and requires self-inspection, reporting and recordkeeping. The standards of this rule would apply to the proposed Project. (SCAQMD is considering proposed amendments in 2023 that may apply to the proposed Project depending on the effective date of the amendments. As of this report, these amendments are not final.)
- **SCAQMD Rule 1113, Architectural Coatings.** This rule limits the VOC content of any architectural coatings used during the proposed Project.
- **SCAQMD Rule 1149, Storage Tank and Pipeline Cleaning and Degassing.** This rule reduces VOC and TAC emissions by requiring emissions controls during roof landings, cleaning, maintenance, testing, repair, and removal of storage tanks and pipelines. The standards of this rule would apply to the proposed Project.
- **SCAQMD Rule 1166, Volatile Organic Compound Emissions from Decontamination of Soil.** This rule sets requirements to control VOC emissions while excavating, grading, handling, and treating VOC-contaminated soil. The proposed Project would be subject to notifications and fees prior to earthwork involving potentially VOC-containing soils.
- **SCAQMD Rule 1173, Control of Volatile Organic Compound Leaks and Releases from Components at Petroleum Facilities and Chemical Plants.** The purpose of this rule is to control VOC leaks from components and releases from atmospheric process pressure relief devices at refineries, marine terminals, other types of petroleum facilities, and pipeline transfer stations. The standards of this rule would be applied to the proposed Project through the control requirements in the air permitting process.
- **SCAQMD Regulation XIII, New Source Review (NSR).** This program would require air permits for the proposed stationary sources; the proposed sources would need to implement the Best Available Control Technology (BACT) and offset the proposed VOC emissions increase with Emission Reduction Credits (ERCs). These requirements would be made enforceable by SCAQMD in the air permits for the new tanks.
- **SCAQMD Rule 1401, New Source Review of Toxic Air Contaminants.** Each of the proposed permitted stationary sources, the proposed new storage tanks, must comply with the health risk standards of this rule.

AB 617 – Community Emission Reduction Plan (CERP)

CARB established the Community Air Protection Program (Program) to implement AB 617, Garcia, C., Chapter 136, Statutes of 2017, which requires new community-focused action to reduce air pollution. On September 6, 2019, the SCAQMD adopted the Community Emissions Reduction Plan (CERP) for Wilmington, Carson, and West Long Beach pursuant to AB 617. The CERP outlines actions and commitments by the Community Steering Committee, the SCAQMD, and the CARB, to reduce air pollution in the Wilmington, Carson, West Long Beach community. Refineries, ports, neighborhood truck traffic, oil drilling and production, railyards, and schools,

childcare centers, and homes are prioritized as air quality priorities to be addressed and identified actions to reduce emissions and/or exposures. The SCAQMD tracks progress on the actions taken to reduce emissions and air pollutant exposure in the community and provides periodic updates (SCAQMD, 2019).

The Ribost Terminal provides storage and bulk loading of petroleum liquids transported to and from storage tanks via pipeline or trucks. The facility is not a refinery, nor does oil drilling or production occur at the facility. However, certain actions identified in the CERP would potentially apply to the Ribost Terminal:

■ **Refineries: Action 4: Initiate Rule Development to Amend Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities.** While the Ribost Terminal Facility primarily operates petroleum storage tanks at their facility, Rule 1178 applies specifically to facilities with annual emissions of more than 40,000 lbs (20 tons) of VOCs. The Ribost Terminal is not currently subject to Rule 1178 because it does not and has not historically emitted more than 20 tons of VOCs annually. SCAQMD amended this rule in September 2023 to establish more stringent leak detection and repair and control requirements for storage tanks located at subject facilities. The CERP includes rule development for amending Rule 1178 as an “Action to Reduce Community Air Pollution” and commits SCAQMD staff to reevaluate the regional emissions inventory to assess VOC and benzene impacts and evaluate the feasibility of additional requirements to identify and mitigate fugitive VOC emissions from storage tanks at refineries. The 2023 amendments to Rule 1178 implement one 2022 AQMP control measure and the goals of the CERP. While the Facility is not currently subject to the requirements of Rule 1178, should the Facility emit more than 20 tons of VOCs in a given year, Ribost would then be required to comply with Rule 1178 accordingly.

■ **Ports: Action 3: Reduce Emissions from Port Equipment (Cargo Handling Equipment) and Drayage Trucks.** Trucks visiting the Ribost Terminal would be subject to CARB requirements for idling trucks, and the applicable provisions of the CARB Truck and Bus Regulation.

■ **Neighborhood Truck Traffic: Action 1: Reduce Truck Idling; Neighborhood Truck Traffic: Action 2: Reduce Emissions from Heavy-Duty Trucks.** Trucks visiting the Ribost Terminal would be subject to CARB requirements for idling trucks, and the applicable provisions of the CARB Truck and Bus Regulation.

Port of Long Beach Green Port Policy

In November 2004, the Board of Harbor Commissioners directed Port staff to develop a policy that would build on the existing Healthy Harbor Program to encompass wide-ranging environmental goals. In January 2005, the Board of Harbor Commissioners adopted the Green Port Policy, which serves as a guide for decision-making and establishes a framework for environmentally friendly Port operations. The goal of the air quality element of the POLB Green Port Policy is to reduce harmful air emissions from Port activities (POLB, 2005).

San Pedro Bay Ports Clean Air Action Plan (CAAP). The CAAP was originally adopted in 2006 by the Boards of Harbor Commissioners of the ports of Long Beach and Los Angeles to reduce the health risks posed by air pollution from all port-related emission sources, specifically ships, trains, trucks, terminal equipment, and harbor craft, such as tugboats.

The 2017 CAAP Update contains health risk and emission-reduction targets set in the 2010 CAAP Update, for 2014 and 2023 for DPM, NO_x, and SO_x, as compared to 2005 conditions:

■ By 2014, reduce port-related emissions by 22 percent for NO_x, 93 percent for SO_x and 72 percent for DPM.

- By 2023, reduce port-related emissions by 59 percent for NO_x, 93 percent for SO_x and 77 percent for DPM.

The 2017 CAAP Update notes that the ports have achieved the 2014 targets and are well on the way to achieving the 2023 targets. The 2017 CAAP Update reiterated the commitment of the ports to a San Pedro Bay-wide health risk reduction goal, consistent with CARB's Goods Movement Reduction Plan goal, as compared to 2005 conditions, and continued the original CAAP commitment of setting an increment threshold of 10 in a million excess residential cancer risk for new projects.

3.1.3. Significance Criteria

The following air quality significance thresholds are used to determine the significance of Project air quality and health risk impacts. These criteria are based on CEQA Appendix G and CEQA thresholds recommended by the SCAQMD for the emissions increases of proposed projects (SCAQMD, 2023), and the SCAQMD published localized significance thresholds (LST) are used in characterizing ambient air quality effects near off-site sensitive receptors (SCAQMD, 2009).

Significance Criteria for Construction Impacts

Construction impacts would be significant under any of the following circumstances:

Impact AQ-1: Construction would conflict with or obstruct implementation of an applicable air quality management plan.

Impact AQ-2: Construction would result in a cumulatively considerable net emission increase exceeding any of the SCAQMD thresholds of significance shown in Table 3.1-5 for a criteria pollutant for which the region is in nonattainment.

Impact AQ-3: Construction would result in substantial increase in offsite ambient air pollutant concentrations for a criteria pollutant for which the region is in nonattainment due to emissions exceeding any of the SCAQMD Localized Significance Thresholds shown in Table 3.1-6.

Impact AQ-4: Construction would expose sensitive receptors to substantial pollutant concentration levels of toxic air contaminants (TACs). The determination of significance is based on the following:

- Maximum incremental cancer risk greater than or equal to 10 in one million (10×10^{-6}).
- Noncancer (chronic or acute) hazard index greater than or equal to 1.0 (Project increment).
- Cancer burden greater than 0.5 excess cancer cases, in areas where population is within a zone of impact with risk greater than 1 in one million (1×10^{-6}).

Impact AQ-5: Construction would create objectionable odors affecting a substantial number of people pursuant to SCAQMD Rule 402 (Nuisance) and the California Office of Environmental Health Hazards Assessment (OEHHA) Hydrogen Sulfide (H₂S) odor threshold of 8 parts per billion (ppb).

Significance Criteria for Operational Impacts

Operational Impacts would be significant under any of the following circumstances:

Impact AQ-6: Operation would conflict with or obstruct implementation of an applicable air quality management plan.

Impact AQ-7: Operational emissions would result in a cumulatively considerable net emission increase exceeding any of the SCAQMD thresholds of significance shown in Table 3.1-5 for a criteria pollutant for which the region is in nonattainment.

Impact AQ-8: Operation would result in substantial increase in offsite ambient air pollutant concentrations for a criteria pollutant for which the region is in nonattainment due to emissions exceeding any of the SCAQMD Localized Significance Thresholds of shown in Table 3.1-6.

Impact AQ-9: Operation would expose sensitive receptors to substantial pollutant concentration levels of toxic air contaminants (TACs). The determination of significance is based on the following:

- Maximum incremental cancer risk greater than or equal to 10 in one million (10×10^{-6}).
- Noncancer (chronic or acute) hazard index equal to or greater than 1.0 (Project increment).
- Cancer burden greater than 0.5 excess cancer cases, in areas where population is within a zone of impact with risk greater than 1 in one million (1×10^{-6}).

Impact AQ-10: Operation would create objectionable odors affecting a substantial number of people pursuant to SCAQMD Rule 402 (Nuisance) and the OEHHA H₂S odor threshold of 8 ppb.

Table 3.1-5. Mass Daily Emissions Significance Thresholds

Activity	VOC (lb/day)	NO _x (lb/day)	CO (lb/day)	SO _x (lb/day)	PM ₁₀ (lb/day)	PM _{2.5} (lb/day)
Construction	75	100	550	150	150	55
Operation	55	55	550	150	150	55

Source: SCAQMD, 2023.

To aid with evaluating localized effects of air pollutants, SCAQMD developed LSTs to represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable ambient air quality standard (SCAQMD, 2008). For the proposed Project, the daily emissions thresholds for localized effects are defined by the SCAQMD Mass Rate LST Look-up Table for a one-acre site within the region's Source Receptor Area (SRA) 4, South Coastal Los Angeles County, for a receptor that is 500 meters from the site boundary (SCAQMD, 2009).

The LST values used for each pollutant appear in Table 3.1-6.

Table 3.1-6. Localized Significance Thresholds

Activity	NO _x (lb/day)	CO (lb/day)	PM ₁₀ (lb/day)	PM _{2.5} (lb/day)
Construction	142	7,558	158	93
Operation	142	7,558	38	23

Source: SCAQMD, 2009.

3.1.4. Assessment Methodology

All construction- and operation-related emissions are quantified based on the best available forecast of activities. For mobile sources, including on-highway and off-road equipment during construction and incremental tanker truck traffic during operation, this analysis uses the California Emissions Estimator Model (CalEEMod), version 2022.1.1.1414, software developed by the California Air Pollution Control Officers Association (CAPCOA). This is the most recent version of the CalEEMod desktop software, and it relies upon mobile source emission factors from the CARB OFFROAD inventory and EMFAC2021 models. Where Project-specific design features are not

yet defined, default and typical settings from CalEEMod are used. Default emission factors, where used in this analysis, are consistent with those in the CalEEMod User's Guide (April 2022). (Model output and supporting spreadsheet calculations appear in EIR Appendix C, *Air Pollutant Emissions Data*.)

Construction phase activities include coatings for the proposed storage tanks. Emissions of VOC during the use of coatings are estimated with separate spreadsheet calculations assuming compliance with SCAQMD Rule 1113 (Architectural Coatings). The rule mandates VOC control by requiring use of low-VOC content compliant coatings for the interior and exterior of the tanks.

The methodology for estimating operational emission from the different types of sources relies on either a preliminary SCAQMD staff analysis or separate spreadsheet calculations augmented by CalEEMod for mobile and area sources. Standing and working losses of VOC during routine use of the proposed storage tanks were quantified by SCAQMD staff as part of a preliminary Engineering Evaluation prepared for Ribost Terminal, LLC, dated June 9, 2021 (SCAQMD, 2021a). SCAQMD used the current USEPA *Compilation of Air Pollutant Emissions Factors* (AP-42), Section 7.1 Organic Liquid Storage Tanks (USEPA, 2020) methodology for standing and working emissions, and the SCAQMD also evaluated new VOC emissions that may leak from components affixed to the proposed storage tanks. The SCAQMD Annual Emissions Reporting Program procedures refer to AP-42 for storage tank emissions inventories. (The 2021 preliminary Engineering Evaluation is provided in EIR Appendix C, *Air Pollutant Emissions Data*.)

Consistent with USEPA AP-42 Section 7.1, this analysis considers "routine emissions" to refer to standing and working losses, because emissions of taking the tanks out of service for maintenance and cleaning would occur much less frequently. Separate emissions estimates address the non-routine events of emptying and cleaning the tanks. This analysis presents separate quantification for the idling of a tank, when the tank is emptied to the point that the floating roof lands on deck legs, and quantification of subsequent degassing, if required to clean the tank.

Where the Project could cause changes in operational emissions from existing sources, spreadsheet calculations estimate the incremental changes in emissions from existing stationary sources at the facility by proportionally scaling up the 2019 emissions from the loading racks and use of the thermal oxidizer for vapor collection at the loading racks. (See EIR Appendix C, *Air Pollutant Emissions Data: Attachment 1* page 9 of 12.)

3.1.5. Impacts and Mitigation Measures

3.1.5.1. Proposed Project

Construction Impacts

Impact AQ-1: Construction of the proposed Project would conflict with or obstruct implementation of the applicable air quality plan. (Less than Significant)

This impact evaluates whether the proposed Project conflicts with applicable air quality plans including the AQMP adopted by the SCAQMD and air quality management strategies adopted by the POLB. The proposed Project's compliance with 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.

Project construction would be required to comply with all applicable air quality regulations and all applicable strategies of the San Pedro Bay Ports Clean Air Action Plan (CAAP) (POLB, 2017), including the Port's Air Quality Best Management Practices (BMPs) for Construction Activities made enforceable through the Harbor Development Permit. Compliance with applicable air quality

regulations and Air Quality BMPs for Construction Activities would ensure construction practices and emissions would conform with the AQMP.

Permits to Construct issued by the SCAQMD would establish permit conditions to ensure compliance with the SCAQMD rules and regulations for construction of the new tanks and associated equipment to ensure that construction of the proposed Project would not conflict with any applicable air quality plan.

The CERP for Wilmington, Carson, and West Long Beach identifies actions for various priority sources, such as ports and oil drilling production, the actions do not specifically address construction activities. Nevertheless, construction of the proposed Project would support actions in the CERP including Port's Action 3 which includes supporting the Port's implementation of CAAP measures for trucks; the Neighborhood Traffic Action 2 to reduce emissions from heavy-duty trucks.

CEQA Impact Determination

Less than significant. The proposed Project's construction activities would be required to comply with all applicable air quality regulations and BMPs to ensure the proposed Project would not conflict with or obstruct implementation of the AQMP, CAAP, or CERP. Therefore, impacts related to conflict with or obstruction of implementation of the AQMP, CAAP, or CERP would be less than significant.

Mitigation Measures

No mitigation would be required.

Impact AQ-2: Construction of the proposed Project would result in a cumulatively considerable net emission increase exceeding a South Coast Air Quality Management District (SCAQMD) threshold of significance. (Less than Significant)

The proposed Project includes the installation of two new floating roof crude oil storage tanks. Site preparation would involve clearing debris, such as concrete and abandoned underground components, and the demolition and removal of an out-of-service oil/water concrete separator sump. Excavation and removal of soil would occur in accordance with World Oil Corp.'s Soil Management Plan that specifies air monitoring, notification, and reporting if encountering materials potentially containing hydrocarbons under SCAQMD Rule 1166. The construction equipment, vehicle trip, and tank coating assumptions were determined through coordination with the Project applicant.

Table 3.1-7 provides the maximum daily emissions estimated for Project construction and compares them to the applicable SCAQMD significance threshold. The worst-case daily rate of emissions could occur during combined activities to prepare the foundation and commence tank installation; the period of highest VOC emissions would occur while coating the tanks. However, none of the construction emissions would exceed the SCAQMD daily significance thresholds.

Table 3.1-7. Construction Maximum Daily Criteria Pollutant Emissions – Proposed Project

Activity	VOC (lb/day)	NOx (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
Construction Activities: Fugitive Dust, Off-Road Equipment, Mobile Sources	2.33	21.22	26.00	0.11	1.88	1.00
Architectural Coatings	35.33	--	--	--	--	--
Total Project Construction	37.66	21.22	26.00	0.11	1.88	1.00

Activity	VOC (lb/day)	NOx (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
SCAQMD Significance Thresholds	75	100	550	150	150	55
Significant?	No	No	No	No	No	No

Source: EIR Appendix C, *Air Pollutant Emissions Data*.

CEQA Impact Determination

The Project construction emissions would not exceed the SCAQMD daily significance thresholds for construction, and this impact would be less than significant.

Mitigation Measures

Project construction emissions would not exceed the SCAQMD daily significance thresholds, and this impact is less than significant. Therefore, no mitigation would be required.

Impact AQ-3: Off-site ambient air pollutant concentrations from construction of the proposed Project would increase due to exceeding a SCAQMD Localized Significance Threshold. (Less than Significant)

Project construction emissions would cause localized increases in criteria air pollutant concentrations. The potential for causing, or substantially contributing to, an exceedance of the ambient air quality standards can be evaluated using the SCAQMD recommendations for localized significance thresholds (LSTs) (SCAQMD, 2008). The LSTs are based on modeling for the maximum off-site pollutant concentrations that could result in potentially significant Project-level criteria pollutant health impacts based on the size of the site and the distance from the boundary of the site to receptors.

The quantity of PM10 and PM2.5 emissions from proposed Project construction activities would be limited by SCAQMD fugitive dust control requirements and requirements to comply with California's In-Use Off-Road Diesel-Fueled Fleets Regulation. These programs for targeting fugitive dust and controlling diesel equipment would avoid excessive air pollutant concentrations by reducing the mass rates of total PM10 and PM2.5 including equipment exhaust DPM.

Table 3.1-8 shows the total of on-site and off-site emissions during the proposed Project's construction. The table 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 portion of these emissions would be a fraction of the total, and on-site emissions would be well below all SCAQMD LSTs for a one-acre site and a receptor that is 500 meters from the site boundary, in SCAQMD SRA 4, South Coastal Los Angeles County. The construction emissions would not create an exceedance or potentially adverse localized effects.

Table 3.1-8. Construction Daily Criteria Pollutant Emissions and Localized Significance Thresholds – Proposed Project

Activity	NOx (lb/day)	CO (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
Project Construction	21.22	26.00	1.88	1.00
SCAQMD Localized Significance Thresholds	142	7,558	158	93
Significant?	No	No	No	No

Source: EIR Appendix C, *Air Pollutant Emissions Data*.

CEQA Impact Determination

As shown in Table 3.1-8, construction emissions of criteria pollutants would be below all SCAQMD LSTs. Therefore, the impact of Project construction to off-site concentrations of criteria air pollutants would be less than significant.

Mitigation Measures

Project construction emissions of criteria pollutants would not exceed the SCAQMD LSTs, and the impact of off-site concentrations is less than significant. No mitigation would be required.

Impact AQ-4: Construction of the proposed Project would expose sensitive receptors to substantial pollutant concentration levels of toxic air contaminants (TACs). (Less than Significant)

The proposed Project construction emissions would include DPM, which is a TAC. Construction emissions of air toxics would be limited to occur during the short-term construction period (approximately 10.5 months). From a health risk perspective, DPM has a high cancer potency, and the onsite portion of construction DPM emissions are the greatest concern. The offsite emissions from transportation to the Project site would also contribute to DPM concentrations in the area, but the offsite emissions would be spread over the large area of region-serving roadways, rather than being concentrated at the Project site.

Project construction emissions would also include those from low-VOC coatings for the new tanks. Architectural coatings to be used by the Project would be low-VOC materials that do not have substantial amounts of TACs. However, they would 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 that indicate these contaminants are much less likely to drive adverse health risks than DPM. As such, the potential risks from TAC emissions in low-VOC coatings used during construction would be minor and are not discussed further.

The DPM emissions during Project construction would occur over a relatively short period of less than one year, when compared with the potential for lifetime exposures. Cancer potency factors are normally based on long-term exposure, and construction DPM emissions would only last a small fraction of a lifetime.

The locally increased concentrations of construction-related DPM emissions would cause increased health risk and hazards near the site. The primary health risks to nearby sensitive receptors would be driven by the DPM emissions from on-site equipment and vehicles during construction. Noncancer effects of DPM are normally less of a concern than cancer risks, and DPM emissions do not have acute health risk reference exposure levels, so acute health hazards are not quantifiable for DPM emissions. Cancer risks of the construction-related DPM emissions are based on a worst-case one-year exposure period, which starts in the third trimester of pregnancy, as specified by California Office of Environmental Health Hazard Assessment (OEHHA) risk assessment methods guidance for short-term projects (OEHHA, 2015).

To evaluate downwind DPM concentrations and health risks during construction-phase activities, this analysis provides a health risk screening analysis by using the CARB Air Dispersion Modeling and Risk Tool, which is part of the Hotspots Analysis and Reporting Program (HARP) suite of software (version 22118). The current version of HARP embeds the USEPA-recommended guideline model, AERMOD (American Meteorological Society/USEPA Regulatory Model). The model relies upon user-specified source parameters that are input by HARP into AERMOD. For this analysis, the worst-case ambient downwind concentrations are estimated using a five-year record (2012-2016) of model-ready meteorological conditions from the Long Beach airport, as made available by SCAQMD.

The emissions from proposed Project construction equipment exhaust emissions, namely DPM from off-road equipment were configured in HARP and AERMOD as a volume source with a generic “unit” emission rate (1 gram per second) that could be scaled for Project-specific emissions. Other relevant input options are summarized as follows:

- Volume source representing on-site use of off-road equipment and mobile sources within one acre.
- Modeled “unit” emission rate of 1 gram per second.
- Volume source release height: 12 feet (3.7 meters); volume source length of side: 200 feet (64 meters); initial sigma-y: 14.8 meters; initial sigma-z: 1.7 meters.
- Receptors at radial distances: 90, 763, and 838 meters corresponding to nearest worker, residential, and school locations, respectively.

The dispersion modeling analysis solves for maximum concentrations at the specified receptors in terms of micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). For emissions up to 148 pounds of DPM during the construction period, annual average concentration would be $0.007 \mu\text{g}/\text{m}^3$ of DPM at the residential receptors of maximum impact, and the concentration would be approximately $0.2 \mu\text{g}/\text{m}^3$ for workers near the site boundary. For a residential receptor exposed at this DPM concentration for the construction period, the risk assessment result for the incremental cancer risk would be 1.16 in one million. The zone of impact from the construction activity to the point at which the risk falls below one in one million is approximately one mile (1.61 kilometers) from the proposed Project site. For the total population of the one-mile buffer area of 15,588 persons, the estimated cancer burden would be 0.02 excess cancer cases, below the SCAQMD threshold of 0.5 excess cancer cases.

Table 3.1-9 shows that the construction-phase DPM impacts at the nearest sensitive receptors would not exceed the SCAQMD health risk thresholds, which indicates that construction would not result in significant incremental cancer risk or chronic health hazards.

Table 3.1-9. Construction Maximum Health Impacts of TACs – Proposed Project

Location	Maximum Incremental Cancer Risk
Residential Receptor	1.16×10^{-6}
Worker Receptor	0.411×10^{-6}
Health Risk Thresholds	10×10^{-6}
Significant?	No

Source: EIR Appendix C, *Air Pollutant Emissions Data*.

The potential incremental cancer risk associated with construction DPM at the worst-case residential receptor would be 1.16 in one million, which is within the SCAQMD threshold of significance of 10 in one million cancer cases for the Maximum Incremental Cancer Risk.

CEQA Impact Determination

The proposed Project construction impact of TACs including DPM emissions would not expose sensitive receptors to substantial pollutant concentrations of toxic air contaminants. Therefore, the localized health risk impact of construction emissions and impacts related to exposure of sensitive receptors to substantial pollutant concentration of toxic air contaminants would be less than significant.

Mitigation Measures

No mitigation would be required.

Impact AQ-5: The proposed Project would create objectionable odors during construction affecting a substantial number of people. (Less than Significant)

During construction, the short-term increase in air pollutants and odors primarily due to the combustion of diesel fuel from construction equipment and VOC emissions associated with the application of tank interior and exterior coating (i.e., paint) may have the potential for objectionable odors. Excavations for new tank foundations would be monitored for the presence of hydrocarbons using sight and smell and a handheld monitor for detection of hydrocarbon vapors, as required by SCAQMD Rule 1166. Given the small quantity of potentially 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. These conditions ensure that odors during construction would be likely to comply with SCAQMD Rule 402 (Nuisance) and would not adversely impact a substantial number of people.

CEQA Impact Determination

The impact of odors during construction would be less than significant.

Mitigation Measures

The impact of Project-generated odors during construction would be less than significant. Therefore, no mitigation would be required.

Operational Impacts

Impact AQ-6: Operation of the proposed Project would conflict with or obstruct implementation of the applicable air quality plan. (Less than Significant)

This impact evaluates whether operation of the proposed Project would conflict with applicable air quality plans including the AQMP adopted by the SCAQMD and air emissions reduction strategies adopted by the POLB. This is a qualitative determination that considers the combined effects of Project construction and operation. Compliance with 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.

Operation of the two new storage tanks would not require modifications to the existing loading racks or tanker truck transportation requirements as described in Ribost's existing SCAQMD-issued Permits to Operate. Ribost would be required to submit an application for Permits to Construct/Permits to Operate for the new tanks and associated equipment. Issuance of the Permits to Construct/Permits to Operate would require Ribost to comply with SCAQMD's rules, regulations, and permit conditions, including requirements for inspection, monitoring, and recordkeeping. The proposed new tanks and modified sources at the facility would be subject to the SCAQMD requirements to implement the BACT to ensure that the Project would pose no potential to conflict with the AQMP or SCAQMD requirements. These permitting requirements and conditions made enforceable by the permits ensure that the proposed Project would not conflict with the applicable air quality plan.

The Ribost Terminal 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 operating permit.

The CERP for Wilmington, Carson, and West Long Beach identifies actions for various priority sources, such as ports, refineries, and oil drilling and production. The Ribost Terminal provides storage and bulk loading of petroleum liquids, and it is not a refinery, drilling or production facility. Nevertheless, operation of the proposed Project would support actions in the CERP including

Port's Action 3 which includes supporting the Port's implementation of CAAP measures for trucks and the Neighborhood Traffic Action 2 to reduce emissions from heavy-duty trucks.

CEQA Impact Determination

The proposed Project would not conflict with or obstruct implementation of an applicable air quality plan. Therefore, the impact related to conflict with or obstruction of implementation of applicable air quality plans is less than significant.

Mitigation Measures

No mitigation would be required.

Impact AQ-7: Operation of the proposed Project would result in a cumulatively considerable net emission increase exceeding a SCAQMD threshold of significance. (Less than Significant)

New stationary sources of operational emissions would include the transfer of materials to and from the new tanks, and new fugitive leaks that may escape from components affixed to the new tanks. Operational emissions associated with the proposed Project would also result from the continued use of existing storage tanks and existing truck loading racks.

Proposed New Storage Tanks. Air emissions associated with the operation of the new tanks were quantified in the application for a Permit to Construct/Permit to Operate (Permit Application) submitted by Ribost Terminal, LLC, to the SCAQMD (Yorke, 2021). The quantification from the application was refined by SCAQMD staff in a preliminary Engineering Evaluation for air permitting (SCAQMD, 2021a). This analysis summarizes the results of the SCAQMD staff draft Engineering Evaluation, dated June 9, 2021, for the new stationary sources.

VOC emissions associated with operation of the proposed new tanks were estimated by SCAQMD as part of the review of the 2021 Permit Application (Yorke, 2021). SCAQMD engineering staff used the latest 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 for the maximum monthly emissions (SCAQMD, 2021a). In the peak month of August, the standing and working losses from the two proposed storage tanks, combined with the fugitive leaks from new components, would cause an estimated 10.82 pounds per day (lb/day) of average daily VOC emissions (SCAQMD, 2021a).

Tank Maintenance. The two new storage tanks would require typical maintenance activities. Typical maintenance activities for the new tanks would include cleaning sludge from tank bottoms, dewatering, routine visual inspections, and standard quarterly inspections in compliance with the SCAQMD air permit to operate requirements. When a tank is removed from service for inspection or repair, it may be emptied and cleaned, which requires degassing. Idling a tank, emptying, and cleaning are not routine events and occur with a very low frequency, approximately every 10 years for typical cleaning.

The day-to-day operation of the proposed storage tanks would not involve the landing of the floating roof, degassing the tank after draining, or cleaning. Draining the tanks to the point of the floating roof landing on the support legs would only occur in the event of an equipment malfunction or breakdown, or to undergo a routine 10-year inspection per American Petroleum Institute standards, or for certain changes in the product stored that could require drainage, degassing, and cleaning.

SCAQMD rules and USEPA NSPS Subpart Kb require floating roofs remain floating on the liquid at all times except when the tank is being completely emptied for cleaning or repair. All tank inspection and cleaning events must comply with SCAQMD Rule 1149, Storage Tank and Pipeline Cleaning and Degassing, which requires emission controls for vented VOC. When a tank

is subject to Rule 1149 and emptied to the point that the floating roof lands on deck legs, the vapor space of the tank must be vented (degassed) to an APCD-approved control device. Vacuum trucks hired to assist in removal of material from a tank are required to comply with Rule 1149. For its existing operations, Ribost 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. Because the tanks would be out of service during these maintenance events, the routine standing and working losses would not occur at the same time. Compliance with these applicable rules ensures that the internal roof of each tank remains either floating, or the vapors are vented to a control device at all times.

Although emptying and cleaning the proposed tanks would not occur on a predictable schedule, this analysis uses USEPA AP-42 Section 7.1 and applies the mandatory controls of Rule 1149 to approximate VOC emissions during these maintenance events. Emptying a tank creates “landing losses,” and cleaning a tank requires degassing. This analysis estimates that 1.2 lb/day VOC could occur due to one of the proposed tanks standing idle with the floating roof landing on deck legs. Subsequent refilling after a roof landing would create emissions similar to the normal use of the tank. For a tank cleaning, purging, and degassing the vapor space under the floating roof could cause around 4.3 lb/day VOC. Once the tank vapor space is purged and rendered clean, ventilation of the tanks would cause no further emissions. With the mandatory controls of Rule 1149, these maintenance events would not increase the daily rates of VOC emissions above those expected to occur with normal operations.

Existing Tanks. With implementation of the proposed Project, two existing tanks would be converted to leased tanks, primarily for fuel oil product storage and removed from Ribost’s dedicated paving/roofing asphalt refinery service. This change of service would not be likely to increase VOC emissions from the two existing tanks because true vapor pressure properties of fuel oils are much lower than those of crude oils. This means that, all else equal, changing existing tanks from a baseline of crude oil service to fuel oil service would result in lower potential evaporative losses when compared with existing conditions.

Truck Loading Racks and Thermal Oxidizer. The proposed Project also assumes operation of the truck loading racks and truck transport from the facility as well as the thermal oxidizer for vapor collection at the loading racks. (See EIR Appendix C, *Air Pollutant Emissions Data: Attachment 1* page 9 of 12.)

Summary of Emissions during Operations. Table 3.1-10 shows daily emissions related to Project operations. These emissions would not exceed the SCAQMD daily significance thresholds for operation, and this impact would be less than significant.

Table 3.1-10. Daily Operational Emissions – Proposed Project

Activity	VOC (lb/day)	NOx (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
Storage Tanks, New Standing and Working Losses	8.80	--	--	--	--	--
Storage Tanks, New Fugitive Components	2.02	--	--	--	--	--
Coatings, Consumer Products, Area Sources	0.6464	0.0101	0.9595	< 0.005005	< 0.005005	< 0.005005
Loading Rack Tanker Truck Traffic, Mobile Sources	0.02	1.32	0.45	0.01	0.32	0.10

Activity	VOC (lb/day)	NOx (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
Loading Rack Thermal Oxidizer	0.01	0.20	0.16	0.00	0.01	0.01
Loading Rack Throughput	0.08	--	--	--	--	--
Total Project Operations	11.57	1.53	1.56	0.01	0.33	0.11
SCAQMD Significance Thresholds	55	55	550	150	150	55
Significant?	No	No	No	No	No	No

Source: EIR Appendix C, *Air Pollutant Emissions Data*.

CEQA Impact Determination

As shown in Table 3.1-10, daily emissions related to Project operation would not exceed the SCAQMD daily significance thresholds. Therefore, impacts related to cumulative considerable net increase in criteria pollutants would be less than significant.

Mitigation Measures

Project emissions related to Project operation would not exceed the SCAQMD daily significance thresholds, and this impact is less than significant. Therefore, no mitigation would be required.

Impact AQ-8: Off-site ambient air pollutant concentrations from operation of the proposed Project would increase due to exceeding a SCAQMD Localized Significance Threshold. (Less than Significant)

Air emissions associated with operation of the proposed Project would cause localized increases in criteria air pollutant concentrations. Emissions during operations that are less than the LSTs would not have a potential for causing or substantially contributing to an exceedance of the ambient air quality standards.

The proposed Project would increase ozone precursor (VOC and NOx) emissions; ozone is a secondary pollutant that is formed by photochemical reaction downwind of the sources of precursors. Downwind ozone formation in the regional context would be an indirect effect of the precursor emissions. This indirect effect is in contrast with the direct effects of the speciated organic compounds that qualify as TAC emissions, which pose health risks near the site. Ozone peaks near the emissions source region are not as high as those further downwind, due to the time required for ozone to form. The health impacts from exposure to ozone are managed as part of the AQMP (SCAQMD, 2022). For the indirect effects of VOC leading to ozone formation, the SCAQMD establishes control strategies in the AQMP to avoid adverse health risks of ozone levels in the region by reducing VOC at the sources. There is no SCAQMD LST for assessing the localized effects of total VOC emissions, and the SCAQMD NSR program (SCAQMD Rule 1303) does not require modeling of VOC emissions for ozone concentrations. The health risks of speciated organic compounds are addressed separately as TACs (see Impact AQ-9).

As discussed in Impact AQ-7, VOC emissions during operation of the proposed Project would be below the SCAQMD mass daily emissions threshold for impacts to regional air quality. Accordingly, the VOC emissions of the proposed Project would not significantly change the health risks of regional ozone levels.

Table 3.1-11 shows that the maximum daily localized emissions from operations would be below all applicable SCAQMD LSTs.

Table 3.1-11. Operational Emissions and Localized Significance – Proposed Project

Activity	NOx (lb/day)	CO (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
Total Project Operations	1.53	1.56	0.33	0.11
SCAQMD Localized Significance Thresholds	142	7,558	38	2
Significant?	No	No	No	No

Source: EIR Appendix C, *Air Pollutant Emissions Data*.

CEQA Impact Determination

As shown in Table 3.1-11, emissions of criteria pollutants during operations would be below all SCAQMD LSTs. Therefore, the impact of Project operations related to off-site concentrations of criteria air pollutants for which the region is in nonattainment would be less than significant.

Mitigation Measures

Project operation emissions of criteria pollutants would not exceed the SCAQMD LSTs, and the impact of off-site concentrations is less than significant. No mitigation would be required.

Impact AQ-9: Operation of the proposed Project would expose sensitive receptors to substantial pollutant concentration levels of TACs. (Less than Significant)

Project emissions during operations would cause localized increases of TACs, primarily in the form of VOC emissions of the two new storage tanks. Other sources of potential emissions increases would include changes in use of the existing loading racks, which leak fuel oil vapors, and tanker truck traffic. When compared with new tank VOC emissions, these sources would emit at much lower quantities (less than 0.1 pounds per day). Additionally, trucking emissions would occur over a large area and would not substantially contribute to localized health impacts near the site.

As part of the preliminary Engineering Evaluation, the SCAQMD staff performed a health risk screening evaluation for the new stationary sources (SCAQMD 2021a). The SCAQMD staff used a conservative assumption to determine the speciated TAC emissions rates by assuming the TAC content profile for gasoline rather than crude oil, as anticipated under the proposed Project. The evaluation concluded that the new sources would be likely to comply with the risk thresholds of SCAQMD Rule 1401.

The results are summarized in Table 3.1-12, which demonstrates that the health risks for during Project operations would not exceed the SCAQMD incremental cancer risk or health hazards index thresholds.

Table 3.1-12. Estimated Health Impacts for Operation – Proposed Project

Location	Maximum Incremental Cancer Risk	Acute Hazard Index	Chronic Hazard Index
Residential Receptor	0.3×10^{-6}	0.0016	0.0014
Worker Receptor	0.464×10^{-6}	0.0324	0.0260
Health Risk Thresholds	10×10^{-6}	1.0	1.0
Significant?	No	No	No

Source: EIR Appendix C, *Air Pollutant Emissions Data*.

Because the effects of proposed Project operations would be below the SCAQMD health risk thresholds for use in CEQA, operation emissions would not expose sensitive receptors to substantial pollutant concentrations, and this impact would be less than significant.

The combined effects of construction (Table 3.1-9) and operation (Table 3.1-12) would also remain less than the SCAQMD health risk thresholds. The total maximum incremental cancer risk during construction and operation, for the maximum residential receptor would be fewer than 1.5 in one million. Acute and chronic non-cancer health hazard indices would be less than 0.1 for construction and operation combined. (See EIR Appendix C, *Air Pollutant Emissions Data: Attachment 1* page 12 of 12.)

CEQA Impact Determination

As shown in Table 3.1-9 and in Table 3.1-12, the effects of Project-related TAC emissions during operation, and the combined effects of construction and operation, would not expose sensitive receptors to substantial pollutant concentrations that could exceed SCAQMD health risk thresholds. This impact related to exposure of sensitive receptors to substantial pollutant concentrations of TACs would be less than significant.

Mitigation Measures

No mitigation would be required. The Project impact of construction and operation TAC emissions is less than significant.

Impact AQ-10: The proposed Project would create objectionable odors during operations affecting a substantial number of people. (Less than Significant)

Project operation would cause increases in VOC and H₂S emissions, primarily from the two new tanks and fugitives. The loading rack, exhaust emissions from the loading rack vapor control thermal oxidizer, and tanker truck trips would not be substantial sources of odors and would not have the potential to create odors that could adversely affect a substantial number of people.

The two new tanks and fugitive VOC and H₂S emissions would include a mixture of substances with distinct odors that are normally associated with petroleum storage. Oil and gas processes are common sources of H₂S, which has a rotten egg odor that most people find offensive. Odor from H₂S can induce tearing of the eyes and symptoms related to overstimulation of the sense of smell, including headache, nausea, or vomiting. On a population basis, the average odor detection threshold is about 0.03 to 0.05 ppm, although some individuals can detect H₂S at lower concentrations (CARB, 2023). Additional health effects have only been reported with exposures greater than 50 ppm (eye irritation), considerably higher than the odor threshold. To protect public health and to significantly reduce odor annoyance, the CARB adopted an ambient air quality standard or CAAQS of 0.03 ppm over a one-hour average for H₂S (CARB, 2023).

The SCAQMD staff provided emission calculations to estimate H₂S emissions related to the two new tanks and fugitives. Assuming that the Project would handle liquids that could contain up to a worst-case sulfur content of 3 percent as H₂S, the SCAQMD determined H₂S could be emitted at an average rate of 0.00675 lb/hour per tank (SCAQMD, 2021a) or an equivalent Project-related increase of 0.0135 lb/hour of H₂S facility-wide.

The SCAQMD evaluated the Project H₂S emissions increase for each tank against the OEHHA odor threshold (8 parts per billion [ppb]) that is more stringent than the CAAQS for H₂S of 0.03 ppm (30 ppb, 42 µg/m³). The maximum modeled H₂S concentration would be 0.00194 ppm (1.94 ppb) at 9.1 meters from each tank location onsite (SCAQMD, 2021a). Considering the combined effects of two proposed tanks, the overall impact would be 0.004 ppm (4 ppb) onsite, which is well below both the OEHHA (8 ppb) limit and the CAAQS (30 ppb). Dispersion of the odor would ensure that much lower concentrations would occur at the closest commercial receptor 90 meters

away (less than 1 ppb) and at the closest residential receptor and school. Objectionable odors from H₂S would be unlikely to affect a substantial number of people because offsite H₂S concentrations would be substantially lower than the odor thresholds for H₂S.

Other odorous substances would occur as part of the proposed Project fugitive VOC emissions. Certain organic compounds, such as benzene and naphthalene, contribute to the distinctive smell of crude and fuel oils common to petroleum production, refining, and fuel storage and marketing. Odor detection of organic compounds in crude oil occurs at higher concentrations than detection of H₂S odor. Because the concentrations of other odorous organic substances would be a small fraction of the total VOC concentrations and these substances are less likely to cause a nuisance than H₂S, there is little to no potential for any substance other than H₂S to cause objectionable odors. (Supporting calculations appear in EIR Appendix C, *Air Pollutant Emissions Data: Attachment 1* page 10 of 12.)

The predicted maximum short-term concentrations of odorous substances during proposed Project operation at the nearest sensitive receptor locations would be several orders of magnitude below the respective odor thresholds. Therefore, given the Project's emissions rates and the distances between Project emission sources and the nearest sensitive receptors (i.e., approximately 800 meters), the downwind concentrations of odorous emissions would be well below the thresholds for objectionable odors, and a substantial number of people would not be adversely affected by odors from the proposed Project.

CEQA Impact Determination

The impact of odors during Project operation would be less than significant.

Mitigation Measures

No mitigation would be required. The impact of Project-generated odors during operation is less than significant.

3.1.5.2. Single Tank Alternative

Under the Single Tank Alternative, only one 25,000 bbl petroleum storage tank would be constructed and operated. The Single Tank Alternative would involve the same type of construction activities: preparation, excavation, removal of soil, and tank coating that would contribute to construction-related emissions. Staging and mobilization would be essentially the same. Stationary sources of operational emissions, such as the new storage tank and new fugitive leaks that may escape from components affixed to the new tank and mobile source emissions at the existing loading racks would occur similar to the proposed Project.

Construction Impacts

Impact AQ-1: Construction of the Single Tank Alternative would conflict with or obstruct implementation of the applicable air quality plan. (Less than Significant)

Construction requirements associated with the Single Tank Alternative would be less than those required for the proposed Project, as one less tank would be constructed and operated. As such, this could result in a moderate reduction in impacts related to air quality and a reduction in the potential to conflict with AQMPs; the Single Tank Alternative would be required to comply with all applicable air quality regulations and BMPs to ensure it would not conflict with or obstruct implementation of any applicable AQMP.

CEQA Impact Determination

The Single Tank Alternative would have a less-than-significant impact with respect to compliance with the applicable air quality plans.

Mitigation Measures

No mitigation would be required.

Impact AQ-2: Construction of the Single Tank Alternative would result in cumulatively considerable net emission increase exceeding a South Coast Air Quality Management District (SCAQMD) threshold of significance. (Less than Significant)

Construction requirements are less than those required for the proposed Project, as one less tank would be constructed; however, construction would still involve the mobilization and site preparation activities, as discussed above. Therefore, net emission increases during construction for this alternative would be slightly reduced compared to the proposed Project. As with the proposed Project, construction emissions under Alternative 1 would not exceed the SCAQMD daily significance thresholds for construction.

CEQA Impact Determination

The Single Tank Alternative, like the proposed Project, would not exceed the SCAQMD daily significant thresholds for construction, and this impact would be less than significant.

Mitigation Measures

No mitigation would be required.

Impact AQ-3: Result in substantial increase in off-site ambient air pollutant concentrations for a criteria pollutant for which the region is in nonattainment from construction of the Single Tank Alternative would increase due to exceeding a SCAQMD Localized Significance Threshold. (Less than Significant)

The Single Tank Alternative would involve fewer construction emissions than those that would occur for the proposed Project, as one less tank would be constructed. As a result, construction emissions would be below all applicable SCAQMD LSTs and unlikely to substantially change off-site ambient air pollutant concentrations.

CEQA Impact Determination

The Single Tank Alternative would cause construction emissions at levels that would not exceed SCAQMD LSTs. This impact would be less than significant.

Mitigation Measures

No mitigation would be required.

Impact AQ-4: Construction of the Single Tank Alternative would expose sensitive receptors to substantial pollutant concentration levels of toxic air contaminants (TACs). (Less than Significant)

Air emissions associated with construction of the Single Tank Alternative would be less than those from the proposed Project due to the reduction in new tank construction activities. Therefore, the health impacts related to TAC contaminants and DPM emissions during construction would be slightly reduced compared to the proposed Project. As with the proposed Project, the Single Tank Alternative would not expose sensitive receptors to substantial TACs concentrations during construction.

CEQA Impact Determination

TACs, including DPM emissions associated with construction of the Single Tank Alternative would be below SCAQMD significance thresholds. Therefore, Impact AQ-4 would be less than significant.

Mitigation Measures

No mitigation would be required.

Impact AQ-5: The Single Tank Alternative would create objectionable odors during construction affecting a substantial number of people. (Less than Significant)

Construction activities, such as the combustion of diesel fuel from construction equipment and VOC emissions associated with the application of tank interior and exterior coating, under the Single Tank Alternative would be slightly reduced compared to the proposed Project but would still occur. Therefore, the objectionable odors created during construction would be reduced slightly compared to the proposed Project. As with the proposed Project, the Single Tank Alternative would be located within the Port where existing industrial operations generate similar odors.

CEQA Impact Determination

The impact of odors during construction of the Single Tank Alternative, like the proposed Project, would be less than significant.

Mitigation Measures

No mitigation would be required.

Operational Impacts**Impact AQ-6: Operation of the Single Tank Alternative would conflict with or obstruct implementation of the applicable air quality plan. (Less than Significant)**

Operational requirements associated with the Single Tank Alternative would be less than those required for the proposed Project, as one less tank would be constructed and operated. As such, this could result in a moderate reduction in impacts related to air quality and a reduction in the potential to conflict with AQMPs; the Single Tank Alternative would be required to comply with all applicable air quality regulations and BMPs to ensure it would not conflict with or obstruct implementation of any applicable air quality plan, including the AQMD, CAAP, or CERP.

CEQA Impact Determination

Less than significant. The Single Tank Alternative would not conflict with or obstruct implementation of any applicable air quality plan.

Mitigation Measures

No mitigation would be required.

Impact AQ-7: Operation of the Single Tank Alternative would result in a cumulatively considerable net emission increase exceeding a SCAQMD threshold of significance. (Less than Significant)

Operational activities associated with the Single Tank Alternative would be less than those required for the proposed Project as one less tank would be in operation; however, operation would involve the same activities and sources of emissions, as discussed previously. Therefore, net emission increases during operation for this alternative would be reduced by potentially up to one half of those of the proposed Project. As with the proposed Project, operational emissions under the Single Tank Alternative would not exceed the SCAQMD daily significance thresholds.

CEQA Impact Determination

The Single Tank Alternative, like the proposed Project, would not exceed the SCAQMD daily significance thresholds for operation, and this impact would be less than significant.

Mitigation Measures

Operation of the Single Tank Alternative would not exceed the SCAQMD daily significance thresholds; Impact AQ-4 would be less than significant. No mitigation would be required.

Impact AQ-8: Off-site ambient air pollutant concentrations from operation of the Single Tank Alternative would increase due to exceeding a SCAQMD Localized Significance Threshold. (Less than Significant)

Operation requirements for the Single Tank Alternative would be less than those required for the proposed Project, as one less tank would be operated; however, operation would still involve localized increases in criteria air pollutants concentrations. Therefore, off-site ambient air pollutant concentrations from operations of the Single Tank Alternative would be reduced by potentially up to one half. As with the proposed Project, emissions during operations under the Single Tank Alternative would be below all SCAQMD thresholds of significance.

CEQA Impact Determination

Emissions of criteria pollutants during operations under the Single Tank Alternative, like the proposed Project, would not exceed a SCAQMD threshold of significance for the localized effects of emissions, and this impact would be less than significant.

Mitigation Measures

Under the Single Tank Alternative, operation would not exceed a SCAQMD threshold of significance. No mitigation would be required.

Impact AQ-9: Operation of the Single Tank Alternative would expose sensitive receptors to substantial pollutant concentration levels of TACs. (Less than Significant)

The long-term operation emissions for the Single Tank Alternative would be less than those for the proposed Project due to the addition of only one tank instead of two and associated operational activities. Therefore, the health impacts related to TAC contaminants and DPM emissions during operation would be reduced compared to the proposed Project. As with the proposed Project, the Single Tank Alternative would not expose sensitive receptors to substantial pollutant concentrations during operation.

CEQA Impact Determination

The Single Tank Alternative operation impact of TACs, including DPM emissions, would be less than significant.

Mitigation Measures

The Single Tank Alternative operation impact of TACs, including DPM emissions, would be less than significant. Therefore, no mitigation would be required.

Impact AQ-10: Operation of the Single Tank Alternative would create objectionable odors affecting a substantial number of people. (Less than Significant)

Operational sources of potential objectionable odors, such as the new tank and fugitive VOC and H₂S, under the Single Tank Alternative would be slightly reduced compared to the proposed Project but would still occur. Therefore, the objectionable odors created during operation would be slightly reduced compared to the proposed Project. As with the proposed Project, the Single Tank Alternative would be located within the Port where existing industrial operations generate similar odors.

CEQA Impact Determination

The impact of odors during operation of the Single Tank Alternative, like the proposed Project, would be less than significant.

Mitigation Measures

No mitigation would be required. The impact of Project-generated odors during operation of the Single Tank Alternative would be less than significant.

3.1.5.3. No Project Alternative**Construction Impacts****Impact AQ-1: The No Project Alternative would conflict with or obstruct implementation of the applicable air quality plan. (No Impact)**

The No Project Alternative would involve no new construction or change in operation that could conflict with or obstruct implementation of the applicable air quality plan. As a result, the No Project Alternative introduces no change in how operations or emissions from operations occur in the environmental setting.

CEQA Impact Determination

The No Project Alternative would have no impact on the potential to conflict with or obstruct implementation of the applicable air quality plans.

Mitigation Measures

No mitigation would be required.

Impact AQ-2: Construction of the No Project Alternative would result in cumulatively considerable net emission increase exceeding a South Coast Air Quality Management District (SCAQMD) threshold of significance. (No Impact)

There would be no construction associated with the No Project Alternative.

CEQA Impact Determination

The No Project Alternative would cause no construction emissions and would have no impact on air quality or health risk.

Mitigation Measures

No mitigation would be required.

Impact AQ-3: Off-site ambient air pollutant concentrations from construction of the No Project Alternative would increase due to exceeding a SCAQMD Localized Significance Threshold. (No Impact)

The No Project Alternative would involve no new construction that could change off-site ambient air pollutant concentrations.

CEQA Impact Determination

The No Project Alternative would cause no construction emissions and would have no impact on air quality or health risk.

Mitigation Measures

No mitigation would be required.

Impact AQ-4: Construction of the No Project Alternative would expose sensitive receptors to substantial pollutant concentration levels of toxic air contaminants (TACs). (No Impact)

The No Project Alternative would involve no new construction that could emit TACs or result in a change in ambient levels of TACs.

CEQA Impact Determination

The No Project Alternative would cause no construction emissions, therefore would have no impact on air quality or health risk.

Mitigation Measures

No mitigation would be required.

Impact AQ-5: The No Project Alternative would not create objectionable odors during construction affecting a substantial number of people. (No Impact)

The No Project Alternative would involve no new construction that could emit odors or change ambient odor levels.

CEQA Impact Determination

The No Project Alternative would cause no construction emissions and would have no impact on odors.

Mitigation Measures

No mitigation would be required.

Operational Impacts

Impact AQ-6: Operation of the No Project Alternative would conflict with or obstruct implementation of the applicable air quality plan. (No Impact)

The No Project Alternative would involve no new construction or change in operation that could conflict with or obstruct implementation of the applicable air quality plan. As a result, the No Project Alternative introduces no change in how operations or emissions from operations occur in the environmental setting.

CEQA Impact Determination

The No Project Alternative would have no impact on the potential to conflict with or obstruct implementation of the applicable air quality plans.

Mitigation Measures

No mitigation would be required.

Impact AQ-7: Operation of the No Project Alternative would result in cumulatively considerable net emission increase exceeding a SCAQMD threshold of significance. (No Impact)

The No Project Alternative would involve no change in operation that could create a net emissions increase.

CEQA Impact Determination

The No Project Alternative would cause no change in emissions during operations and would have no impact on air quality or health risk.

Mitigation Measures

No mitigation would be required.

Impact AQ-8: Off-site ambient air pollutant concentrations from operation of the No Project Alternative would increase due to exceeding a SCAQMD Localized Significance Threshold. (No Impact)

The No Project Alternative would involve no change in operation that could change off-site ambient air pollutant concentrations.

CEQA Impact Determination

The No Project Alternative would cause no change in emissions during operations and would have no impact on air quality or health risk.

Mitigation Measures

No mitigation would be required.

Impact AQ-9: Operation of the No Project Alternative would expose sensitive receptors to substantial pollutant concentration levels of TACs. (No Impact)

The No Project Alternative would involve no change in operation that could emit TACs or result in a change in ambient levels of TACs.

CEQA Impact Determination

The No Project Alternative would cause no change in emissions during operations and would have no impact on air quality or health risk.

Mitigation Measures

No mitigation would be required.

Impact AQ-10: The No Project Alternative would create objectionable odors during operations affecting a substantial number of people. (No Impact)

The No Project Alternative would involve no change in operation that could emit odors or change in ambient odor levels.

CEQA Impact Determination

The No Project Alternative would cause change in emissions during operations and would have no impact on odors.

Mitigation Measures

No mitigation would be required.

3.1.6. Cumulative Impacts

The following discussion evaluates whether the incremental contribution from the proposed Project to air quality impacts would be cumulatively considerable within the context of impacts caused by other past, present, or reasonably foreseeable future projects in the geographic location of the Project.

3.1.6.1. Geographic Extent/Context

The cumulative air quality analysis considers all cumulative projects listed in Table 2-1 that potentially would generate air emissions within one mile from the Project site for the localized cumulative criteria pollutants effects analysis and 500 feet for TACs effects analysis. For potential cumulative effects to regional air quality conditions, the geographic extent includes the entire SCAB as the context for net emission increases.

3.1.6.2. Existing Cumulative Condition

The SCAB experiences nonattainment conditions for ozone and particulate matter, largely due to high regional population density, the vast number and wide range of types of emission sources, and the topographical and meteorological conditions that foster formation and limit dispersion of ambient air pollutants. The existing air quality conditions of the SCAB occur in connection with the effects of past projects and the effects of other current projects, and nonattainment conditions may be exacerbated by the effects of probable future projects. Because of the existing regional air quality conditions, in connection with the effects of cumulative projects, the regional cumulative air quality impact is significant.

Elevated levels of cancer risk and adverse health effects occur in proximity to the Port Complex due to a wide range of sources related to past projects and other current projects, including the operational activities of the San Pedro Bay Ports (SCAQMD, 2021b). The elevated levels of air pollution that can occur in this area of the SCAB are associated with cancer risk and other adverse health effects, including asthma, bronchitis, reduced lung function, and increased mortality and morbidity. Because of these adverse effects, the localized cumulative air quality impact is significant.

3.1.6.3. Reasonably Foreseeable Projects

Cumulative projects considered in this analysis are shown in Table 2-1. Almost all related and cumulative projects would have the potential to contribute to cumulative air quality effects. These projects include construction and/or operational activities that could, at least in part, occur concurrently with the proposed Project, are within the general area of the proposed Project, and could potentially contribute cumulatively to the proposed Project's air quality impacts.

The projects, in the order they are presented in Table 2-1, located within the geographic area of effect for localized cumulative air quality impacts could include:

- Middle Harbor Terminal Redevelopment,
- Pier B Rail Yard Expansion On-Dock Rail Support Facility,
- Toyota Facility Improvements Project,
- Golden Shore Master Plan, and
- Shoemaker Bridge Replacement.

For air quality impacts related to construction, cumulative localized air quality impacts would occur if projects within the immediate geographic area (within one mile of the proposed Project) are under construction at the same time as the proposed Project.

3.1.6.4. Impacts and Mitigation Measures

Regarding the potential to conflict with or obstruct implementation of the applicable air quality management plan, the Project-specific analysis (Impacts AQ-1 and AQ-6) indicates that the incremental effect of the proposed Project would be limited. The proposed Project would not have the potential to cause an effect that could be cumulatively considerable when in light of implementing the applicable air quality management plan or compliance with the applicable air quality management plan. Additionally, the CAAP and other initiatives would ensure that future activities at the POLB would comply with the applicable air quality management plan.

For the impacts of net emission increases of criteria air pollutants in a regional context (Impacts AQ-2 and AQ-7), neither the peak daily construction activities nor emissions during operations for the proposed Project would produce emissions that would exceed the SCAQMD regional emission thresholds. Any activity that concurrently occurs near the proposed Project's construction

and anywhere within the SCAB would contribute to regional cumulative impacts. Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to cause effects that are cumulatively considerable. Conversely, projects that do not exceed the project-specific thresholds are *not* considered to result in cumulatively considerable effects. The effects of the proposed Project with respect to increases of criteria air pollutants in a regional context, therefore, would not be cumulatively considerable.

For the localized impacts of criteria air pollutants subject to the SCAQMD LSTs (Impacts AQ-3 and AQ-8), the project-specific impact analysis considers whether the incremental effect of the Project would have the potential to expose sensitive receptors to substantial pollutant concentrations considering the existing background cumulative air quality conditions within the region's SRA 4 (South Coastal Los Angeles County). The incremental effect of the proposed Project would be less than significant. While localized impacts would be adverse, the proposed Project emissions would not exceed the LSTs and therefore would not create a cumulatively considerable contribution to local impacts. As such, the effects of the proposed Project related to localized impacts of criteria air pollutants would not be cumulatively considerable.

Regarding localized increases of TACs (Impacts AQ-4 and AQ-9), the existing ambient conditions within the Project area reflect a localized cumulative air quality impact that is significant. The SCAQMD significance thresholds for project emissions of TACs indicate that the incremental effect of the proposed Project would be limited, and the proposed Project would not have the potential to expose sensitive receptors to substantial pollutant concentrations. Considering the existing background cumulative air quality conditions, the incremental effect of the proposed Project's TAC emissions would be adverse, but the proposed Project's effects would occur at levels less than the thresholds. As a result, they would not constitute a cumulatively considerable contribution to the existing significant cumulative impact, and the effects of the proposed Project related to localized impacts of TACs would not be cumulatively considerable.

Regarding odors (Impacts AQ-5 and AQ-10), the proposed Project would generate a small amount of potential odorous emissions, similar to those that occur in the existing conditions. However, the distance between the emission sources and the closest sensitive receptors would allow dispersion of the emissions to avoid objectionable odors. Therefore, the effects of odors caused by the proposed Project would not be cumulatively considerable.

3.1.7. Mitigation Monitoring Program

Because no mitigation measures would be required for air quality and health risk, no mitigation monitoring program is required.

3.2. Geology and Soils

This section describes existing geology and soils conditions in the affected area, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from Project construction and operation. In addition, existing laws and regulations relevant to geology and soils are described.

3.2.1. Environmental Setting

3.2.1.1. Regional Geology and Physiography

The World Oil Tank Installation Project is located in the POLB, which is located in the southwestern block of the Los Angeles Basin, within seismically active Southern California. The Los Angeles Basin is located at the intersection of the north-northwest trending Peninsular Ranges Geomorphic Province and the east-west trending Transverse Ranges Geomorphic Province. The Peninsular Ranges Geomorphic Province is characterized by a series of mountain ranges and intervening valleys, which extend from the Transverse Ranges and the Los Angeles Basin south to Baja California. The Transverse Ranges Geomorphic Province comprises a series of east-west trending mountain ranges, which extend from Point Arguello and San Miguel Island to Joshua Tree National Monument, where the province merges with the Mojave and Colorado deserts.

The Los Angeles Basin is a low-lying coastal plain that slopes south and southwest towards the Pacific Ocean with chains of hills created by local and regional fault uplifting activity. The Los Angeles Basin is bound to the north, northeast, and east by the Santa Monica Mountains, and the Puente, Elysian, and Repetto Hills. To the southeast, the Los Angeles Basin is bound by the Santa Ana Mountains and San Joaquin Hills. The Los Angeles Basin is a structural depression experiencing episodic sedimentary deposition activities since the Cretaceous Period, with predominantly marine deposition since the middle Miocene. Sediments found on the floor of the basin (onshore and offshore) are generally characterized as unconsolidated Holocene-aged with local exposure of underlying Pleistocene-aged marine and non-marine sedimentary formations exposed in smaller hills in the basin. Geologic structural elements located near the Project site include the Palo Verdes Anticline that comprises the Palos Verdes Hills, and the adjacent Palos Verdes Hills fault zone. Nearby faults include the Newport-Inglewood-Rose Canyon fault zone, Palos Verdes fault, Compton thrust fault, THUMS-Huntington Beach fault, Wilmington blind thrust fault, and Cabrillo fault.

The POLB is contained within the northern portion of the San Pedro Bay, a natural embayment formed by the western extension of the coastline. The Project site is located on Pier C in the San Pedro Bay, approximately 1,600 feet west from the channeled Los Angeles River. The two new tanks would be constructed on a flat surface about 70 to 90 feet from Channel 2. The proposed new tanks would be installed on an unpaved surface consisting of gravel and underlain by man-made artificial fill. The existing tanks at the Ribost Terminal are surrounded by a containment wall 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 of 1.5 feet below grade at the outer edges of the wall to a depth of approximately 3 feet on the interior 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 tank’s capacity (90,000 barrels) plus a 100-year storm event. The two new tanks would be installed behind this containment wall.

3.2.1.2. Local Geology

Regional geologic mapping from the CGS indicates that the Project site is underlain entirely by man-made artificial fill, underlain by young alluvium and unconsolidated shelf sediment (Saucedo et. al, 2016). These units relative to the Project site are presented on Figure 3.2-1. Faults are denoted as black dotted lines in Figure 3.2-1. A brief summary of the geologic units mapped as underlying or nearby the Project site is presented below.

Artificial fill (af). Artificial fill is located under the entire Project site. Artificial fill consists of late Holocene deposits of fill resulting from human construction, mining, or quarrying activities. Artificial fill includes compacted engineered and non-compacted, non-engineered fill.

Unconsolidated shelf sediment (Qms). Unconsolidated shelf sediment is a late Holocene offshore unit comprised of deposits of unconsolidated sand and silt on the shelf.

Young alluvium (Qya). Young alluvium underlies the artificial fill at the Project site. Young alluvium consists of Holocene to late Pleistocene poorly consolidated and poorly sorted, permeable flood-plain deposits consisting of soft clay, silt, and loose to moderately dense sand and silty sand.

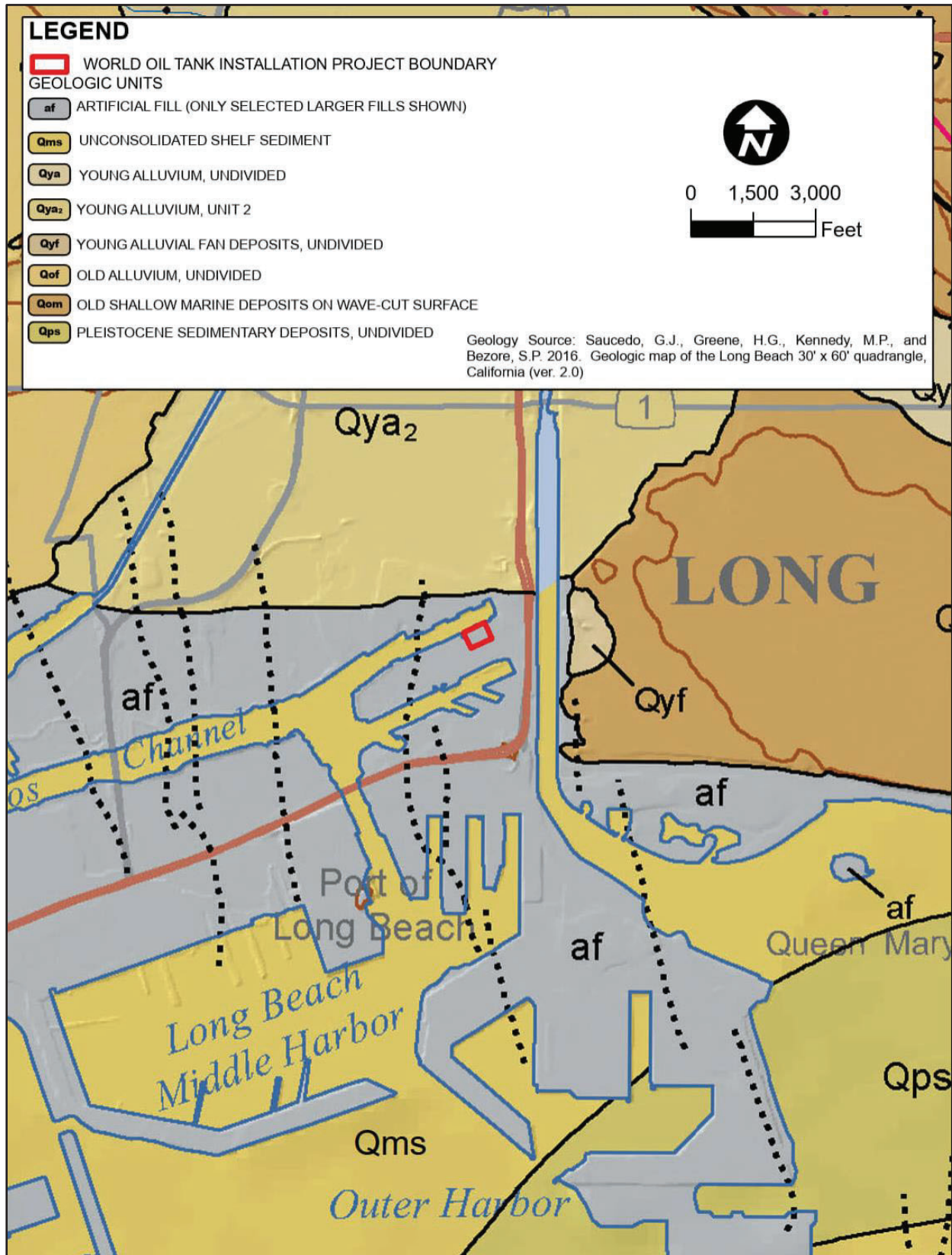
Young alluvial fan deposits (Qyf). Young alluvial fan deposits consist of Holocene and late Pleistocene poorly consolidated and poorly sorted clay, sand, gravel, and cobble alluvial fan and valley deposits.

Old alluvium (Qoa). Old alluvium consists of late to middle Pleistocene fluvial sediments deposited on canyon floors. These deposits are moderately to well consolidated, poorly sorted, permeable, commonly slightly dissected gravel, sand, silt, and clay-bearing alluvium.

Old shallow marine deposits on wave-cut surface (Qom). Old shallow marine deposits on wave-cut surface consists of late to middle Pleistocene poorly sorted, moderately permeable, reddish-brown, interfingered strandline, beach, estuarine, and colluvial deposits composed of siltstone, sandstone, and conglomerate. These deposits sit on the now emergent wave cut abrasion platforms preserved by regional uplift.

Pleistocene Sedimentary Deposits (Qps). Pleistocene sedimentary deposits consist of mostly unconsolidated sand in nearshore areas of the continental shelf.

1 Figure 3.2-1. Local Geologic Map



Source: Saucedo et. al., 2016.

3.2.1.3. Site Conditions

In 2004, a preliminary geotechnical investigation of the Project site was prepared for the proposed development that included two above ground storage tanks ranging from 65 to 70 feet in diameter and from 46 to 60 feet in height (Albus-Keefe, 2004). The initial subsurface investigation included four exploratory borings which ranged in depth from approximately 21.5 to 51.5 feet. Based on the results of the 2004 investigation, Albus-Keefe recommended additional engineering analysis to evaluate the feasibility of mitigating potential settlements through the use of ground improvement systems, pile foundations, or other suitable methods (Albus-Keefe, 2004).

Albus-Keefe prepared a preliminary investigation in 2008 to assess ground improvement options for the proposed development consisting of two above ground storage tanks ranging from 60 to 80 feet in diameter and 45 feet in height. (Currently, the two proposed tanks would be 56 feet in height with a diameter of 60 feet.) The subsurface investigation included three exploratory borings which ranged in depth from approximately 31.5 to 66.5 feet (Albus-Keefe, 2008).

In May 2018, a third geotechnical investigation was prepared for the proposed Project, "Geotechnical Update Report, Proposed Tanks, 1405 Pier 'C' Street, Long Beach, California" by Albus-Keefe & Associates, Inc. (referred to herein as 2018 geotechnical update report) (Albus-Keefe, 2018). The updated geotechnical investigation addresses the Project site and evaluates the subsurface conditions and provides earthwork, grading, and preliminary foundation recommendations for the new tanks. The previous investigations by Albus-Keefe in 2004 and 2008 included drilling and sampling of seven borings to a maximum depth of 66.5 feet (Albus-Keefe, 2004; 2008). Groundwater was encountered at depths ranging from 5 to 6 feet below the ground surface (bgs) in the borings (Albus-Keefe, 2004; 2008). The borings conducted at the site indicated that the subsurface soil material consists of a layer of imported artificial fill ranging from 0 to 6 feet in thickness, capping approximately 20 to 39 feet of hydraulic fill generated during channel dredging to create Pier C (Albus-Keefe, 2004; 2008). Alluvial soils underlay the hydraulic fill to the maximum depth explored of 66.5 feet bgs (Albus-Keefe, 2004; 2008). Fill materials are susceptible to liquefaction (Albus-Keefe, 2018). Laboratory testing of the soils indicated that they are moderately to highly expansive, have a moderate tendency to consolidate, and are highly corrosive to metal and moderately corrosive to concrete (Albus-Keefe, 2018). A total static settlement of more than 12 inches was estimated in previous analyses (Albus-Keefe, 2008). A total seismic settlement of approximately 3 to 5.25 inches was estimated in the 2018 geotechnical update report (Albus-Keefe, 2018). Differential settlement was estimated to be approximately one-half of the total seismic settlement or approximately 2.6 inches over 30 feet (Albus-Keefe, 2018). The 2018 geotechnical update report includes recommendations for a ground improvement system, such as Drill Displacement Column[™]¹ or Rammed Aggregate Piers[®]², to help reduce the effects of both static and seismic settlements (Albus-Keefe, 2018).

¹ Drill Displacement Column[™] (DDC) are deep, partial, and full displacement, pressure grout, ground improvement methods. DDC are used to improve any soft/loose soil. DDC uses a displacement drill to compact soil in the ground, resulting in higher capacity and lower spoils. For DDC, large cavity expansion in the displaced soil produces the increased strength and ground improvement. DDC strengths are enhanced by the pressure grout effect during construction. DDC increases bearing capacity, increases soil stiffness, reduces soil compressibility, increases soil resistance to liquefaction, and increases composite soil shear strength. (Farrellinc.com)

² Geopier Rammed Aggregate Pier[®] (RAP) systems are ground improvement technologies that create a densified column of aggregate surrounded by a stiffened matrix soil. These foundation systems work for nearly all soil types and design applications. There are "drill and fill" solutions for non-caving soils (silts and clays) and there are "displacement" solutions for caving soils (sands below the groundwater table) and squeezing soils (soft clays and silts). The end result is a stiffened mass of soil that provides improved bearing and excellent settlement control for support of spread footings and slabs-on-grade. (Geopier.com)

3.2.1.4. Soils

The soils underlying the Project site reflect the site development by dredging and hydraulic fill. Potential hazards/impacts from soils include consolidation, erosion, shrink-swell (expansive soils), and corrosion.

Potential soil erosion hazards vary depending on the use, conditions, and textures of the soils. The properties of soil which influence erosion by rainfall and runoff affect the infiltration capacity of a soil, as well as the resistance of a soil to detachment and being carried away by falling or flowing water. Soils on steeper slopes would be more susceptible to erosion due to the effects of increased surface flow (runoff) on slopes where there is little time for water to infiltrate before runoff occurs. Soils containing high percentages of fine sands and silt and that are low in density, are generally the most erodible. As the clay and organic matter content of soils increases, the potential for erosion decreases. Clays act as a binder to soil particles, thus reducing the potential for erosion.

Sheet and rill erosion are the removal of soil from the land surface by the action of rainfall and runoff. Sheet erosion occurs when water runs over a large uniform area picking up and distributing soil particles. Rill erosion occurs as concentrated surface runoff begins to remove soil along concentrated zones forming numerous small, conspicuous water channels or tiny rivulets.

Expansive soils are characterized by their ability to undergo substantial 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. Laboratory testing performed on three samples collected at the Project site from the upper 20 feet yielded plasticity indices ranging between 17 and 30, which corresponds to moderate to high shrink/swell potential (Albus-Keefe, 2018).

Corrosivity of soils is generally related to the following key parameters: soil resistivity; presence of chlorides and sulfates; oxygen content; and acidity (pH). Typically, the most corrosive soils are those with the lowest pH (acidic) and highest concentration of chlorides and sulfates. High sulfate soils are corrosive to concrete and may prevent complete curing thereby reducing its strength considerably. Low pH and/or low resistivity soils could corrode buried or partially buried metal structures. Laboratory testing performed at the Project site on one sample within the upper 6 feet indicated site soils are severely corrosive to metals (Albus-Keefe, 2018).

Soil mapping by the USDA National Resources Conservation Service (NRCS) for Los Angeles County, California, Southeastern Part – CA696 and review of soil data accessed through the NRCS Web Soil Survey website (NRCS, 2023) have provided information for surface and near-surface subsurface soil materials. Summaries of the notable characteristics of the major soil association underlying the Project site are listed below (NRCS, 2023).

- **Urban land.** In the proposed Project area, Urban land soils are located in the entirety of the area. Urban land soils consist of dredged fill with slopes of 0 to 2 percent gradient with low shrink-swell potential. Corrosion potential of these soils are reported by NRCS (2023) as low for uncoated steel and low for concrete, whereas the site-specific geotechnical testing identified high to moderate corrosion potential, respectively (Albus-Keefe, 2018). Erosion potential of the soils is moderate for wind erosion and moderate for sheet and rill erosion by water.

3.2.1.5. Faults and Seismicity

The Project site 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. Active faults of the San Andreas system are predominantly strike-slip faults accommodating translational (lateral) movement. The Transverse Ranges fault system consists primarily of blind, reverse, and thrust faults accommodating tectonic compression in the region. Blind, reverse, and thrust faults are faults with vertical movement at a sharp angle; blind faults do not break the earth's surface. Active reverse or thrust faults in the Transverse Ranges include blind thrust faults responsible for the 1987 Whittier Narrows Earthquake and the 1994 Northridge Earthquake, and the range-front faults responsible for uplift of the San Gabriel and San Bernardino Mountains.

The seismicity of Southern California is dominated by the intersection of the north-northwest trending San Andreas fault system and the east-west trending Transverse Ranges fault system. Both systems are responding to strain produced by the relative motions of the Pacific and North American Tectonic Plates. This strain is relieved by right-lateral strike-slip faulting on the San Andreas and related faults, and by vertical, reverse-slip or left-lateral strike-slip displacement on faults in the Transverse Ranges. The effects of this deformation include mountain building, basin development, deformation of Quaternary marine terraces, widespread regional uplift, and generation of earthquakes. The Southern California area is characterized by numerous geologically young faults.

Faults can be classified as historically active, active, potentially active, or inactive, based on the following criteria (CGS, 1999a):

- Historically Active – Faults that have generated earthquakes accompanied by surface rupture during historic time (approximately the last 200 years) and faults that exhibit aseismic fault creep
- Active – Faults that show geologic evidence of movement within Holocene time (approximately the last 11,000 years)
- Potentially Active – Faults that show geologic evidence of movement during the Quaternary time (approximately the last 1.6 million years)
- Inactive – Faults that show direct geologic evidence of inactivity during all of Quaternary time or longer

Although it is difficult to quantify the probability that an earthquake will occur on a specific fault, this classification is based on the assumption that if a fault has moved during the Holocene epoch, it is likely to produce earthquakes in the future. Blind thrust faults do not intersect the ground surface, and thus they are not classified as active or potentially active in the same manner as faults that are present at the earth's surface. Blind thrust faults are seismogenic structures with no surface expression and thus the activity classification of these faults is predominantly based on geologic data from deep oil wells, geophysical profiles, historic earthquakes, and microseismic activity along the fault.

The Project area will be subject to ground shaking associated with earthquakes on faults of the San Andreas and Transverse Ranges fault systems. Active faults of the San Andreas system are predominantly strike-slip faults accommodating translational movement. Active reverse or thrust faults in the Transverse Ranges include blind thrust faults responsible for the 1987 Whittier Narrows Earthquake and 1994 Northridge Earthquake, and the range-front faults responsible for uplift of the Santa Susana and San Gabriel Mountains. The Transverse Ranges fault system consists primarily of blind, reverse, and thrust faults accommodating tectonic compressional

1 stresses in the region. Blind faults have no surface expression and have been located using
2 subsurface geologic and geophysical methods. This combination of translational and compres-
3 sional stresses gives rise to diffuse seismicity across the region.

4 No active faults or Alquist-Priolo zoned faults cross or are in the immediate vicinity of the Project
5 site (CGS, 1999b). The closest Alquist-Priolo zoned faults to the Project site are the Newport-
6 Inglewood and Palos Verdes faults, located approximately 2.9 miles northeast-east, and 3.1 miles
7 west, respectively (USGS, 2023b). The Newport-Inglewood and Palos Verdes faults are
8 northwest-southeast trending, right-lateral strike slip faults. To estimate the probability of nearby
9 active faults generating strong seismic ground shaking at the site the USGS Unified Hazard
10 disaggregation tool was used. This tool develops a hazard curve for each seismic source, and
11 these individual curves are added to develop the cumulative hazard curve for a given site. The
12 total rate at which a given ground motion level is exceeded is the sum of the rates for these
13 individual sources. Seismic hazard analyses identify a "maximum considered earthquake" or
14 "maximum considered event" (MCE) for a specific area. The MCE is expected to occur once in
15 approximately 2,475 years (2% probability of being exceeded in 50 years). The seismic hazard
16 associated with a 2,475-year event at the anticipated approximate fundamental period of 0.3
17 seconds was obtained for the structure. The fundamental natural period of the structure is unique,
18 and is the time taken in seconds for each complete cycle of oscillation. The Newport-Inglewood
19 fault exhibits an 8 percent probability of a Moment Magnitude (Mw) 7.2 earthquake (USGS, 2014).
20 The Palos Verdes fault exhibits a 16 percent probability of a Mw 7.4 earthquake (USGS, 2014).

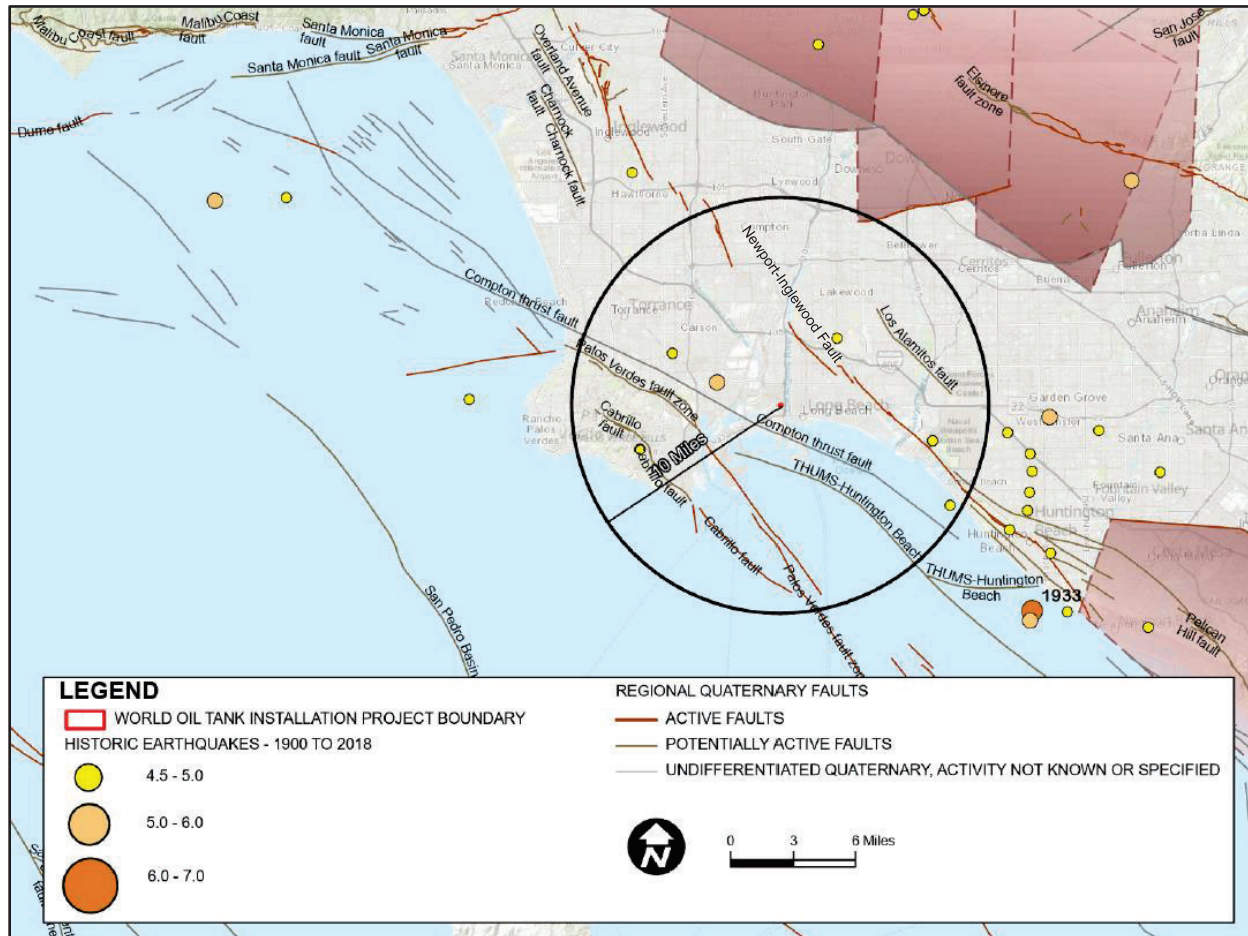
21 Local faults near the Project site include the Compton thrust fault and THUMS-Huntington Beach
22 fault, located 1.3 and 2.8 miles south, respectively (USGS, 2023b). The Wilmington blind thrust
23 fault is located 2.6 miles south of the Project site and underlies the POLB (Wolfe et. al, 2019).
24 The Cabrillo fault is located 6.4 miles southwest of the Project site (USGS, 2023b).

25 Both the Compton and THUMS-Huntington Beach faults are considered potentially active and
26 pass directly through the POLB. The Compton fault is an onshore blind thrust fault within the
27 Mesozoic Catalina Schist underlying the western Los Angeles Basin (USGS, 2017) that has
28 folded 700- to 13,000-year-old sedimentary layers (Leon et. al., 2009). The THUMS-Huntington
29 Beach fault branches from the Palos Verdes fault zone, forming the southwest border of the
30 Wilmington and Huntington Beach anticlines (Ishutov et. al., 2014). The THUMS-Huntington
31 Beach fault extends from the Huntington Beach anticline to the southeast, where it merges with
32 the Newport-Inglewood fault zone (Ishutov et. al, 2014). The current interpretation of the THUMS-
33 Huntington Beach fault is that it is an oblique-slip system that has not been active since late
34 Tertiary time (2.6 million years ago) (EMI, 2020). Both the Compton and THUMS-Huntington
35 Beach faults are capable of a Mw 7.0 earthquake (Wolfe et. al, 2019).

36 The Wilmington blind thrust fault is considered to be part of the potentially active THUMS-
37 Huntington Beach oblique-slip system (Wolfe et. al, 2019). The Wilmington blind thrust fault is
38 potentially active and capable of a Mw 6.3 to M 6.4 earthquake (Wolfe et. al, 2019). The Cabrillo
39 fault is presumed to be related to the Palos Verdes fault (USGS, 1998). The Cabrillo fault is
40 potentially active and capable of a Mw 6.0 to M 6.8 earthquake (SCEDC, 2023).

41 Review of earthquake data for the Project area indicates that approximately 10 earthquakes of
42 greater than or equal to magnitude 5.5 have occurred within 50 miles of the Project site, including
43 the M 6.4 Long Beach Earthquake on the Newport-Inglewood fault, the M 6.6 San Fernando
44 Earthquake on the San Fernando fault zone, and the M 6.7 Northridge Earthquake on the
45 Northridge fault (SCEDC, 2023). Figure 3.2-2 shows locations of active and potentially active
46 faults (representing possible seismic sources) and earthquakes in the region surrounding the
47 Project area.

1 **Figure 3.2-2. Regional Active Faults and Historic Earthquakes**



Sources: USGS, 2018, 2023b.

3.2.1.6. Fault Rupture

Fault rupture is the surface displacement that occurs when movement on a fault deep within the earth breaks through to the surface. Fault rupture and displacement almost always follows preexisting faults, which are zones of weakness, however not all earthquakes result in surface rupture (i.e., earthquakes that occur on blind thrusts do not result in surface fault rupture). Rupture may occur suddenly during an earthquake or slowly in the form of fault creep. In addition to damage caused by ground shaking from an earthquake, fault rupture is damaging to buildings and other structures due to the differential displacement and deformation of the ground surface that occurs from the fault offset leading to damage or collapse of structures across this zone. In California, Alquist-Priolo Earthquake Fault Zones have been defined by the CGS along active faults with the potential for surface rupture. However, not all active faults have been zoned, as the criteria specifies that a fault must be shown to be “sufficiently active” and “well defined” by detailed site-specific geologic explorations in order to determine whether an Alquist-Priolo Earthquake Hazard Zone can be established with associated building setbacks. Many known active faults are not sufficiently “well defined” at the surface to qualify to be Alquist-Priolo zoned but could still cause significant surface fault rupturing.

There are no known active faults passing through the Project site and the site is not located within a State designated Alquist-Priolo Earthquake Fault Zone (CGS, 1999b).

3.2.1.7. Ground Shaking

An earthquake is classified by the amount of energy released, which traditionally has been quantified using the Richter scale. Recently, seismologists have begun using a Moment Magnitude (M) scale because it provides a more accurate measurement of the size of major and great earthquakes. For earthquakes of less than M 7.0, the Moment and Richter Magnitude scales are nearly identical. For earthquake magnitudes greater than M 7.0, readings on the Moment Magnitude scale are slightly greater than a corresponding Richter Magnitude.

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 intensity of earthquake-induced ground motions can be described using peak site accelerations (PGAs), represented as a fraction of the acceleration of gravity (g). 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/sec²).

The USGS Unified Hazard Tool (2014) website was used to estimate approximate peak ground accelerations (PGAs) in the Project area (USGS, 2023b). The USGS Unified Hazard Tool depicts peak ground accelerations with a 2 percent probability of exceedance in 50 years which corresponds to a return interval of 2,475 years and a 10 percent probability of exceedance in 50 years which corresponds to a return interval of 475 for a maximum considered earthquake. Peak ground accelerations at the Project site for 2 percent probability of exceedance in 50 years is approximately 0.77 g and approximately 0.42 g for a 10 percent probability of exceedance in 50 years, which correspond to moderate to strong ground shaking (USGS, 2014).

3.2.1.8. Liquefaction

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 (Youd and Perkins, 1978). 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.

In order to determine liquefaction susceptibility of a region, three major factors must be analyzed. These include: (a) the density and textural characteristics of the alluvial sediments, (b) the intensity and duration of ground shaking, and (c) the depth to groundwater.

According to the Seismic Hazard Zones Map for the Long Beach Quadrangle, the Project site is located within an area prone to earthquake-induced liquefaction (CGS, 1999b). Liquefaction analyses conducted as part of the geotechnical investigation for the proposed Project by Albus-Keefe & Associates in May 2018 indicate that various layers below the assumed high groundwater depth of 5 feet are potentially liquefiable (Albus-Keefe, 2018). Liquefiable layers are present within the artificial fill and the underlying marine sediments. The 2018 geotechnical update report presents options for ground improvement, such as Drill Displacement Column™ or Rammed

Aggregate Piers® to mitigate the effects of liquefaction (Albus-Keefe, 2018). The 2018 geotechnical update report indicates that due to the presence of liquefiable layers within the artificial fill, lateral spreading hazards should be a design consideration (Albus-Keefe, 2018).

3.2.1.9. Slope Stability

Important factors that affect the slope stability of an area include the steepness of the slope, the relative strength of the underlying soil or rock material, and the thickness and cohesion of the overlying soil. The steeper the slope and the thicker the colluvium or soil, the more likely the area is susceptible to landslides or debris flows. Another indication of unstable slopes is the presence of old or recent landslides or debris flows.

The Project site is located on relatively flat terrain consisting of varying thicknesses of artificial fill overlying marine sediments and would not be subject to landslides or other slope stability issues. The top of the southern slope of Channel 2 is 60 to 75 feet north of the containment wall at the Project site.

3.2.1.10. Seismic Slope Instability

Other forms of seismically induced ground failures which may affect the Project area include ground cracking, and seismically-induced landslides. Landslides triggered by earthquakes have been a considerable cause of earthquake damage; in southern California large earthquakes such as the 1971 San Fernando and 1994 Northridge earthquakes triggered landslides that were responsible for destroying or damaging numerous structures, blocking major transportation corridors, and damaging life-line infrastructure. Areas that are most susceptible to earthquake-induced landslides are steep slopes in poorly cemented or highly fractured rocks, areas underlain by loose, weak soils, and areas on or adjacent to existing landslide deposits.

The Seismic Hazard Zones Map for the Long Beach Quadrangle indicates that there are no areas of potential for earthquake-induced landslides in the POLB (CGS, 1999b). The Project site is located on relatively flat terrain consisting of varying thicknesses of artificial fill overlying marine sediments and would not be subject to seismically induced slope failures or instability.

3.2.1.11. Subsidence

Subsidence is the loss of surface elevation due to the removal of subsurface support. Subsidence is the reduction of pore space in the ground that was formerly occupied by a fluid such as water or oil, caused by activities that contribute to the loss of support materials within the underlying soils, such as agricultural practices or the overdraft of an aquifer. As the fluid is withdrawn, the pore fluid pressure in the sediments decreases allowing the weight of the overlying sediment to permanently compact or compress the fine-grained units. This effect is most pronounced in younger, unconsolidated sediments. Land subsidence is generally characterized by a broad zone of deformation where differential settlements are small.

The Los Angeles Basin has an extensive history of oil and natural gas production, including near and within the POLB. According to the US Geological Survey Land Subsidence map, the POLB is located within an area of subsidence attributed to oil extraction (USGS, 2023a). Historic oil and gas production from the Wilmington Oil Field has contributed to subsidence around the POLB and coastal section of the City of Long Beach. Most of the subsidence in the POLB can be attributed to gas and oil extraction, while a small portion of groundwater production at Terminal Island Naval Shipyard has also contributed. Oil was first discovered in the POLB in 1936, and by the mid-1940s, subsidence was a major concern. By 1958, the area of subsidence comprised 20-square miles and reached 29 feet in the center of the subsidence bowl (Mayuga, 1968). Operation “Big

Squirt”, a water injection program began in 1958, and by 1966, subsidence had stabilized. The subsidence rate at the center of the bowl reduced from an annual rate of 2.4 feet in 1951 to 0.1 feet in 1967 (Mayuga, 1968). Monitoring of subsidence by the City of Long Beach Energy Resources Department is ongoing.

3.2.1.12. Lateral Spreading

Lateral spreading typically occurs as a form of horizontal displacement of relatively flat-lying surficial soils toward an open or “free” face such as an open body of water, channel, or excavation. In soils, the movement is generally due to a failure along a weak plane and may often be associated with liquefaction. The Project site is located within an area prone to earthquake-induced liquefaction (CGS, 1999b). The top of the southern slope of Channel 2 is 60 to 75 feet north of the containment wall at the Project site. Albus-Keefe (2004; 2008) evaluated lateral spreading and concluded that lateral spreading movement could be up to 0.6 feet at the Project site (Albus-Keefe, 2004; 2008). The 2018 geotechnical update report indicates that due to the presence of liquefiable layers within the artificial fill, lateral spreading hazards should be a design consideration (Albus-Keefe, 2018).

3.2.2. Regulatory Setting

3.2.2.1. Federal

Clean Water Act

The Clean Water Act establishes the basic structure for regulating discharges of pollutants into the waters of the United States. Section 402 of the CWA establishes the National Pollutant Discharge Elimination System (NPDES) permit program to regulate point-source discharges of pollutants into waters of the U.S. Discharges or construction activities that disturb one or more acres are regulated under the NPDES stormwater program and are required to obtain coverage under a NPDES Construction General Permit. The Construction General Permit establishes limits and other requirements, such as the implementation of a Stormwater Pollution Prevention Plan (SWPPP) in accordance with State Water Resources Control Board (SWRCB). Construction activities would disturb a surface area less than one acre; therefore, the proposed Project would not be required to obtain a NPDES permit. During construction, Ribost would implement its existing SWPPP (World Oil Terminals, 2021a). The operation of the new tanks would also be in accordance with the existing facility SWPPP.

International Building Code

The International Building Code (IBC) is published by the International Code Council (ICC). The provisions of the IBC apply to the construction, alteration, relocation, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of buildings or structures, as well as any appurtenances connected to applicable buildings or structures. The IBC also incorporates the requirements and regulations set forth in several other ICC codes including the International Energy Conservation Code, International Existing Building Code, International Fire Code, and International Fuel Gas Code. The International Building Code has replaced the Uniform Building Code as the basis for the California Building Code and contains provisions for structural engineering design. The IBC addresses the design and installation of structures and building systems through requirements that emphasize performance. The IBC includes codes governing structural as well as fire- and life-safety provisions covering seismic, wind, accessibility, egress, occupancy, and roofs.

3.2.2.2. State**Alquist-Priolo**

The Alquist-Priolo Earthquake Fault Zoning Act of 1972, Public Resources Code (PRC) sections 2621–2630 (formerly the Special Studies Zoning Act) regulates development and construction of buildings intended for human occupancy to avoid the hazard of surface fault rupture. While this act does not specifically regulate components not intended for human occupancy; it does help define areas where fault rupture, and thus related damage, is most likely to occur. This Act groups faults into categories of active, potentially active, and inactive. Historic and Holocene age faults are considered active, Late Quaternary and Quaternary age faults are considered potentially active, and pre-Quaternary age faults are considered inactive. These classifications are qualified by the conditions that a fault must be shown to be “sufficiently active” and “well defined” by detailed site-specific geologic explorations in order to determine whether building setbacks should be established.

Seismic Hazard Mapping Act

The Seismic Hazards Mapping Act (the Act) of 1990 (Public Resources Code, Chapter 7.8, Division 2, sections 2690–2699) directs the California Department of Conservation, Division of Mines and Geology (now called California Geological Survey [CGS]) to delineate Seismic Hazard Zones. The purpose of the Act is to reduce the threat to public health and safety and to minimize the loss of life and property by identifying and mitigating seismic hazards. Cities, counties, and state agencies are directed to use seismic hazard zone maps developed by CGS in their land-use planning and permitting processes. The Act requires that site-specific geotechnical investigations be performed prior to permitting most urban development projects within seismic hazard zones.

California Building Code

The California Building Code (CBC), Title 24, Part 2 provides building codes and standards for design and construction of structures in California. The 2022 CBC is based on the 2021 IBC with the addition of more extensive structural seismic provisions. Chapter 16 of the CBC establishes minimum design requirements so that the structural components of buildings are proportioned to resist the loads that are likely to be encountered. This chapter assigns buildings and structures to risk categories that are indicative of their intended use. Chapter 18 of the CBC provides criteria for geotechnical and structural considerations in the selection, design, and installation of foundation systems to support the loads imposed by the structure above. This chapter includes requirements for soils investigation and site preparation for receiving a foundation, including the load-bearing values for soils and protection for the foundation from frost and water intrusion. The basic requirements for all foundation types, including specific requirements for shallow and deep foundations are addressed. Chapter 18 of the CBC regulates also grading activities.

Marine Oil Terminal Engineering and Maintenance Standards

The Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS) were approved by the California Building Standards Commission on January 19, 2005 and are codified as part of California Code of Regulations Title 24, Part 2, Marine Oil Terminals, Chapter 31F. These standards apply to all existing marine oil terminals in California and include criteria for inspection, structural analysis and design, mooring and berthing, geotechnical considerations, fire, piping, mechanical and electrical systems, and liquid natural gas terminals.

3.2.2.3. Local

Los Angeles County General Plan

The Safety Element of the 2035 Los Angeles County General Plan (2022) provides goals and policies to reduce impacts from seismic and geologic hazards and provide a safer environment. Relevant goals and policies are listed below:

Goals

S 1: An effective regulatory system that prevents or minimizes personal injury, loss of life and property damage due to seismic and geotechnical hazards.

Policies

S 1.1: Discourage development in Seismic Hazard and Alquist-Priolo Earthquake Fault Zones.

Los Angeles County Building Code

The Los Angeles County (County) Building Code contains rules and regulations that govern activities that could result in soil erosion or slope instability. These rules and regulations are within the County Grading Code Ordinance and Regulations, where provisions for excavation, grading, and earthwork construction have been established, permitting procedures are set forth, and plan approval and grading inspection protocols and procedures have been identified. The appendix also contains provisions for construction-related erosion control, including the preparation of cut-and-fill slopes and the implementation of erosion control measures such as check dams, cribbing, riprap, or other devices or methods. The ordinances also include seismic safety requirements for certain building types, such as older concrete tilt-up buildings and unreinforced masonry buildings. The stated goal of these ordinances is to promote public safety and welfare by reducing the risk of death or injury that could result from earthquake damage to certain types of older buildings during moderate or strong earthquakes.

City of Long Beach General Plan Seismic Safety Element

Geologic resources and hazards in the Harbor District are governed primarily by the City. The purpose of the Seismic Safety Element of the City of Long Beach General Plan (City of Long Beach, 1988) is to provide a comprehensive analysis of seismic factors so as to reduce loss of life, injuries, damage to property, and social and economic impacts resulting from future earthquakes. The Seismic Safety Element focuses on current developmental policies as well as the allocation of future land uses and, as such, is a planning tool. The element provides recommended guidelines to reduce the level of seismic risk for siting, design, and construction of local buildings and facilities.

City of Long Beach Municipal Code

The City of Long Beach Municipal Code (LBMC) was codified through Ordinance No. ORD-19-0001, enacted January 8, 2019, first adopted December 14, 2010 (ORD-10-0037). Title 18 is the Long Beach Building Standards Code, within which Chapters 18.67-18.75 provide regulations required for construction and demolition recycling program; earthquake hazard regulations; voluntary earthquake hazard reduction, flood-resistant design, and construction; low-impact development standards; and grading, excavations, and fills. Chapter 18.40 of the LBMC is the building code (City of Long Beach, 2023a).

City of Long Beach Building Code

Every three years, Long Beach Development Services is required by State law to adopt and enforce the most current edition of the CBC, in this case 2022, to establish uniform standards for the construction and maintenance of buildings, electrical systems, plumbing systems, mechanical

systems, and fire and life safety systems. The code became effective at the local level on January 1, 2023. Once the CBC is adopted locally, the City's building official administers the building code. The duties and powers of the building official are identified under 18.03.020 of the Long Beach building code (City of Long Beach, 2023b).

3.2.3. Significance Criteria

Considering the Port-specific and Project-specific impact issues, the following criteria are used in this EIR to determine the significance of proposed Project geology and soils impacts. The Project would have a significant impact if it would:

GEO-1: 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.
- ii) Strong seismic ground shaking
- iii) Seismic-related ground failure, including liquefaction
- iv) Landslides

GEO-2: Construction results in substantial soil erosion or the loss of topsoil.

GEO-3: Operations results in substantial soil erosion or the loss of topsoil.

GEO-4: 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.

GEO-5: 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.

Other potential impacts to geology and soils were found to have no or less-than-significant impacts and are not addressed further in the EIR (see Section 1.8, *Environmental Resources Not Affected by the Proposed Project*, and Appendix B, Initial Study).

3.2.4. Assessment Methodology

Geologic, soil, and seismic conditions were evaluated with respect to adverse effects implementation of the proposed Project may have on local geology and soils, as well as the impact that specific geologic hazards may have upon the proposed Project. The methodology applied to assess probable impacts to and from geologic and soils conditions involves comparing actions included under the proposed Project against the environmental setting presented in this section, with consideration to the significance criteria identified in Section 3.2.3, which reflect Appendix G of the State CEQA Guidelines.

Baseline geologic, seismic, and soils information were collected from published and unpublished literature, GIS data, and online sources for the Project site and the surrounding area. Data sources include the following: reports and documents available from the Port of Long Beach (POLB) and the Applicant, geologic literature from the United States (US) Geological Survey and California Geological Survey (CGS), soils data from the US Department of Agriculture (USDA), geologic and soils GIS data, available geotechnical reports, and online reference materials. All the sources used for the purposes of characterizing baseline conditions and conducting the analysis for this

Project are referenced as appropriate. The literature review focused on the identification of specific geologic and seismic hazards within the Project site.

The study area is generally defined as the Project site and the area immediately adjacent to the Project site with the following exception: the study area related to seismically induced ground shaking issues includes significant regional active and potentially active faults within 50 miles of the Project site. The current condition and quality of these geology and soils resources was used as the baseline against which to compare potential impacts of the proposed Project.

3.2.5. Impacts and Mitigation Measures

3.2.5.1. Proposed Project

Construction Impacts

Impact GEO-1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

Impacts

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.**

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, 1999b). The closest Alquist-Priolo zoned faults include the Newport-Inglewood and Palos Verdes faults, located approximately 2.9 miles northeast-east and 3.1 miles west, respectively (USGS, 2023b). Local faults near the Project site include the Compton thrust fault and THUMS-Huntington Beach fault, located 1.3 and 2.8 miles south of the Project site, respectively (USGS, 2023b). Both the Compton and THUMS-Huntington Beach faults are considered potentially active. The Wilmington blind thrust fault is located 2.6 miles south of the Project site and underlies the POLB (Wolfe et. al, 2019). The Cabrillo fault is located 6.4 miles southwest of the Project site (USGS, 2023b). The Wilmington blind thrust fault is considered to be part of the potentially active THUMS-Huntington Beach oblique-slip system (Wolfe et. al, 2019). The Cabrillo fault is potentially active and capable of generating a M 6.0 to M 6.8 earthquake (SCEDC, 2023). Given the distance, people or structures associated with the Ribost Terminal would not be exposed to substantial adverse effects from a rupture of a known earthquake fault. In addition, 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 impact would occur.

ii) **Strong seismic ground shaking**

Located in Southern California, the Project site is in a known seismically active region. As described above, the closest mapped Alquist-Priolo zoned faults include the Newport-Inglewood and Palos Verdes faults, which are considered the most significant faults in the area (CGS, 1999b). The Project site is not located within a mapped Alquist-Priolo Earthquake Fault Zone, nor do any active faults cross the Project site (CGS, 1999b). Other local faults near the Project site include the Compton thrust fault and THUMS-Huntington Beach fault, located 1.3 and 2.8 miles south, respectively (USGS, 2023b). The Wilmington blind thrust fault is located 2.6 miles south of

the Project site and underlies the POLB (Wolfe et. al, 2019). The Cabrillo fault is located 6.4 miles southwest of the Project site (USGS, 2023b). Given the Project's location in relation to the aforementioned faults, the Project site will likely experience strong ground shaking during the Project life.

Earthquakes occurring on faults closest to the Project area would most likely generate the largest ground motion. Moderate to strong ground shaking should be expected in the event of an earthquake on the faults near the Project site, with estimated PGAs of 0.76 g for a 2 percent probability of exceedance in 50 years and of 0.42 g for a 10 percent probability of exceedance in 50 years (USGS, 2014). While the shaking would be less severe from an earthquake that originates farther from the Project site, the effects from nearby or regional earthquakes could be damaging to Project structures. It is likely that the Project structures would be subjected to at least one moderate or large earthquake occurring close enough to produce ground shaking at the Project site.

The proposed Project would incorporate a ground improvement system, such as Drill Displacement Column™ (i.e., a deep ground improvement system used to improve soft, loose, or contaminated soil) or Rammed Aggregate Piers® (i.e., a ground improvement technology that creates a densified column of aggregate surrounded by stiffened matrix soil), which would reduce the effects of static and seismic settlements (Albus-Keefe, 2018). For discussion of noise and vibration impacts refer to Appendix B. 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 (Albus-Keefe, 2018). Rammed aggregate piers or vibro-replacement columns are common ground improvement methods to mitigate various geotechnical challenges and/or provide support of foundations. Although the site is likely to experience moderate to strong ground shaking within its lifetime, the ground improvement system and mat-raft foundation included in the proposed Project's design for the two new tanks as well as adherence to the IBC, CBC, Los Angeles County Building Code, City of Long Beach Building Code, City of Long Beach Municipal Code, and Harbor District Guidelines, would ensure that impacts from ground shaking would be less than significant.

iii) Seismic-related ground failure, including liquefaction

The proposed Project is located on relatively flat terrain consisting of varying thicknesses of artificial fill overlying marine sediments and would not be subject to seismically induced slope failures. The entire Project site is mapped within an area prone to earthquake-induced liquefaction (CGS, 1999b). Liquefaction analyses conducted as a part of the geotechnical investigation for the proposed Project indicated that various layers below the assumed high groundwater depth of 5 feet are potentially liquefiable (Albus-Keefe, 2018). There is a potential that the artificial fill and underlying marine sediments may be subject to liquefaction in the event of strong ground shaking due to shallow groundwater at the Project site. Implementation of the above-described ground improvement system and a mat-raft foundation system and adherence to the IBC, CBC, Los Angeles County Building Code, City of Long Beach Building Code, City of Long Beach Municipal Code, and Harbor District Guidelines would reduce the potential for seismically induced liquefaction damage the new tanks (Albus-Keefe, 2018). Liquefaction and lateral spreading would be reevaluated by the geotechnical engineer prior to submittal of the final grading plans and foundations plans (Albus-Keefe, 2018) to the City of Long Beach Harbor Department Engineering Design Division. Therefore, impacts related to seismic-related ground failure, including liquefaction and lateral spreading, would be less than significant.

iv) Landslides

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. As described above, the Project site is located on relatively flat terrain and is not located in an area considered susceptible to landslides. The CGS seismic hazard mapping indicates that there are no areas of potential earthquake-induced landslides in the POLB (CGS, 1999b).

The top of the southern slope of Channel 2 is 60 to 75 feet north of the containment wall at the Project site. Although the site is underlain by varying thickness of artificial fill overlying alluvial or marine 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. No potential impact from earthquake-induced landslides or landslides triggered by other factors would occur at the Project site. No impact would occur.

CEQA Impact Determination

The proposed Project would incorporate a ground improvement system, such as Drill Displacement Column™ or Rammed Aggregate Piers®; a mat-raft foundation system; and would comply with all applicable State and local building codes, including CBC and municipal code provisions. Construction of the proposed Project would be conducted in accordance with applicable State and local building code requirements and standards. The building codes and criteria provide requirements for construction, grading, excavations, use of fill, foundation work, including type of materials, design, procedures, and structural seismic requirements that address risks from seismic and geologic hazards. The building codes specify necessary permits, plan checks, and inspections. As construction and operations would not directly or indirectly exacerbate risks involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, and landslides. Impacts would be less than significant.

Mitigation Measures

Impacts related to the fault rupture, strong seismic ground shaking, seismic-related ground failure, or landslides would be less than significant, and no mitigation is required.

Impact GEO-2: Construction results in substantial soil erosion or the loss of topsoil. (Less Than Significant)

Excavation and grading for the new tank foundations could loosen soil and trigger or accelerate erosion. 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. Soils underlying the Project site have moderate susceptibility to sheet and rill erosion by water and a moderate susceptibility to erosion by wind (NRCS, 2023).

Current regulations require a NPDES General Permit for Storm Water Discharges Associated with Construction Activity if construction disturbs a surface area greater than one acre. While construction activities would disturb less than one acre and would not require implementation of a Construction SWPPP, Ribost would implement its existing facility SWPPP during construction to specify BMPs and other measures to avoid or eliminate pollution discharges. (World Oil Terminals, 2021a).

The CBC and Los Angeles Building Code regulates grading activities, including drainage and erosion control. Additionally, erosion and the loss of topsoil at areas of ground disturbance within the Project site would be further minimized by provisions, such as sediment basins, silt fences, straw wattles, drainage devices, drainage inlet protection, and appropriate outlet devices, which

would be included in the grading permit required by City of Long Beach/POLB. Impacts related to erosion would be less than significant.

CEQA Impact Determination

The grading permit and the SWPPP would include the use of provisions to minimize erosion. Impacts related to erosion during construction would be less than significant.

Mitigation Measures

No mitigation would be required.

Impact GEO-3: Operations results in substantial soil erosion or the loss of topsoil. (Less Than Significant)

Operation Impacts

Operation of the proposed Project would not require ground disturbance and would be in accordance with the existing facility SWPPP. Operations would occur within the same footprint of the existing site. During operations trucks would continue to utilize paved surfaces in the truck loading area. Gravel surfaces would surround the tanks, same as is found currently throughout the tank area. Impacts related to erosion would be less than significant.

CEQA Impact Determination

The SWPPP would include the use of provisions to minimize erosion. Impacts related to erosion during operation would be less than significant.

Mitigation Measures

No mitigation would be required.

Impact GEO-4: 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)

Impacts

The Project site consists of relatively flat terrain with varying thicknesses of artificial fill overlying marine sediments and would not be subject to landslides or other 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.

According to the Seismic Hazard Zones Map for the Long Beach Quadrangle, the Project site is located within an area prone to earthquake-induced liquefaction (CGS, 1999b). Liquefaction analyses conducted as part of the geotechnical investigation for the proposed Project by Albus-Keefe & Associates in May 2018 indicates that various layers below the assumed high ground-water depth of 5 feet are potentially liquefiable (Albus-Keefe, 2018). There is a potential that the artificial fill and underlying marine sediments may be subject to liquefaction in the event of strong ground shaking due to shallow groundwater at the Project site. A total seismic settlement of approximately 3 to 5.25 inches was estimated in the 2018 geotechnical update report (Albus-Keefe, 2018). Differential settlement was estimated to be approximately one-half of the total seismic settlement or approximately 2.6 inches over 30 feet. The 2018 geotechnical update report includes recommendations for a ground improvement system, such as Drill Displacement Column™ or Rammed Aggregate Piers®, to reduce the effects of both static and seismic settlements. The 2018 geotechnical update report indicates that due to the presence of liquefiable

layers within the artificial fill, lateral spreading hazards should be a design consideration (Albus-Keefe, 2018).

The top of the southern slope of Channel 2 is 60 to 75 feet north of the containment wall at the Project site. Due to the nearby slope of Channel 2 and the susceptibility of the Project site to liquefaction, lateral spreading could occur at the Project site during a maximum earthquake event.

According to the US Geological Survey Land Subsidence map, the POLB is located within an area of subsidence attributed to oil extraction (USGS, 2023a). Since the 1960s, water injection has stabilized subsidence in the POLB. Subsidence would not be triggered nor exacerbated due to the proposed Project.

The site is underlain by hydraulic fill as deep as 48 feet below the existing ground surface and is very compressible (Albus-Keefe, 2018). The hydraulic fill at the site was placed in saturated conditions and is not considered collapsible. Collapsible soils are found throughout the world in soil deposits that are eolian, loessial, subaerial, mudflows, alluvial, residual, or are manmade fills. These soils are typically found in arid or semiarid regions and have a loose structure; that, is a large void ratio, and a water content much lower than saturation.

Implementation of the above-described ground improvement system and mat-raft foundation system 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 2018 geotechnical update report, and in an additional review of the final foundation and grading plans (Albus-Keefe, 2018) prior to submittal for review of the City of Long Beach Harbor Engineering Division. Construction of the proposed Project would require standard engineering recommendations per 2022 CBC design criteria relative to seismic and geologic hazards and would be subject to applicable State and local building codes, including CBC and municipal code provisions. Compliance with the above-mentioned requirements would prevent the soils under the Project site from becoming unstable or potentially resulting in off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. Therefore, the impacts would be less than significant.

CEQA Impact Determination

The proposed Project would incorporate a ground improvement system, such as Drill Displacement Column™ or Rammed Aggregate Piers®; a mat-raft foundation system, along with other pertinent recommendations identified in the geotechnical investigation; and would comply with applicable State and local building codes, including CBC and municipal code provisions. Impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Impact GEO-5: 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)

Impacts

According to USDA NRCS Web Soil Survey, the expansion potential for soils underlying the Project site is low (NRCS, 2023). However, laboratory testing performed on three samples collected from the upper 20 feet yielded plasticity indices which correspond to moderate to high shrink/swell potential (Albus-Keefe, 2018). Soils with moderate to high shrink/swell potential would be classified as expansive soils.

The recommendations in the 2018 geotechnical update report include the placement of compacted sand beneath the proposed tanks, as well as installation of a deep foundation system, such as Drill Displacement Column™ or Rammed Aggregate Piers®, that would mitigate the effects of expansive soils (Albus-Keefe, 2018). Additionally, the geotechnical recommendations require additional testing for soil expansion subsequent to rough grading and prior to the construction of foundations and other concrete flatwork (Albus-Keefe, 2018). The results of soil testing would confirm if the soil meets the specified engineering requirements to correct for expansive soils. If corrective measures are needed, standard engineering practice includes removing the expansive soil and importing non-expansive soil, chemical treatment, or possibly adding lime. The final Project design would incorporate all geotechnical recommendations provided in the 2018 geotechnical update report (Albus-Keefe, 2018). Additionally, construction of the proposed Project would require implementation of standard engineering recommendations per CBC design criteria relative to soil and geologic hazards. Construction of the proposed Project would be subject to applicable State and local building codes, including CBC and municipal code provisions. Therefore, the impacts from expansive soils would be less than significant.

CEQA Impact Determination

The proposed Project would incorporate the recommendations of the 2018 geotechnical update report including placement of compacted sand beneath the proposed tanks; a ground improvement system, such as Drill Displacement Column™ or Rammed Aggregate Piers®; a mat-raft foundation system; and would comply with applicable State and local building codes, including CBC and municipal code provisions. Impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

3.2.5.2. Alternative 1 – Single Tank Alternative

The major difference in the Single Tank Alternative and the proposed Project is that one less tank would be constructed which would reduce construction and operation activities. As such, this alternative could include a reduction in impacts related to geology and soils.

Impact GEO-1: 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.**
- ii) **Strong seismic ground shaking**
- iii) **Seismic-related ground failure, including liquefaction**
- iv) **Landslides**

Impacts

As with the proposed Project, the Single Tank Alternative would not result in a change or increase in seismic hazard to people related to the rupture of a known earthquake fault or be subject to landslides, but the Project area would likely experience strong ground shaking and potentially result in liquefaction during the Project life. However, a ground improvement system and mat-raft foundation system would be implemented, and the IBC, CBC, Los Angeles County Building Code, City of Long Beach Building Code, City of Long Beach Municipal Code, and Harbor District Guidelines would be adhered to. As such, construction and operations would not directly or

indirectly exacerbate risks involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, and landslides.

CEQA Impact Determination

The Single Tank Alternative, like the proposed Project, would have less-than-significant impacts related to the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, and landslides.

Mitigation Measures

No mitigation would be required.

Impact GEO-2: Construction result in substantial soil erosion or the loss of topsoil. (Less Than Significant)

Construction Impacts

Construction requirements are less than those required for the proposed Project as one less tank would be constructed; however, construction would still require excavation and grading that could result in temporary soil erosion or the loss of topsoil. The potential for substantial soil erosion or the loss of topsoil during construction would be slightly reduced compared to the proposed Project as less area would be disturbed. With implementation of the existing facility SWPPP and grading permit provisions, impacts related to erosion during construction would be less than significant.

CEQA Impact Determination

The Single Tank Alternative, like the proposed Project, would have a less-than-significant impact related to substantial soil erosion or the loss of topsoil during construction.

Mitigation Measures

No mitigation would be required.

Impact GEO-3: Operation results in substantial soil erosion or the loss of topsoil. (Less Than Significant)

Operation Impacts

As with the proposed Project, under the Single Tank Alternative, operations would not require ground disturbance, would be in accordance with the existing SWPPP, and require trucks to utilize paved surfaces and gravel surfaces surrounding the tank. Therefore, the potential for substantial soil erosion or the loss of topsoil during operation would be similar compared to the proposed Project. Additionally, implementation of the SWPPP would ensure erosion is minimized.

CEQA Impact Determination

The Single Tank Alternative, like the proposed Project, would have less-than-significant impacts related to soil erosion or loss of topsoil during operation.

Mitigation Measures

No mitigation would be required.

Impact GEO-4: 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)

Impacts

As with the proposed Project, the Single Tank Alternative would not trigger or exacerbate subsidence and would be located in an area that is not subject to landslides or other slope stability

issues. However, lateral spreading hazards and structurally loose soils exist at the Project site. Therefore, related impacts would be similar compared to the proposed Project. With implementation of a ground improvement system, mat-raft foundation system, geotechnical recommendations provided in the 2018 geotechnical update report, standard engineering recommendations per 2022 CBC design criteria relative to seismic and geologic hazards, and State and local buildings codes, soils would be prevented from becoming unstable or potentially resulting in off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

CEQA Impact Determination

The Single Tank Alternative, like the proposed Project, would have less-than-significant impacts related to the placement of proposed Project structures on unstable geologic units or soils.

Mitigation Measures

No mitigation would be required.

Impact GEO-5: 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)

Impacts

As with the proposed Project, the Single Tank Alternative would be located in an area that contains expansive soils; therefore, related impacts would be similar. With implementation of the geotechnical recommendations provided in the 2018 geotechnical update report, standard engineering recommendations per 2022 CBC design criteria relative to seismic and geologic hazards, and State and local buildings codes, soils would be prevented from creating a substantial direct or indirect risk to life or property.

CEQA Impact Determination

The Single Tank Alternative, like the proposed Project, would have less-than-significant impacts related to expansive soils.

Mitigation Measures

No mitigation would be required.

3.2.5.3. Alternative 2 – No Project Alternative

Impact GEO-1: 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.
- ii) Strong seismic ground shaking
- iii) Seismic-related ground failure, including liquefaction
- iv) Landslides

Impacts

The No Project Alternative would not result in any new construction and/or operational activities or any new associated ground-disturbing activities. The No Project Alternative would not expose people or structures to adverse effects related to fault rupture, strong seismic ground shaking,

seismic-related ground failure, or landslides. There would be no impacts related to fault rupture, strong seismic ground shaking, seismic-related ground failure, or landslides.

CEQA Impact Determination

Under the No Project Alternative, no tanks would be constructed and, therefore, the geology and soil impacts related to fault rupture, strong seismic ground shaking, seismic-related ground failure, or landslides would not occur.

Mitigation Measures

No mitigation would be required.

Impact GEO-2: Construction results in substantial soil erosion or the loss of topsoil. (No Impact)

Construction Impacts

The No Project Alternative would not result in any new construction activities or any new associated ground-disturbing activities. There would be no impact related to erosion during construction.

CEQA Impact Determination

Under the No Project Alternative, the proposed Project would not be implemented and, therefore, the geology and soils impacts related to erosion during construction would not occur.

Mitigation Measures

No mitigation would be required.

Impact GEO-3: Operation results in substantial soil erosion or the loss of topsoil. (No Impact)

Operation Impacts

The No Project Alternative would not result in any new construction activities or any new associated ground-disturbing activities. There would be no impact related to erosion during operation.

CEQA Impact Determination

Under the No Project Alternative, the proposed Project would not be implemented and, therefore, the geology and soils impacts related to erosion during operation would not occur.

Mitigation Measures

No mitigation would be required.

Impact GEO-4: 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. (No Impact)

Impacts

The No Project Alternative would not result in any new construction and/or operational activities or any new associated ground-disturbing activities. The No Project Alternative would not expose people or proposed structures to adverse effects involving structures being located on geologic units or soil that is unstable or would become unstable.

CEQA Impact Determination

Under the No Project Alternative, no structures would be constructed or operated; therefore, geology and soil impacts related to the location of proposed structures on geologic units or soil that is unstable or would become unstable would not occur.

Mitigation Measures

No mitigation would be required.

Impact GEO-5: 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. (No Impact)

Impacts

The No Project Alternative would not result in any new construction and/or operational activities or any new associated ground-disturbing activities. The No Project Alternative would not expose people or structures to adverse effects involving expansive soils. There would be no impacts related to the location of proposed structures on expansive soils.

CEQA Impact Determination

Under the No Project Alternative, no structures would be constructed or operate; therefore, the geology and soil impacts related to expansive soils would not occur.

Mitigation Measures

No mitigation would be required.

3.2.6. Cumulative Impacts

Geology and soils impacts, including seismic hazards, are typically site-specific. The impacts of each past, present, and reasonably foreseeable project would be specific to the respective site and its users and would not be in common with or contribute to (or shared with, in an additive sense) the impacts on other sites. In addition, development of each site would be subject to site development and construction guidelines and standards (local, State, and federal) that are designed to protect public safety. In order to be cumulatively considerable, adverse geologic conditions would have to occur at the same time and in the same location as the same or similar conditions of the proposed Project.

Seismic impacts (fault rupture, ground shaking, earthquake-induced ground failure, liquefaction, lateral spreading) from the numerous local and regional faults comprise an impact of the geologic environment on individual projects and would not introduce cumulatively considerable impacts. Impacts from unsuitable soils (expansive or corrosive soils) would also represent an impact of the environment on individual projects and would not be cumulatively considerable. The World Oil Tank Installation Project and related projects within the geographic scope of potential cumulative impacts results in less than significant impacts to geology and soils. Therefore, there would not be a cumulative considerable impact related to geology and soils.

3.2.7. Mitigation Monitoring Program

No mitigation measures related to geology and soils would be required for this Project.

3.3. Greenhouse Gas Emissions

This section addresses the potential impacts from GHG emissions that would result from construction and operation of the proposed Project or its alternatives.

3.3.1. Environmental Setting

It is well-documented that the Earth's climate has fluctuated throughout its history. However, scientific evidence now indicates a relationship between increasing global temperatures over the past century and the worldwide proliferation of GHG emissions by mankind. Global climate changes in the average weather of the Earth, resulting from greenhouse gas emissions, measured by change in wind patterns, storms, precipitation, and temperature is predicted to produce negative environmental, economic, and social consequences across the globe and may, in turn, be manifested as impacts on resources and ecosystems in California and elsewhere.

3.3.1.1. GHG Emissions and Effects

GHGs trap heat in the atmosphere and are emitted from both natural processes and human activities. Examples of GHGs produced both by natural processes and human activity include carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Examples of GHGs emitted through human activities alone include fluorinated gases and sulfur hexafluoride (SF₆). The natural balance of GHGs in the atmosphere regulates the Earth's temperature; without this natural greenhouse effect, the earth's surface would be approximately 60 degrees Fahrenheit (°F) cooler (USGCRP, 2018). As of 2018, CO₂ levels are approximately 40 percent higher than the highest levels estimated for the 800,000 years preceding the industrial revolution, as determined from CO₂ concentrations analyzed from air bubbles in Antarctic ice core samples (USGCRP, 2018).

The State of California and United States Environmental Protection Agency (USEPA) have identified six GHGs generated by human activity that are believed to be the primary contributors to global warming: CO₂, CH₄, N₂O, hydrofluorocarbons (HFC), perfluorocarbons (PFC), and SF₆. Of these, CO₂, CH₄, and N₂O are products of combustion and the GHGs of interest in this analysis; HFC, PFC, and SF₆ are specialized compounds emitted by different types of sources than would be used or emitted by any of the proposed Project equipment or activities.

Each GHG has a global warming potential (GWP), which is its ability to trap heat in the atmosphere. To account for the different GWP of each compound, GHG emissions are often reported as carbon dioxide equivalent (CO₂e). CO₂e is calculated by multiplying each GHG emission by its GWP and adding the results together to produce a single, combined emission rate representing all GHG emissions. Mass rates of GHG emissions are commonly presented in units of metric tons (MT) of CO₂e. One MT equals 1,000 kilograms or 1.1 short tons.

3.3.1.2. Black Carbon

Black carbon (a.k.a. soot) is a component of diesel particulate matter (DPM) emissions, and because it is a powerful climate forcer, California includes black carbon within the Short-Lived Climate Pollutant Reduction Strategy. The state's major anthropogenic sources of black carbon include off-road transportation, on-road transportation, residential wood burning, fuel combustion, and industrial processes. The majority of anthropogenic sources come from transportation, specifically, heavy-duty vehicles. Black carbon emissions in California have decreased since 2013 due to engine certification standards and in-use rules for on-road and off-road fleets, along with clean fuel requirements and incentives, including California Climate Investments and Low Carbon Fuel Standard credits. California's air quality management programs that target reductions in reduce DPM help to reduce the fraction of DPM that is black carbon (CARB, 2022).

At present, there are no protocols for assessing the effects of black carbon on GCC. Therefore, this EIR provides a qualitative assessment of this effect in that black carbon is a component of PM_{2.5} and DPM emissions from diesel-powered sources. Section 3.1, *Air Quality and Health Risk*, quantitatively evaluates DPM emissions as a criteria air pollutant and DPM as a toxic air contaminant (TAC).

3.3.2. Regulatory Setting

3.3.2.1. Federal

The US government administers an array of programs designed to reduce US GHG emissions. These programs focus on energy efficiency, renewable energy, non-CO₂ gases, and implementation of technologies designed to reduce fuel consumption and increase the use of renewable fuels to facilitate GHG reductions. These federal programs include:

- Phase 2 Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles (2016).
- Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles, Phase 3 (Proposed Rule 2023) and Clean Trucks Plan.
- Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles (Proposed Rule 2023).
- Greenhouse Gas Reporting Program (GHGRP) for fuel suppliers and electricity generation.
- Renewable Fuel Standard (RFS) program (promulgated 2007 and 2010).

3.3.2.2. State

California's efforts to reduce GHG emissions and adapt for the consequences of climate change were first set forth in June 2005 by Governor's Executive Order S-3-05, which established the targets of reducing California's GHG emissions to 1990 levels by 2020 and 80 percent below 1990 levels by 2050. To further these efforts, California maintains an extensive regulatory framework for reducing GHG emissions.

The following information updates the presentation of applicable GHG emissions reduction strategies previously presented in the Project CEQA Initial Study (January 2023; see EIR Appendix B).

California Global Warming Solutions Act of 2006 (Assembly Bill 32 [AB 32]). The California Global Warming Solutions Act of 2006 (AB 32) promulgated targets to achieve GHG emissions reductions to 1990 levels by the year 2020. Reductions have been through standards and regulations including an enforceable statewide cap on global warming emissions beginning in 2012. AB 32 directs the California Air Resources Board (CARB) to develop regulations and a mandatory reporting system to track and monitor global warming emissions levels (AB 32, Chapter 488, Statutes of 2006). The CARB Climate Change Scoping Plan, initially approved December 2008 and most recently updated by CARB in December 2022, provides the framework for achieving California's goals (CARB, 2022). AB 32 requires CARB to update the Scoping Plan at least every 5 years.

California Governor's Executive Order B-30-15 and Senate Bill 32 (SB 32). Executive Order B-30-15 (April 2015) extended AB 32 goals and set a GHG reduction goal of 40 percent below 1990 levels by 2030. Executive Order B-30-15 also addressed the need for climate adaptation and directed state governments to take a number of actions, including factoring climate change in state agencies' planning and investment decisions. In 2016, SB 32 codified the GHG emissions reduction target for 2030 from Executive Order B-30-15.

California Governor’s Executive Order B-55-18 and Senate Bill 100 (SB 100). Beyond 2030, Executive Order B-55-18 establishes a statewide goal for California to achieve carbon neutrality by 2045. In September 2018, Senate Bill 100 (SB 100), to revise and extend California’s Renewables Portfolio Standard (RPS) program, was signed into law. SB 100 accelerated the RPS targets and established the goals of 50 percent renewable energy resources by 2026 and 60 percent renewable energy resources by 2030.

CARB AB 32 Scoping Plans. The *2022 Scoping Plan for Achieving Carbon Neutrality* (CARB, 2022) assesses progress towards achieving the SB 32 2030 target, while laying out a path to achieve carbon neutrality no later than 2045 (CARB, 2022), as directed by AB 1279. The Reference Scenario in the 2022 Scoping Plan includes prior projections of “business-as-usual conditions”, including:

- California Energy Demand Forecast.
- Two transportation carbon neutrality studies required by Assembly Bill 74 (2021).
- CARB’s 2020 Mobile Source Strategy.
- SB 100 60 percent Renewables Portfolio Standard.
- Low Carbon Fuel Standard (LCFS) carbon intensity reduction target of 20 percent.

3.3.2.3. Local

SCAQMD 2022 Air Quality Management Plan (AQMP). The most-recent AQMP, adopted December 2, 2022, focuses on achieving emissions reductions to achieve ozone and particulate matter standards. The AQMP recognizes California’s GHG reduction targets under SB 32 and Governor Executive Order B-55-18 as additional efforts to address many of the same sources that emit criteria air pollutants. The AQMP lists the control measures for achieving further reductions and the reductions attributable to ongoing regulations and programs, such as California’s GHG standards for vehicles, renewable fuels, and energy use. Accordingly, the AQMP reflects the criteria air pollutant emissions reductions that occur as co-benefits from mandates and programs that reduce GHG emissions (SCAQMD, 2022).

San Pedro Bay Ports Clean Air Action Plan (CAAP). The CAAP was originally adopted in 2006 by the Boards of Harbor Commissioners of the ports of Long Beach and Los Angeles. The original CAAP established a means of complying with the SCAQMD’s AQMP for the region. The CAAP was designed to reduce the health risks posed by air pollution from all port-related emission sources, specifically ships, trains, trucks, terminal equipment and harbor craft, such as tugboats. The bulk of the CAAP 2017 Update strategies are designed to significantly advance the push toward zero emissions in support of California and local GHG reduction goals. The 2017 CAAP Update promotes the following two emission-reduction targets:

- Reduce GHGs from port-related sources to 40 percent below 1990 levels by 2030.
- Reduce GHGs from port-related sources to 80 percent below 1990 levels by 2050.

The 2017 CAAP Update also incorporates the June 12, 2017 joint declaration by the mayors of the cities of Los Angeles and Long Beach to move toward zero emissions at the ports, including setting goals of zero-emissions cargo-handling equipment by 2030 and zero-emissions drayage trucks by 2035.

City of Long Beach, Sustainable City Action Plan. The City of Long Beach, Sustainable City Action Plan (February 2010) is intended to guide operational, policy, and financial decisions to create a more sustainable Long Beach. The Sustainable City Action Plan includes initiatives, goals, and actions that will move Long Beach toward becoming a sustainable city. The plan includes initiatives to reduce the City’s carbon footprint and sets a goal to reduce GHG emissions from City facilities and operations 15 percent by 2020, relative to 2007 levels.

Port of Long Beach Green Port Policy. The Port of Long Beach Green Port Policy (2025) 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. The Green Port Policy includes initiatives that reduce emissions of air pollutants from operations at the Port. Many of these measures also would result in GHG emission reductions.

3.3.3. Significance Criteria

Considering the Port-specific and Project-specific impact issues, the following criteria are used in this EIR to determine the significance of Project GHG impacts. The Project would have a significant impact if it would:

GHG-1: Generate GHG emissions, either directly or indirectly, during construction that may have a significant impact on the environment.

GHG-2: Generate GHG emissions, either directly or indirectly, during operations that may have a significant impact on the environment.

GHG-3: Conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of GHG.

The proposed Project would involve construction and operation of industrial stationary sources that require permits to construct and operate that must be issued by the South Coast Air Quality Management District (SCAQMD). Therefore, the SCAQMD GHG emissions significance threshold for industrial facilities of 10,000 MT of CO₂e per year (MTCO₂e/year) applies to this analysis (SCAQMD, 2023).

3.3.4. Assessment Methodology

Construction-phase GHG emissions are estimated along with the criteria air pollutant emissions using the SCAQMD approved California Emissions Estimator Model (CalEEMod version 2022.1.1.14) a statewide land-use emission model developed in collaboration with SCAQMD and several local air districts. Please see Section 3.1, *Air Quality*, for additional discussion of the construction emissions estimate methodology and assumptions.

Operation-phase GHG emissions due to additional truck trips generated and incremental onsite electricity consumption during proposed Project operation were estimated using CalEEMod or separate spreadsheet calculations augmented by CalEEMod for mobile and area sources. See EIR Appendix C, *Air Pollutant Emissions Data*, for copies of the CalEEMod output report and further results of GHG emissions estimates.

3.3.5. Impacts and Mitigation Measures

3.3.5.1. Proposed Project

Impact GHG-1: Generate GHG emissions, either directly or indirectly, during construction that may have a significant impact on the environment. (Less than Significant)

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).

Construction Impacts

Construction emissions and operation phase emissions are considered together when comparing against the SCAQMD GHG emissions significance threshold for industrial facilities. Standard guidance from SCAQMD in the CEQA analysis of GHG emissions allows lead agencies to amortize construction GHG emissions over a project lifetime and add them to operational emissions. The amortization period is 30 years for most projects.

Quantification of overall one-time Project construction GHG emissions appears in Table 3.3-1, and GHG emissions during construction would be well below the annual threshold of 10,000 MTCO₂e/year. The annual amortized construction emissions over a proposed Project life of 30 years is also shown with proposed Project operations for comparison with the annualized GHG emissions significance threshold.

Table 3.3-1. Summary of Project GHG Emission Estimates

Emissions Type	One-time GHG Emissions (MTCO ₂ e)	Annual GHG Emissions (MTCO ₂ e/year)
Construction Activities	394	---
Construction Activities, Amortized over 30 years	---	13.1
Annual Operating Emissions, Tanker Truck Traffic	---	195.0
Annual Operating Emissions, Thermal Oxidizer	---	32.5
Annual Operating Emissions, Electricity Use	---	11.3
Total Annual GHG Emissions	---	251.9
SCAQMD Significance Threshold	---	10,000

Source: EIR Appendix C, *Air Pollutant Emissions Data*.

CEQA Impact Determination

Table 3.3-1 shows that the quantity of GHG emissions caused by the proposed Project during construction and operation would not exceed the GHG emissions significance threshold. Therefore, the GHG emissions generated by the proposed Project would not have a significant impact on GCC or the environment, and the impact is less than significant.

Mitigation Measures

No mitigation would be required.

Impact GHG-2: Generate GHG emissions, either directly or indirectly, during operations that may have a significant impact on the environment. (Less Than Significant)

The proposed Project could generate GHG emissions during operation by transferring materials to and from the two new storage tanks and by changing the volume of truck traffic at the existing loading racks, increasing the use of the existing thermal oxidizer, and increasing the use of electricity at the site.

Fugitive methane (CH₄) could escape during the handling of petroleum liquids. The two new storage tanks would be used to transfer partially processed crude oil that contains only trace amounts of CH₄. Partially processed crude oil would contain little to no methane because CH₄ is either removed or escapes during the extraction and production of the petroleum crude oil at the off-site well-site, leaving little to no potential for methane to escape to the atmosphere during downstream transportation and storage. Additionally, the proposed Project would not change how the facility is limited to loading up to 10,000 bbl/day of crude oil into trucks. Therefore, the potential

for increased fugitive GHG emissions from crude oil storage and loading to and from the new storage tanks would be negligible.

Two underutilized existing tanks would be converted to leased tanks, primarily for fuel oil product storage. Similar to other leased tanks at the Ribost Terminal, fuel oil is currently transmitted between the Ribost facility and the Marathon and Glencore facilities primarily via existing pipelines. In the atypical event a pipeline is out of service, trucks would be used to transport fuel oil between the Ribost facility and the Marathon and/or Glencore facilities. The volume of truck trips would increase over the baseline truck traffic counts. The GHG emissions due to combustion of diesel as a transportation fuel caused by this incremental change in truck traffic are quantified using CalEEMod and shown in Table 3.3-1.

In addition, there would be a minor amount of increased indirect GHG emissions from the use of natural gas in the thermal oxidizer for vapor collection at the loading racks and the use of electricity to power the two new pumps associated with the new tanks. The GHG emissions indirectly caused by electricity use depends on the energy resource mix of power delivered to the site by the electric utility. The GHG intensity is approximated using the CalEEMod default factors for Southern California Edison, and these GHG intensity factors would decrease over time as the renewable energy content of the delivered electricity increases in compliance with California's Renewable Portfolio Standard.

Operation Impacts

Quantification of Project GHG emissions during operations appears with the summary of Project construction GHG emissions in Table 3.3-1, presented with Impact GHG-1. The quantity of GHG emissions caused by the proposed Project during operation would not exceed the GHG emissions significance threshold.

CEQA Impact Determination

Table 3.3-1 shows that the combined effects of construction and operation of the proposed Project would not exceed the GHG emissions significance threshold. It is standard guidance from SCAQMD to amortize construction GHG emissions over a project lifetime and add them to operational GHG emissions when determining significance. The amortization period is 30 years for most projects. Therefore, the impacts from the GHG emissions generated by the proposed Project would be less than significant.

Mitigation Measures

No mitigation would be required.

Impact GHG-3: Conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of GHG. (Less Than Significant)

Impacts

This discussion addresses whether the proposed Project could introduce a potential conflict with an applicable plan, policy, or regulation adopted for the purposes of GHG emissions reductions. A summary of Project compliance with all potentially applicable GHG emissions reductions plans, strategies, policies, and regulations appears in Table 3.3-2.

1 **Table 3.3-2. Applicable GHG Emissions Reduction Strategies**

Strategy	Compliance with Strategy
California AB 32 Scoping Plan Strategies	
Vehicle Technology Standards	Not directly applicable to the proposed Project, as vehicle technology standards and actions to transition to zero-emission mobile source technologies are CARB enforced standards; vehicles that access the Project site are required to comply with the standards. The proposed Project would not change how vehicles comply with technology standards.
Use of Low Carbon or Alternative Fuels	Not directly applicable to the proposed Project, as construction, operation, and maintenance vehicles are not expected or required to immediately utilize biodiesel or other renewable fuels or alternative fuels. The proposed Project would 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.
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 proposed Project during construction is required by regulation for fugitive dust control, for concrete production, or for tank hydro-testing 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 wastewater transportation and disposal.
Port of Long Beach and City of Long Beach Strategies	
City of Long Beach, Sustainable City Action Plan (February 2010)	The City of Long Beach, Sustainable City Action Plan focuses on city property, buildings, and public transportation, although 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. The proposed Project would be required through the Harbor Development Permit to comply with all applicable strategies of the CAAP. Ribost is a registered participant in the CAAP Clean Trucks Program drayage truck registry.
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. Ribost 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)	Compliance with the City of Long Beach Construction and Demolition Recycling Program and implementation of air quality Best Management Practices (BMPs) for construction activities through the Harbor Development Permit would ensure conformance with the Green Port Policy. In addition, Ribost is a registered participant in the CAAP Clean Trucks Program drayage truck registry.

CEQA Impact Determination

The proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purposes of GHG emissions reductions and therefore impacts are less than significant.

Mitigation Measures

No mitigation would be required.

3.3.5.2. Alternative 1 – Single Tank Alternative

The major difference in the Single Tank Alternative and the proposed Project is that one less tank would be constructed which would reduce construction and operation activities. As such, this alternative could include a reduction in impacts related to GHG emissions. However, as with the proposed Project, GHG emissions would be generated 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). Additionally, operations under the Single Tank Alternative would still involve activities that could generate GHG emissions by transferring materials to and from the storage tank and by changing the volume of truck traffic at the existing loading racks, increasing the use of the existing thermal oxidizer, and increasing the use of electricity at the site.

Impact GHG-1: Generate GHG emissions, either directly or indirectly, during construction that may have a significant impact on the environment. (Less Than Significant)

Construction Impacts

Construction requirements are less than those required for the proposed Project as one less tank would be constructed; however, construction would still require off-road equipment and on-road construction vehicle trips. Therefore, the generation of GHG emissions would be reduced compared to the proposed Project but not eliminated.

CEQA Impact Determination

The Single Tank Alternative, like the proposed Project, would not exceed the GHG emissions significance threshold, and therefore, impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Impact GHG-2: Generate GHG emissions, either directly or indirectly, during operations that may have a significant impact on the environment. (Less Than Significant)

Operation Impacts

Operation GHG emissions are expected to be less than those required for the proposed Project as one less tank would be in operation; however, operation would still require materials transfer, and an increase in truck traffic, electricity use, and use of the existing thermal oxidizer that could generate GHG emissions. Therefore, the generation of GHG emissions would be slightly reduced compared to the proposed Project but not eliminated.

CEQA Impact Determination

The Single Tank Alternative, like the proposed Project, would not exceed the GHG emissions significant threshold, and therefore, impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Impact GHG-3: Conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of GHG. (Less Than Significant)

Impacts

As with the proposed Project, construction and operation under the Single Tank Alternative would not introduce a potential conflict with an applicable plan, policy, or regulation adopted for the purposes of GHG emissions reductions. Therefore, the potential to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG would be the same.

CEQA Impact Determination

The Single Tank Alternative, like the proposed Project, would not conflict with an applicable plan, policy, or regulation adopted for the purposes of GHG emissions reductions and therefore impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

3.3.5.3. Alternative 2 – No Project Alternative

Impact GHG-1: Generate GHG emissions, either directly or indirectly, during construction that may have a significant impact on the environment. (No Impact)

Construction Impacts

Because the No Project Alternative involves no construction activities, there would be no construction related GHG emissions associated with this alternative.

CEQA Impact Determination

The No Project Alternative would cause no GHG emissions and would have no impact with respect to GCC.

Mitigation Measures

No mitigation would be required.

Impact GHG-2: Generate GHG emissions, either directly or indirectly, during operations that may have a significant impact on the environment. (No Impact)

Operation Impacts

Operations under the No Project Alternative would remain the same as current operations at the site; therefore, GHG emissions would not change from existing conditions.

CEQA Impact Determination

The No Project Alternative would cause no GHG emissions and would have no impact with respect to GCC.

Mitigation Measures

No mitigation would be required.

Impact GHG-3: Conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of GHG. (No Impact)

Impacts

The No Project Alternative would involve no new construction or change in operation that could introduce a potential conflict with an applicable plan, policy, or regulation adopted for the purposes of GHG emissions reductions. As a result, the No Project Alternative introduces no change in how operations relate to GHG emissions reductions strategies from the environmental setting.

CEQA Impact Determination

The No Project Alternative would have no impact on the potential to conflict with an applicable plan, policy, or regulation adopted for the purposes of GHG emissions reductions.

Mitigation Measures

No mitigation would be required.

3.3.6. Cumulative Impacts

The impacts on GCC and the environment caused by GHG emissions are inherently cumulative; therefore, no additional discussion related to cumulative impacts is necessary for GHG emissions.

3.3.7. Mitigation Monitoring Program

Because no mitigation measures would be required for GHG emissions, no mitigation monitoring program is required for the potential impacts to GCC for this Project.

3.4. Hazards and Hazardous Materials

This section addresses issues related to environmental hazards and physical hazards. Environmental hazards include exposure of sensitive receptors, workers, and the public to hazardous materials due to an accident, spill, or presence of existing subsurface contamination. Physical hazards, including exposure of workers and the public to the risk of wildfire, aviation safety hazards, and interference with emergency plans were discussed in the Initial Study and determined not to be significant (see Appendix B).

3.4.1 Environmental Setting

3.4.1.1 Area of Influence

The area of influence for hazards associated with releases of hazardous materials (e.g., spills and leaks); past soil, groundwater, and sediment contamination; and hazards associated with potential for exposure of the public to unsafe situations (e.g., situations which increase the risks and dangers of accidents), include the Project site, adjacent harbor waters and land areas, and roadways adjacent to and in the vicinity of the proposed Project.

3.4.1.2 Hazards and Hazardous Materials Setting

The proposed Project is located within the Port of Long Beach (POLB), which consists of industrial and heavy commercial cargo and trucking activity. The proposed Project is located within Ribost's existing petroleum storage facility on Pier C. The Project area is bounded by the Long Beach Harbor Channel 2 and Pier B to the north, the Long Beach Freeway (I-710) to the east, and Pier C Street to the south. Land uses in the vicinity of Pier C include industrial uses similar to the proposed Project. The adjacent facilities on Pier C include the Matson Auto and Oversized Cargo Yard to the east, the Tesoro Marine Terminal 3 Facility to the south, and the Matson Container Yard operated by SSA Terminals to the west.

The Project site has been privately owned and operated as a petroleum storage facility since 1964. Ribost purchased the privately owned land (6 acres) in 1983 but did not take operational control of the petroleum storage facility until 1996. The Project site is used for the storage and transfer of crude oil and refined fuels. The terminal facility has seven existing aboveground storage tanks (ASTs) and proposes to add two new 25,000-bbl tanks in the northwest corner of the Project site on Pier C. 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 approximately 502,000 bbl. Currently four of the seven tanks are available for lease to customers and store different grades of marine fuels, such as marine diesel oil, high and low sulfur vacuum gas oil, bunker fuel oil, and low sulfur fuel oil (World Oil Terminals, 2023 – Material Throughput). Three tanks are dedicated to Ribost Terminal operations and contain crude oil. Crude oil and petroleum fuel specifically for World Oil Refining in South Gate are delivered to the Ribost Terminal by a receive-only pipeline and stored in the tanks before loading tanker trucks for shipping off-site. Marine fuels are transferred to the tanks via pipelines.

Soil and groundwater contamination at the Project site were identified in a site assessment completed in 1997 (Earth Tech, 1997) as summarized below under "Previous Environmental Studies". In addition, the existing facility operation generates small quantities of hazardous and non-hazardous waste, also summarized below.

Hazardous Materials/Waste

Hazardous substances are defined by federal and State regulations to protect public health and the environment. Hazardous materials have chemical, physical, or infectious properties that cause them to be considered hazardous. Hazardous materials include toxic, ignitable, corrosive, reactive, and explosive substances. Toxic substances may cause short-term or long-lasting health effects. Examples of toxic substances include most heavy metals, pesticides, and benzene (a carcinogenic component of gasoline). Ignitable substances are hazardous because of their flammable properties. Gasoline and natural gas are examples of ignitable substances. Corrosive substances are chemically active and can damage other materials or cause severe burns upon contact. Examples include strong acids and bases such as sulfuric (battery) acid or lye. Reactive substances may cause explosions or generate gases or fumes. Explosives, pressurized canisters, and pure sodium metal (which reacts violently with water) are examples of reactive materials.

Hazardous substances are defined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 101(14), and in the California Code of Regulations (CCR), Title 22, Chapter 11, Article 2, Section 66261, which provides the following definition:

A hazardous material is a substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of, or otherwise managed.

Soil excavated from a site containing hazardous materials would be considered hazardous waste if it exceeds specific CCR Title 22 criteria, or if it exceeded criteria defined in CERCLA or other relevant federal regulations. The Los Angeles Regional Water Quality Control Board (LARWQCB) regulates groundwater dewatering, which may be required during Project construction. Groundwater that exceeds current State or federal water quality standards would need to be treated before disposal or collected to be disposed of at an approved facility. Groundwater and soil that exceed Title 22 or CERCLA criteria, and are classified as hazardous waste, would need to be disposed of at an approved treatment facility or disposal site. Even if soils or groundwater at a contaminated site do not have the characteristics required to be defined as hazardous wastes, remediation of the site may be required by regulatory agencies subject to jurisdictional authority. Cleanup requirements are determined on a case-by-case basis by the agency taking lead jurisdiction, which would most likely be LARWQCB if groundwater dewatering is required during Project construction.

Maintenance and Operation

Approximately every 10 years, the existing tanks are cleaned of sludge, repaired, and/or hydro-tested. However, tanks may be emptied and/or cleaned if the material in the tank no longer meets quality specifications or if repair of the tank is required (World Oil Terminals, 2022a). Additionally, tanks may be emptied and/or cleaned to avoid cross-contamination if there is a change in material stored in the tank (World Oil Terminals, 2022a).

Sludge tank bottom quantities for the existing tanks are disposed of at a permitted treatment, storage, and disposal facility (TSDF). Sludge tank bottom waste is considered liquid non-hazardous waste, which is regulated by the State of California (Non-Resource Conservation and Recovery Act [RCRA] hazardous waste). The 2022 and 2019 waste manifests for the Project site do not list sludge tank bottom waste. However, the 2021 waste manifest provided by Ribost indicated sludge tank bottom waste is transported from the Project site to Patriot Waste Water,

LLC located in Bakersfield, California (World Oil Terminals, 2022a). From 2017 to 2020, sludge tank bottom quantities were disposed of at Crosby & Overton, Inc. located in Long Beach, California, DeMenno/Kerdoon in Compton, California (now World Oil Recycling), US Ecology – Beatty, Nevada, and World Oil Recycling (formerly DeMenno/Kerdoon) (World Oil Terminals, 2022a). Waste manifests indicated that 6,510 bbl was removed from the Ribost Terminal in 2021, and 1,781 bbl in 2020. In 2017 and 2018, 43 and 784 bbl, respectively, were removed (World Oil Terminals, 2022a).

The existing on-site wastewater treatment plant (WWTP) processes water from crude tank dewatering and stormwater collected at the truck loading rack. Figure 1-3 presents a flow diagram of the on-site WWTP. The 2021 wastewater discharge meter readings for the Project site indicate that 387 gallons of water per day (gpd) per tank for the three existing crude tanks are dewatered, as estimated from wastewater discharge flow meter readings on the existing tanks (World Oil Terminals, 2022a – Waste Water Discharge Meter Readings). Treated wastewater is piped into the three existing on-site 10,000-gallon wastewater treatment storage tanks and then discharged to the Los Angeles County Sanitation District (LACSD) in compliance with the facility’s discharge permit. Annual wastewater discharge volumes from 2017 to 2021 ranged from 422,908 to 609,514 gallons. From January to April 2022, wastewater discharge was reported at 105,069 gallons (World Oil Terminals, 2022a). The total amount of stormwater processed by the wastewater treatment plant is negligible, accounting for a small percentage of the total discharges (World Oil Terminals, 2022a). No stormwater is discharged into Long Beach Harbor Channel 2.

The WWTP contains a dissolved air flotation (DAF) system, which is a water treatment process that clarifies wastewater by the removal of suspended matter such as oil or solids. The DAF process generates solid waste classified as non-RCRA hazardous waste several times each year; the volume generated is dependent on crude quality and the amount of oil generated during tank dewatering (World Oil Terminals, 2022c). According to the 2018 waste manifest, oily water and DAF/API sludge were transported to DeMenno/Kerdoon (World Oil Terminals, 2022a). Additionally, carbon is used to control emissions from the WWTP (granulated carbon on site used as an air pollution control device). Spent carbon is replaced every 2 to 3 years at the facility (World Oil Terminals, 2022c). According to the 2020 waste manifest, spent carbon was transported to Evoqua Water Technologies, located in Parker, Arizona (World Oil Terminals, 2022a). Spent carbon is regenerated and re-used by Evoqua customers (World Oil Terminals, 2022c).

In 2020 and 2022, Ribost purchased and disposed granulated activated carbon (World Oil Terminals, 2023 – Material Throughputs Attachment). Ribost did not purchase or dispose of granulated activated carbon from 2017 through 2019 or in 2021 (World Oil Terminals, 2023 – Material Throughputs Attachment). At any one time, there are two 4,000-lb canisters of granulated carbon on site used as an air pollution control device (World Oil Terminals, 2023 – Material Throughputs Attachment). From 2017 through 2022, Ribost purchased WW-6000, an additive and coagulant (flocculant) for suspended solids removal. The WW-6000 is incorporated into solid waste from the WWTP (World Oil Terminals, 2023 – Material Throughputs Attachment). At any one time, there are between five to ten 5-gallon pails of WW-6000. From 2017 through 2022, Ribost purchased PL-135, a weak aqueous acid used to adjust pH (acidity) of wastewater (World Oil Terminals, 2023 – Material Throughputs Attachment). The PL-135 is added to wastewater prior to discharging to the LACSD sewer (World Oil Terminals, 2023 – Material Throughputs Attachment). There is one 55-gallon drum of PL-135 stored on site (World Oil Terminals, 2023 – Material Throughputs Attachment).

Approximately every 10 years, an NPDES permitted hydrotest is completed to check for leaks and structural integrity of an existing tank using potable water sourced from the Long Beach Water Department. Once conducted, the hydrotest discharge is tested for any contaminants and then

dechlorinated and discharged to LACSD in accordance with applicable regulations. No hydrotest water is discharged into Channel 2.

RCRA is the federal statute that regulates facilities that treat, store, or dispose of hazardous waste. The Ribost Terminal is not required to obtain an RCRA hazardous waste permit, as it meets certain conditions specified in RCRA regulations. World Oil meets the following exceptions which exclude the facility from being required to obtain an RCRA permit when handling hazardous waste: the facility is a transporter of hazardous waste, the facility generates hazardous waste and stores the waste for short periods of time before transporting the waste off-site, and the facility performs containment activities during an immediate response to an emergency. As such, Ribost Terminal does not have any hazardous waste permits (World Oil Terminals, 2022a). A Hazardous Materials Business Plan (HMBP) contains an inventory of hazardous materials at a facility, emergency response plans, employee training requirements regarding safety procedures in the event of a release or a threatened release of a hazardous material, and a site map showing evacuation staging areas, hazardous materials handling and storage areas, and emergency response equipment. The California Environmental Protection Agency (CalEPA) oversees the implementation of the HMBP program at the state level. The Certified Unified Program Agency (CUPA) is responsible for implementing the program and enforcement. A review of Ribost's 2022 HMBP site map indicates that there are four hazardous material handling and storage areas at the Project site. Figure 3.4-1 presents locations of the hazardous material handling and storage areas. In addition to a site map, the HMBP also includes an inventory of hazardous materials and wastes that is submitted in the California Environmental Reporting System (CERS) web-based database. The 2022 hazardous materials and wastes inventory listed the seven existing tanks.

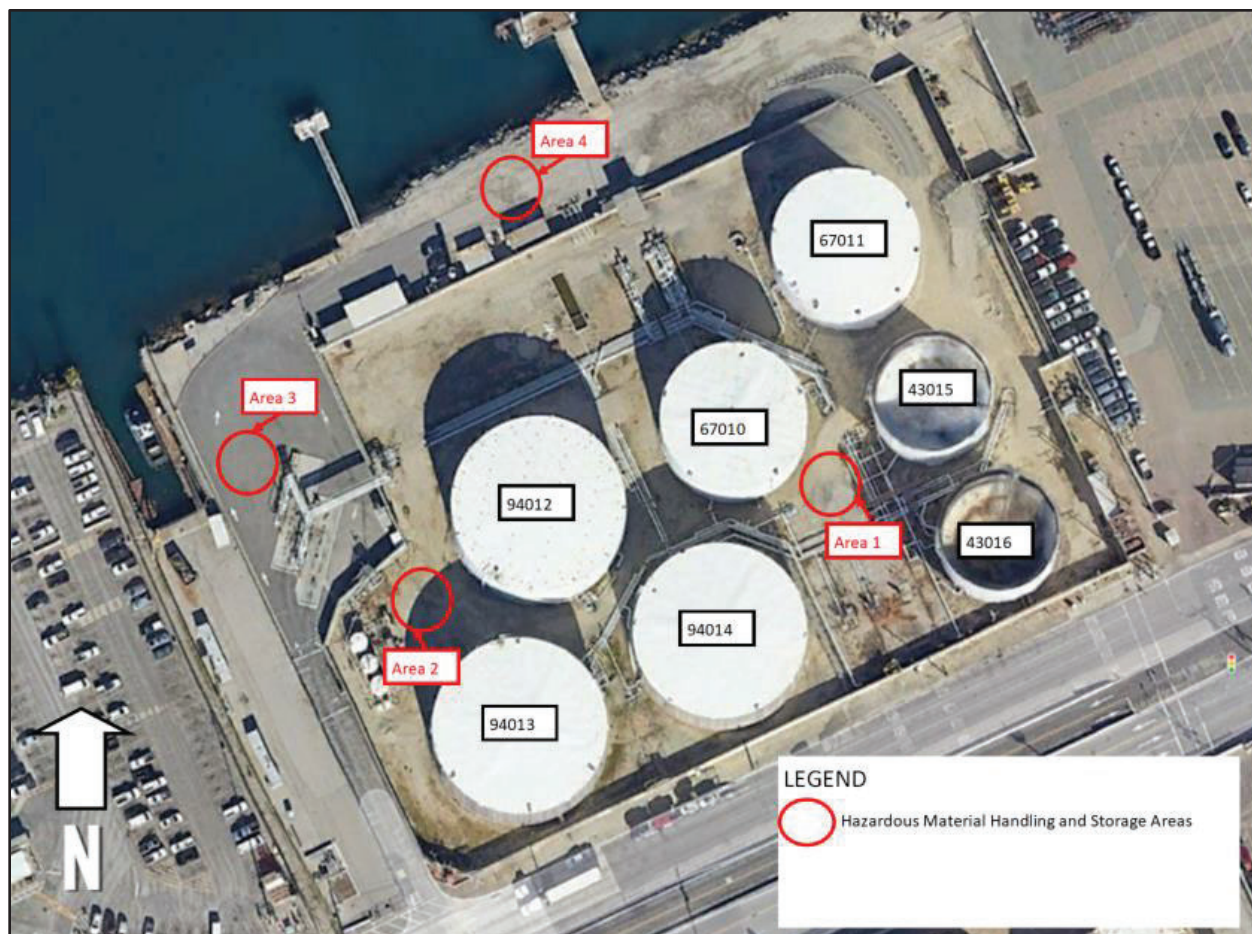
From 2017 through 2022, materials stored in the seven tanks has varied. Table 3.4-1 provides materials stored in the seven existing tanks from 2017 through 2022.

Table 3.4-1. Materials Stored in Existing Tanks from 2017 through 2022

Year	Tank 67010	Tank 67011	Tank 94012	Tank 94013	Tank 94014	Tank 43015	Tank 43016
2017	Fuel Oil	Crude Oil	Crude Oil LVGO	Fuel Oil	Fuel Oil	Crude Oil	Fuel Oil MDO
2018	Fuel Oil	Crude Oil	LVGO Fuel Oil	Fuel Oil	Fuel Oil	Crude Oil	MDO Crude Oil
2019	Fuel Oil	Crude Oil	Fuel Oil	Fuel Oil	Fuel Oil	Crude Oil	Crude Oil
2020	Fuel Oil	Crude Oil	Fuel Oil	Fuel Oil	Fuel Oil	Crude Oil	Crude Oil
2021	Fuel Oil	Crude Oil	Fuel Oil	Fuel Oil HSVGO LSFO	Fuel Oil	Crude Oil	Crude Oil
2022	Fuel Oil HSVGO LSVGO LSFO	Crude Oil	Fuel Oil	LSFO HSVGO LSVGO	Fuel Oil LSFO	Crude Oil	Crude Oil

Source: World Oil Terminals, 2023 – Material Throughputs Attachment.

Acronyms: HSVGO – High Sulfur Vacuum Gas Oil, LSFO – Low Sulfur Fuel Oil, LSVGO – Low Sulfur Vacuum Gas Oil, LVGO – Light Vacuum Gas Oil, MDO – Marine Distillate Oil.

Figure 3.4-1. Locations of Hazardous Materials Handling and Storage Areas

Source: World Oil Terminals, 2022a.

Also listed in the 2022 hazardous materials and wastes inventory were the following: one cylinder (304 cubic feet) of nitrogen gas, one 5-gallon drum of petroleum distillate, and one 55-gallon drum of sulfuric acid. Solid RCRA hazardous waste listed in the 2022 hazardous materials and wastes inventory included one ASTAST and one tank wagon containing 10,000 and 5,000 gallons of oily water and DAF/API sludge, respectively. Liquid Non-RCRA hazardous waste listed included one drum containing 55 pounds of oily debris (World Oil Terminals, 2022b).

According to the 2022 Spill Prevention, Control, and Countermeasure Plan (SPCC) plan, two horizontal ASTs are located on site, including one DAF sludge tank and one oil skimmer tank (World Oil Terminals, 2023 – SPCC Plan Attachment). The DAF sludge tank holds oily sludge and has a capacity of 12 bbl (World Oil Terminals, 2023 – SPCC Plan Attachment). The oil skimmer tank holds recovered oil and has a capacity of 3 bbl (World Oil Terminals, 2023 – SPCC Plan Attachment). One portable container, a 21,336-gallon baker tank is temporarily located on site and is used to store residual product or oil water/waste (World Oil Terminals, 2023 – SPCC Plan Attachment). A 97-gallon capacity vapor knock-out vessel which stores oily condensate is present at the Project site and associated with manufacturing equipment (World Oil Terminals, 2023 – SPCC Plan Attachment).

Additional waste generated at the facility from routine maintenance and operation include non-RCRA hazardous waste, and solid waste comprised of oily rags, absorbent, and oil debris (World

Oil Terminals, 2022a). From 2017 to 2022, the Ribost Terminal generated approximately 0.5 tons to 4.15 tons per year of non-RCRA hazardous and solid waste. Locations of disposal during 2017 to 2022 included Pacific Resource Recovery, US Ecology – Vernon, and Crosby & Overton (World Oil Terminals, 2022c).

Environmental Contamination

Based on review of publicly available historical images and maps, the Project site and surrounding area consisted of undeveloped marshes until at least 1902. However, by 1923, the Project site was developed with several structures and a railroad spur, located along the southern edge of Channel No. 2 of the POLB. The 1949 Sanborn Map indicated that several buildings were vacant and associated with a former lumber yard owned by Coast Lumber & Investment Company, several buildings were labeled as Long Beach Marine Repair Company. One oil well was located near the northwest corner of the Project site, and one oil well east (20 feet from the Project site) and one well west of the Project site (60-80 feet from the Project site). The 1969 Sanborn Map indicated that the Project site was part of Powerine Oil Company Tank Farm. Maps and photographs from 1972 show that all existing ASTs were visible within the Project site, and two additional ASTs (no longer existing) were located immediately east of the Project site.

Previous Environmental Studies

An “Additional Assessment Report” from Earth Tech in 1997 (Earth Tech, 1997) indicates that Powerine Oil Company installed nine ASTs (seven on site and two located immediately east of the Project site), piping, and associated facilities in 1964 and operated the facility until 1996 (World Oil Corporation purchased the Project site in 1983 and leased the land to Powerine through 1996). Volumes of the nine ASTs ranged from 43,000 to 94,000 barrels and stored petroleum products, predominately bunker fuel, crude oil, and marine diesel. The facility was described as consisting of a dock loading area, truck loading area, small laboratory, and tank farm; the facility received petroleum products from barges or trucks and distributed petroleum to refineries via underground pipelines. The two ASTs located immediately east of the Project site and operated by Powerine (mentioned above), were removed in 1995 under permit from the POLB. Soil at the Project site has known hydrocarbon contamination linked to prior use as an oil well drilling staging area.

In order to comply with LARWQCB directives stated in a letter dated February 6, 1996, Powerine Oil Company was required to conduct a site investigation. The 1997 Additional Assessment Report indicates that 12 soil borings were completed across the Project site, with 24 soil samples analyzed for total recoverable petroleum hydrocarbons (TRPH), total petroleum hydrocarbon (TPH), benzene, toluene, ethylbenzene, and xylene (BTEX), and/or methyl tert-butyl ether (MTBE). Samples collected from 6 inches to 7 feet below the ground surface (bgs) reported various concentrations of the analytes (i.e., the above-mentioned substances) with maximum TRPH concentration reported as 71,000 mg/kg, maximum total petroleum hydrocarbons (TPH)-gasoline range concentration reported as 0.46 mg/kg, and maximum benzene concentration reported as 0.35 mg/kg. Groundwater was reportedly encountered at approximately 5 to 6 feet bgs across the Project site. Three of the soil borings were developed as groundwater wells, and one groundwater sample was collected from each (3 total groundwater samples) and analyzed; BTEX and TPH concentrations were reported as non-detectable (below laboratory detection limit), while MTBE was detected in one sample with a reported concentration of 8.4 ug/L. The report conclusion summarized the laboratory results but did not present recommendations.

A subsequent report in 1998 titled “Former Powerine Long Beach Terminal”, from World Oil Company to the California Regional Water Quality Control Board, reported that subsequent groundwater measurements in December 1997 indicated that the groundwater gradient at the

Project site was to the southeast and ranged from 0.004 to 0.007 feet per feet. Groundwater samples from December 1997 reported detectable petroleum concentrations at one well; TPH-C28 and higher concentration reported of 170 ug/L, MTBE concentration of 20 ug/L, and BTEX as non-detectable. The report indicated that a subsequent well sampling event was planned for 1998; no data from the second sampling event was available.

Project Site Features

The existing tanks are surrounded by a containment wall that varies in height between 12.5 to 13 feet. 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 capacity of the largest tank (90,000 barrels) plus a 100-year storm event. See Figure 1-2 for the location of the containment wall. The loading area is surrounded by a berm that provides containment for the equivalent of one tank truck of crude oil at the facility (4,000 gallons) in the event of an accidental spill (Figure 3.4-2). To prevent oil from directly affecting soil or water quality, the berm contains a drainage device that collects oil into a processing area. The 2022 SPCC plan indicates that each oil container, equipment, and handling area contains drainage control, diversionary structures, and containment (World Oil Terminals, 2023 – SPCC Plan Attachment). As required by the SPCC rule, containment areas are impervious to oil or are shown to be sufficiently impervious to prevent a spill from reaching navigable water. In the 2022 SPCC plan, spill modeling was conducted to evaluate the impermeability of the Ribost Tank Farm earthen berm with fiber-reinforced plastic barrier (east side of site) for a scenario that addressed vertical flow followed by lateral migration in the subsurface based on spill transport modeling (World Oil Terminals, 2023 – SPCC Plan Attachment). The results demonstrated that Ribost has sufficient resources to clean up a release of oil prior to reaching a navigable water (World Oil Terminals, 2023 – SPCC Plan Attachment).

Figure 3.4-2. Loading Area with Berm



Soil Management Plan

Apex Companies, LLC prepared a Soil Management Plan (SMP) for Ribost to address ground disturbance that may generate and expose workers to soil containing contaminants. The SMP applies to excavations that may occur due to utility work, landscaping/planting, remedial excavation, site construction/grading, and potholing. The SMP indicates that, in some instances, a site-

specific or task-specific SMP will be required as directed by World Oil environmental manager (World Oil Terminals, 2023 – Soil Management Plan Attachment).

Historical Site Assessments

A review of the California Geologic Energy Management Division (CalGEM) Well Finder indicates that three plugged and abandoned oil wells, identified as 533-W (completed in 1940 and abandoned in 1986), M478E (completed in 1939 and abandoned in 1968), and M495E (completed in 1940 and abandoned in 1999), are mapped in the vicinity of the Ribost Terminal, approximately 30 to 62 feet to the northwest and outside of the existing containment wall. There are no active or abandoned oil wells within the Project construction area or staging area.

Environmental Data Resources, Inc. performed a search of federal, State, and local environmental databases for sites that use, store, and/or dispose of hazardous materials and for sites with known environmental contamination within a 1-mile radius of the Ribost Terminal (EDR, 2020). Additionally, environmental data and reports documenting environmental contamination and remediation, obtained from the Department of Toxic Substance Control (DTSC) Envirostor and the California State Water Resources Control Board (SWRCB) GeoTracker websites, were reviewed to assess the potential to encounter contaminated soil or groundwater during construction of the proposed Project. A brief summary of the relevant information obtained is listed below.

- Arco Marine Terminal 3 (Terminal 3) is listed on the GeoTracker website under the LARWQCB Cleanup Program Sites list as open and under site assessment; the site is located approximately 500 feet south of the proposed Project at 1400 West Pier C Street (SWRCB, 2023). Terminal 3 currently comprises six ASTs located within containment walls; the site has stored petroleum products since the 1920s, resulting in petroleum impacts to groundwater. A light, non-aqueous phase liquid (LNAPL) monitoring and recovery program was implemented at Terminal 3 in 1995 and is currently ongoing with no new or ongoing hydrocarbon contamination. The thickness of LNAPL at Terminal 3 has reportedly remained stable or decreased since 2006, is a low mobility LNAPL plume, and is confined to Terminal 3. The Terminal 3 groundwater monitoring well closest to the Project site is located approximately 490 feet south of the proposed Project, across Pier C Street. Groundwater is reported to flow in the north-northwest direction toward the proposed Project, and groundwater levels range from approximately 1.18 to 11.22 feet below the ground surface, and LNAPL is reportedly confined to Terminal 3. The area of the LNAPL plume within Terminal 3 is fairly small and confined to within the site; therefore, any residual contamination at this site should not affect the proposed Project.
- Arco Marine Terminal 2 (Terminal 2) is also listed on the GeoTracker website under the LARWQCB Cleanup Program Sites list as open and under site assessment; the site is located approximately 1,400 feet north of the proposed Project at 1300-1350 West Pier B Street (SWRCB, 2023). Terminal 2 comprises 27 ASTs located within containment walls and the site has stored petroleum products since the 1920s, resulting in petroleum impacts to groundwater. Delineation and removal of LNAPL at Terminal 2 occurred from 1995 through 2013, and monitoring and removal has been ongoing since 2013. The Terminal 2 groundwater monitoring well nearest the Project site is located approximately 530 feet north of the Project site, across Channel 2; groundwater flow direction is reportedly variable, but largely toward the northwest, north, and northeast with groundwater levels ranging from 1.54 to 19.64 feet below the ground surface. Implementation of the proposed Project would not interfere with the ongoing cleanup of Terminal 2.
- Proctor & Gamble Manufacturing Company leaking underground storage tank (LUST) is listed on the GeoTracker website under the LARWQCB Cleanup Program Sites as a closed site with

no further action (SWRCB, 2023). The site is located about 3,000 feet east of the Project site at 1601 West 7th Street and across the Los Angeles River Channel. A spill was reported at the site in June 1988 with potential contaminants of concern including gasoline in groundwater. The LARWQCB issued a no further action letter in 1996 that indicated investigation and remedial action had been completed. Based on these results no further action has been taken at this site. This site presents no potential to impact the proposed Project.

Emergency Contingency Plans

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. Ribost's existing emergency contingency plans include the following:

- **Emergency Response Action Plan.** The Emergency Response Action Plan is in place in the event of an accidental spill. The plan enables workers to respond to any potential release of hazardous materials and ensure quick and safe cleanup. Any hazardous materials spill or threatened release, regardless of quantity, is to be reported immediately to the appropriate agency per State and federal emergency response reporting guidelines.
- **Facility Response Plan.** The Facility Response Plan demonstrates a facility's preparedness to respond to a worst-case oil discharge.
- **Illness and Injury Prevention Plan.** The Illness and Injury Prevention Plan is a written workplace safety program. This plan addresses compliance, hazard identification, incident reporting and investigation, hazard mitigation, training, employee communication, program documentation, and record keeping.
- **Hazardous Materials Business Plan.** The Hazardous Materials Business Plan includes an inventory of hazardous materials handled, plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures. This plan aims to prevent or minimize harm to public health and safety and the environment from a release or threatened release of a hazardous material. This is accomplished by providing emergency responders with the necessary information to effectively protect the public.
- **Spill Prevention Control and Countermeasure Plan.** The Spill Prevention Control and Countermeasure Plan is in place in the event of a discharge of oil from a bulk storage container into navigable waters, such as nearby Channel 2, or adjoining shorelines. The Spill Prevention Control and Countermeasure Plan helps prevent an oil spill, as well as control a spill should one occur.

Fire and Emergency Response

Engineering controls at the Ribost Terminal serve to prevent hazardous conditions such as a fire. The Ribost Terminal contains portable fire extinguishing equipment and a deluge fire suppression system. The existing tanks are equipped with a foam fire suppression system, which allows firefighters to pump aqueous film forming foam into/onto a tank during a fire.

There is no history of fires at the Ribost Terminal (World Oil Terminals, 2021b). In the event of a small fire, the operators are trained to halt all ongoing operations, close isolation valves to the safest extent possible, and use available on-site portable fire extinguishing equipment. In the event of a large fire, operators would notify emergency response agencies, halt all ongoing operations, close isolation valves to the safest extent possible, and assist emergency responders upon

arrival. The Long Beach Fire Department would be responsible for coordinating with other responding agencies to determine if a shelter-in-place or evacuation order is necessary, as well as to notify the public. There are two Long Beach Fire Department (LBFD) stations located within 2 miles of the Ribost Terminal, with an estimated response time of under 10 minutes. The Project site is currently served by LBFD Fire Station No. 20 located at 331 Pier D Avenue in Long Beach, approximately one mile southwest of the Project site.

The POLB performed a hazard assessment for the existing facility as part of the POLB RMP Guideline Analysis World Oil's Ribost Terminal (Quest, 2018). 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 potential impact associated with a marine diesel fuel fire extends approximately 150 feet outside the Project site (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).

Emergency Services/Plans

The Ribost Terminal is contained entirely within the Long Beach Harbor District, and is serviced by LBFD, the Long Beach Police Department, and the Port Harbor Patrol for fire protection, police protection, and emergency services. As described above, Ribost's Emergency Contingency Plans include emergency response protocols and evacuation systems in place in the event of an accidental spill or workplace injury.

Schools

There are no existing or planned schools located within a quarter mile of the Ribost Terminal. The closest school to the proposed Project is Edison Elementary School, located just over 0.5 mile east of the Project site. The second closest school is Cesar Chavez Elementary school, which is located approximately 0.6 mile to the east.

Aviation Hazards

There are no public or private airports or airstrips within 2 miles of the Project site. The closest airport is the Long Beach Municipal Airport which is located over 4 miles northeast of the Project site at its closest point.

Wildland Fire

The Ribost Terminal is not located in a wildland fire hazard area. The POLB and Project area are listed as "not burnable" on the US 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 Project site is not within a High Fire Risk Area (CAL FIRE, 2022).

3.4.2 Regulatory Setting

3.4.2.1 Federal

US Environmental Protection Agency (USEPA)

The USEPA was established in 1970 in response to the growing public demand for cleaner water, air, and land. The USEPA was established to consolidate in one agency a variety of federal research, monitoring, standard-setting, and enforcement activities to ensure environmental protection. The USEPA's mission is to protect human health and to safeguard the natural environment — air, water, and land — upon which life depends. The USEPA works to develop and enforce regulations that implement environmental laws enacted by Congress, is responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and tribes the responsibility for issuing permits and for monitoring and enforcing compliance. Where national standards are not met, the USEPA can issue sanctions and take other steps to assist the states and tribes in reaching the desired levels of environmental quality.

The Federal Toxic Substances Control Act (TSCA) (1976) and the Resource Conservation and Recovery Act (RCRA) of 1976 established a program administered by the USEPA for regulating the generation, transportation, treatment, storage, and disposal of hazardous waste. The RCRA of 1976 was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the “cradle to grave” system of regulating hazardous wastes.

Other federal regulations overseen by the USEPA relevant to hazardous materials and environmental contamination include US Code Title 42, Chapter 103 (CERCLA or Superfund), Title 40 CFR Chapter I, Subchapter D – Water Programs and Subchapter I – Solid Wastes. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites, provides for liability of persons responsible for releases of hazardous waste at these sites, and establishes a trust fund to provide for cleanup when a responsible party cannot be identified. Title 40 CFR Chapter I, Subchapter D Parts 116 and 117 designate hazardous substances under the Federal Water Pollution Control Act and set forth a determination of the reportable quantity for each substance that is designated as hazardous in Title 40 CFR Part 116. Title 40 CFR 117 applies to quantities of designated substances equal to or greater than the reportable quantities that may be discharged into waters of the United States.

3.4.2.2 State

California Environmental Protection Agency (Cal-EPA)

Cal-EPA was created in 1991. It centralized California's environmental authority, consolidating the Air Resources Board, SWRCB, Department of Resources Recycling and Recovery (CalRecycle) (formerly Integrated Waste Management Board), DTSC, Office of Environmental Health Hazard Assessment (OEHHA), and Department of Pesticide Regulation under one agency. These agencies were placed within the Cal-EPA “umbrella” to create a cabinet-level advocate for the protection of human health and the environment and to ensure the coordinated deployment of State resources. Its mission is to restore, protect, and enhance the environment, and to ensure public health, environmental quality, and economic vitality. The DTSC and SWRCB regulate hazardous materials and hazardous waste that have the potential to cause soil, water, and groundwater contamination at the proposed Project; their missions are summarized below.

- **Department of Toxic Substances Control.** The DTSC's mission is to restore, protect, and enhance the environment, and to ensure public health, environmental quality, and economic

vitality by regulating hazardous waste, conducting and overseeing cleanups, and developing and promoting pollution prevention.

- **State Water Resources Control Board.** The SWRCB's mission is to preserve and enhance the quality of California's water resources and ensure their proper allocation and efficient use for the benefit of present and future generations. The SWRCB issues permits for and oversees discharges of groundwater to the land and surface waters that may result in contamination.

California Occupational Safety and Health Administration (Cal-OSHA)

Cal-OSHA is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal-OSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (Title 8 CCR Sections 337-340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

Title 8 CCR, Chapter 4, Subchapter 7, Group 14 and 15, and Group 16, Articles 107, 109, and 110 sets forth the Permissible Exposure Limit, the exposure, inhalation, or dermal permissible exposure limit for numerous chemicals. Included are chemicals, mixture of chemicals, or pathogens for which there is statistically significant evidence, based on at least one study conducted in accordance with established scientific principles, that acute or chronic health effects may occur in exposed employees.

It is the responsibility of Cal-OSHA to ensure compliance with the provisions of the Hazard Communication Standard. California Labor Code Sections 6360 through 6399.7 and Title 8 CCR Sections 5191 and 5194 are intended to ensure that both employers and employees understand how to identify potentially hazardous substances in the workplace, understand the health hazards associated with these chemicals, and follow safe work practices. This is accomplished by preparation of a Hazard Communication Plan.

California Health and Safety Code and Code of Regulations

In 1993, the State (Cal-EPA) was mandated by Senate Bill 1082 (Health and Safety Code Chapter 6.11) to establish a "unified hazardous waste and hazardous materials management" regulatory program (Unified Program). The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of the following six environmental and emergency response programs: Hazardous Materials Release Response Plans and Inventories (Hazardous Material Business Plan [HMBP]), California Accidental Release Prevention (CalARP) Program, Underground Storage Tank Program, Above-ground Petroleum Storage Act, Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs, and California Uniform Fire Code: Hazardous Material Management Plans and Hazardous Material Inventory Statements. The Unified Program is implemented at the local level by various local government agencies certified by the Secretary of Cal-EPA. These agencies, known as Certified Unified Program Agencies (CUPA) implement all of the Unified Program elements and serve as a local contact for area businesses. LBFD and the Long Beach Health Department share oversight of the Long Beach CUPA.

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Act is a State law that provides a comprehensive water quality management system for the protection of California waters. The act designates the SWRCB as

the ultimate authority over State water rights and water quality policy, and established nine Regional Water Quality Control Boards (RWQCBs) to oversee water quality on a day-to-day basis at the local and regional levels. The RWQCBs have the responsibility of granting National Pollutant Discharge Elimination System (NPDES) permits and waste discharge requirements for storm water runoff from construction sites.

3.4.2.3 Local

POLB Risk Management Program

The Port of Los Angeles/Port of Long Beach Risk Management Program (RMP) includes the Port of Long Beach Risk Management Plan (POLB, 1990). The RMP is primarily concerned with the transfer, handling, storage, and transport of hazardous liquid bulk cargoes (POLB, 1990). The RMP includes risk management policies, criteria methodology, and implementation guidelines. The RMP is broken into three major parts: identification of hazards, hazardous materials and vulnerable resource inventory, risk management and evaluation, and implementation guidelines for risk management policies and regulations. Ultimately, the RMP is a means for judiciously managing, controlling, and directing POLB activities and proposed projects to prevent, insure, protect against, and minimize the risks of loss or significant adverse impacts due to potential hazards within the POLB.

3.4.3 Significance Criteria

Considering the Port-specific and Project-specific impact issues, the following criteria are used in this EIR to determine the significance of proposed Project hazards and hazardous material impacts. The Project would have a significant impact if:

HAZ-1: Construction creates a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

HAZ-2: Construction creates 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.

HAZ-3: Operation creates a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

HAZ-4: Operation creates 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.

3.4.4 Assessment Methodology

This analysis describes the existing and proposed hazardous material activities (hazardous material handling, storage, disposal, and excavation of potentially contaminated soil and groundwater) associated with the Project and estimates the hazard footprint for each activity (the area these activities could affect or areas of contamination that could affect the Project). Site location, Project design, construction technologies, operational regulations, and emergency response plans are among the considerations for reducing potential hazard impacts.

Existing and past land use activities are commonly used as indicators of sites or areas where hazardous material storage and use may have occurred or where potential environmental contamination may exist. For example, many historic and current industrial sites have soil and/or

groundwater contaminated by hazardous substances. Hazardous materials sources include leaking underground tanks in commercial and industrial areas, leaking pipelines, contaminated surface runoff from polluted sites, and contaminated groundwater plumes.

3.4.5 Impacts and Mitigation Measures

The primary Project impacts involving hazards or hazardous materials would be related to the potential for people to be exposed to existing subsurface contamination in the soil and/or groundwater or an accidental spill or release of hazardous substances. This may occur through activities such as excavation and handling of contaminated soil and/or groundwater. Hazardous materials in the construction area may require special handling, as toxic substances and hazardous waste can create an exposure risk to workers and the general public due to spills or upset or from excavation and transport.

3.4.5.1 Proposed Project

Impact HAZ-1: Construction creates a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (Less Than Significant)

Construction Impacts

The proposed Project would involve limited transport, storage, use, and disposal of hazardous materials during construction. No acutely hazardous materials would be stored or used at the Project site during construction of the proposed Project. Hazardous materials such as vehicle fuels, oils, hydraulic fluid, and other vehicle maintenance fluids would be used and stored in construction yards or in the on-site staging area. When not in use, these hazardous materials would be stored in approved containers and in a proper manner to prevent drainage or accidents. The use of hazardous materials during construction would not require frequent transportation, nor the transportation of large amounts of hazardous materials. Normal maintenance and refueling of construction equipment would be conducted both offsite and at the on-site staging yard. Gasoline, diesel fuel, oils, hydraulic fluid, lubricants, paints, solvents, adhesives, and cleaning chemicals used in construction activities, equipment, and vehicles could be released during construction as a result of accidents and/or leaking equipment or vehicles. 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.

Construction of the new tanks would take place within the existing containment wall (see Figure 1-2), which would limit effects to soil and water quality. The containment wall was designed to hold the capacity of the largest tank (90,000 barrels) plus a 100-year storm event. The construction staging area is outside the containment wall and adjacent to Channel 2. Construction within the containment wall and the equipment and material storage in the construction staging area will be included in the existing facility SWPPP and will include BMPs to properly store chemicals, protect the ground surface, and implement quick cleanup of spills.

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 would be disposed of in accordance with applicable regional, State, and federal regulatory requirements.

Following construction of the two new tanks, an NPDES permitted hydrotest would be completed to check for leaks and structural integrity. A maximum of 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 and discharged to LACSD in accordance with applicable regulations.

If not properly managed, spills and leaks of hazardous materials during construction activities could result in soil or groundwater contamination. An accidental release of a potentially harmful or hazardous material onto asphalt or pavement covered roads would not directly affect water quality. However, accidental spills or releases of hazardous materials onto unpaved surfaces, or on the banks of Channel 2, could indirectly adversely affect water quality through runoff during a subsequent storm event, when the spilled material would be washed into a stream or waterbody. Accidental spills or releases of hazardous materials could also indirectly affect 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.

While construction activities would disturb less than one acre and would not require implementation of a Construction SWPPP, Ribost would commit to implementing its existing operational SWPPP during construction, with modifications to address construction impacts as necessary (World Oil Terminals, 2021a). The SWPPP provides protective measures and notification and cleanup requirements for incidental spills or other potential releases of hazardous materials. The SWPPP also provides 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 existing facility 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.

Ground disturbing activities include grading and excavation for construction and installation of the new tank foundations. As discussed in the Environmental Contamination section of Section 3.4.1.2, *Hazards and Hazardous Materials Setting*, there is the potential for soil and groundwater contamination to exist beneath and adjacent to areas of ground disturbance during grading and excavation of the new tank foundations. Construction personnel could encounter contamination during ground disturbance activities. The unanticipated discovery of contaminated soil and/or groundwater could result in potential human health and environmental impacts. If contaminated soil were encountered during Project construction, Ribost's SMP contains protocols for soil sampling and analysis prior to disposal.

Construction of the proposed Project would include excavation activities for the foundations of the new tanks, which may require dewatering due to the presence of shallow groundwater on site. There is a potential to encounter contaminated groundwater during construction. The 2018 Project geotechnical update report states that groundwater was encountered at depths ranging from 5 to 6 feet below ground surface (Albus-Keefe, 2018). During construction of the deep foundation elements, temporary dewatering would generate small volumes of water that would be contained in on-site water tanks and tested for contamination to determine the appropriate method of disposal; the contaminated groundwater would be disposed of in accordance with applicable regional, State, and federal regulatory requirements.

Hazardous conditions, such as fire, have the potential to occur at the Project site during construction; however, engineering controls on site serve as prevention of such incidents. The Project site contains fire extinguishing equipment and a deluge fire suppression system. The existing tanks are equipped with a foam fire suppression system, which could be used if a fire occurred during Project construction. 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 LBFD. 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 LBFD Fire Station No. 20 is less than 10 minutes.

Existing emergency contingency plans, including the Emergency Response Action Plan, Facility Response Plan, Illness and Injury Prevention Plan, Hazardous Materials Business Plan, and Spill Prevention Control and Countermeasure Plan would continue to be in place, although these would not be updated until after the completion of Project construction. Although updates to all plans would be required, the proposed new tanks would store materials that the facility is already handling on a day-to-day basis. The response plans require minor updates/changes to incorporate the new storage tanks to denote the addition of the new tanks including location, volume, and contents. As discussed in the Emergency Contingency Plans section in Section 3.4.1.2, *Hazards and Hazardous Materials Setting*, these plans include precautions to minimize potential hazards and actions to take in the event of an emergency. Should there be a release of hazardous materials resulting from an accident during Project construction, the established emergency and hazardous materials responses and procedures would be immediately implemented. During Project construction, Ribost would continue to conduct annual trainings and quarterly/annual emergency drills, have evacuation plans, and shutdown procedures.

Excavations for the new tank foundations would be conducted in accordance with World Oil Corp.'s "Soil Management Plan". During excavation, soil would be monitored for the presence of hydrocarbons using visual and olfactory observations (sight and smell), as well as using a handheld monitor for detection of hydrocarbon vapors as required by South Coast Air Quality Management District (SCAQMD) regulations. All excavated soil would be set aside for sampling and analysis prior to disposal. Any soil suspected of contamination or observed to be contaminated would be stockpiled separately from the main stockpile. All excavated soil would be disposed of in accordance with Federal and California waste disposal regulations after being analyzed and properly profiled. Clean fill would be imported and compacted pursuant to the tank foundation construction plans.

Compliance with applicable laws and regulations governing the transport, use, or disposal of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner and would minimize the potential for impacts. Any ground disturbance for the new tanks would be conducted in accordance with World Oil Corp.'s "Soil Management Plan". Impacts would be less than significant.

CEQA Impact Determination

The proposed Project would have a less-than-significant impact relating to the routine transport, use, or disposal of hazardous materials.

Mitigation Measures

No mitigation would be required.

Impact HAZ-2: Construction creates 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)

Construction Impacts

Spills of hazardous materials could occur due to improper handling and/or storage practices during construction activities and potentially cause soil or groundwater contamination, or contamination of the adjacent Channel 2. No acutely hazardous materials would be stored or used at the Project site as part of construction of the proposed Project. As discussed above, the construction of the proposed Project would involve the use of limited hazardous materials such as vehicle

fuels, oils, hydraulic fluid, lubricants, paints, solvents, adhesives, and cleaning chemicals, and would potentially generate limited quantities of hazardous waste during construction and demolition of existing facilities (oil/water separator sump). All refueling, maintenance, and storage of fuels and other hazardous materials would be in accordance with the existing facility SWPPP, applicable plans, and federal and State regulations. The transport and disposal of hazardous waste would be per State or federal regulations.

If not properly managed, an accidental release of hazardous materials during construction could result in soil or groundwater contamination either directly or indirectly. As described above, excavations for the new tank foundations would be conducted in accordance with Ribost's SMP. Construction of the new tanks would take place within the containment wall, which would prevent any direct effects to soil or water quality. The containment wall was designed to hold the capacity of the largest tank (90,000 barrels) plus a 100-year storm event. The construction staging area is outside the containment wall and adjacent to Channel 2. Construction staging areas will be included in the existing facility SWPPP and include BMPs to properly store chemicals, protect the ground surface, and implement quick cleanup of spills.

As discussed in HAZ-1, existing emergency contingency plans would continue to be in place during construction, although these would not be updated until after the completion of Project construction. Compliance with applicable laws and regulations governing the transport, use, or disposal of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner and would minimize the potential for impacts related to accidental conditions. Implementation of the existing facility SWPPP and the reliance on existing emergency contingency plans would reduce the potential impact from upset or accidental spills of hazardous materials during construction to less than significant.

CEQA Impact Determination

The proposed Project would have a less-than-significant impact relating to the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Mitigation Measures

No mitigation would be required.

Impact HAZ-3: Operation creates a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (Less Than Significant)

Operation Impacts

Operation and maintenance activities at the Project site require routine transport, use, and disposal of hazardous materials, which could result in a potentially significant hazard to the public or environment, if not properly managed.

The majority of operation and maintenance activities take place within the containment wall that surrounds the existing tanks. The containment wall was designed to hold the capacity of the largest tank (90,000 barrels) plus a 100-year storm event. The new tanks would be constructed within the containment wall. The truck loading rack is surrounded by a berm that provides containment for the equivalent of one tank truck of crude oil (approximately 6,700 gallons) at the facility in the event of an accidental spill. The berm contains a drainage device which collects oil into a processing area, which prevents any direct effects to soil or water quality.

Ribost's existing HMBP would be updated following construction of the new tanks. Updates to the inventory of hazardous materials at the facility, emergency response plans, employee training requirements, and site map showing evacuation and staging areas would be made to the HMBP.

Operation and maintenance activities for the new tanks would be the same as for the existing tanks. Activities include cleaning sludge from tank bottoms, dewatering, and routine visual inspections. Ribost would update all existing operation/maintenance procedures for the proposed Project (see Section 1.5.2, *Project Operation and Maintenance*) to reflect the additional tanks. Additionally, Ribost would continue to conduct annual training and quarterly/annual emergency drills, have evacuation plans, and shutdown procedures. The Ribost Terminal is not required to obtain a RCRA hazardous waste permit, as it meets certain conditions specified in RCRA regulations. As such, Ribost Terminal does not have any hazardous waste permits (World Oil Terminals, 2022a).

Approximately every 10 years the new tanks would be cleaned of sludge. The combined sludge tank bottom quantities for the new tanks are estimated to be approximately 1,500-bbl every 10 years, which would be disposed of at a permitted TSDF, equivalent to approximately 7,500 bbl over the course of the Project's 50-year operational life. Potential permitted TSDFs that would accept waste from the proposed Project include Patriot Waste Water, LLC, Crosby & Overton, Inc.; DeMenno/Kerdoon, US Ecology, Beatty, Nevada; and World Oil Recycling (see Section 3.4.1.2, *Hazards and Hazardous Materials Setting*). The 1,500 bbl of sludge tank bottom waste that is generated every 10 years accounts for approximately 4.5 percent of the overall capacity of the US Ecology Vernon facility, and other facilities exist that could also accept this material. This amount of sludge tank bottom is a small percentage of the overall capacity of the nearest US Ecology waste facility. Sludge tank bottom waste is liquid non-hazardous waste, which is regulated by the State of California (non-RCRA hazardous waste). The two new tanks would add two additional tank cleanings generating sludge tank bottom waste.

The on-site WWTP processes water from tank dewatering. Water generated during tank dewatering would be initially treated at the on-site WWTP and then discharged to the LACSD sanitary sewer system in compliance with existing water quality standards. The 2021 wastewater discharge meter readings for the Project site indicate 387 gallons of water per tank per day are dewatered (World Oil Terminals, 2022a – Waste Water Discharge Meter Readings). Therefore, it is anticipated that a smaller amount would be dewatered (approximately 200 gpd per tank) from the two proposed smaller 25,000-bbl tanks per day.

The WWTP contains a DAF system that generates solid waste several times per year. Additional waste generated by the WWTP includes carbon that is used to control emissions. Dewatering volumes, DAF waste, and carbon waste are not expected to increase as they are a function of the crude oil throughput which is not anticipated to increase (World Oil Terminals, 2022c).

Hazardous conditions, such as fire, have the potential to occur at the Project site during operations; however, engineering controls on site serve as prevention of such incidents. 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 LBFD. 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 LBFD Fire Station No. 20 is less than 10 minutes.

All of the facility's existing emergency contingency plans, including the Emergency Response Action Plan, Facility Response Plan, Illness and Injury Prevention Plan, Hazardous Materials

Business Plan, and Spill Prevention Control and Countermeasure Plan would incorporate necessary modifications resulting from Project construction. As discussed in the Emergency Contingency Plans section in Section 3.4.1.2, *Hazards and Hazardous Materials Setting*, these plans include precautions to minimize potential hazards and actions to take in the event of an emergency. Should there be a release of hazardous materials resulting from an accident during Project operation, established emergency and hazardous materials responses and procedures would be immediately implemented.

Compliance with applicable laws and regulations governing the transport, use, or disposal of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner and would minimize the potential for impacts. Operation of the new tanks would be in accordance with the existing facility SWPPP. All emergency contingency plans would be updated to incorporate necessary modifications resulting from the addition of the two new tanks. Impacts would be less than significant.

CEQA Impact Determination

The proposed Project would have a less-than-significant impact relating to the routine transport, use, or disposal of hazardous materials.

Mitigation Measures

No mitigation would be required.

Impact HAZ-4: Operation creates 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)

Operation Impacts

Operation and maintenance activities at the Project site require routine transport, use, and disposal of hazardous materials, which could result in reasonably foreseeable accident conditions involving the release of hazardous materials into the environment, if not properly managed. Spills of hazardous materials could occur due to improper handling and/or storage practices during operation and maintenance activities and potentially cause soil or groundwater contamination of the Project site or the adjacent Channel 2. In the event of an accidental spill, the existing containment wall that surrounds the existing tanks and would surround the new tanks, and a berm that surrounds the truck loading rack would prevent any direct effects to soil or water quality (See Figure 1-2).

As discussed above, operation of the new tanks would be the same as for the existing tanks. Approximately every 10 years the new tanks would be cleaned of sludge. The combined sludge tank bottom quantities for the new tanks are estimated to be approximately 1,500-bbl every 10 years, which would be disposed of at a permitted TSDF. Sludge tank bottom waste is liquid is regulated as non-RCRA hazardous waste by the State of California. The two new tanks would add two additional tank cleanings generating sludge tank bottom waste.

Water generated during tank dewatering would be initially treated at the on-site WWTP and then discharged to the LACSD sanitary sewer system in compliance with existing water quality standards. The 2021 wastewater discharge meter readings for the Project site indicate 387 gallons of water per tank per day are dewatered (World Oil Terminals, 2022a – Waste Water Discharge Meter Readings). Therefore, it is anticipated that a smaller amount would be dewatered (approximately 200 gpd per tank) from the two proposed smaller 25,000-bbl tanks per day.

The WWTP contains a DAF system that generates solid waste several times per year. Additional waste generated by the WWTP includes carbon that is used to control emissions. Dewatering volumes, DAF waste, and carbon waste are not expected to increase as they are a function of the crude oil throughput which is not anticipated to increase (World Oil Terminals, 2022c).

Operation of the new tanks would be in accordance with the existing facility SWPPP. The SWPPP includes measures to reduce the potential for spills to occur by providing protocols for storage, transport, and handling of hazardous materials on site. All existing emergency contingency plans would be updated to include necessary modifications resulting from Project implementation. As discussed in the Emergency Contingency Plans section in Section 3.4.1.2, *Hazards and Hazardous Materials Setting*, these plans include precautions to minimize potential hazards and actions to take in the event of an emergency. Should there be a release of hazardous materials resulting from an accident during Project operation, established emergency and hazardous materials responses and procedures would be immediately implemented. In the event of a fire, engineering controls on site serve as prevention.

The routine transport, use, or disposal of construction-related hazardous materials would be required to conform to existing laws and regulations. Compliance with applicable laws and regulations would ensure that all potentially hazardous materials are used and handled in the appropriate manner, minimizing the potential for impacts. Implementation of the existing facility SWPPP and updated emergency contingency plans would reduce the potential impact from upset or accidental spills of hazardous materials during operation to less than significant.

CEQA Impact Determination

The proposed Project would have a less-than-significant impact relating to the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Mitigation Measures

No mitigation would be required.

3.4.5.2 Alternative 1 –Single Tank Alternative

The major difference in this alternative and the proposed Project is that one less tank would be constructed which would reduce the construction and operation activities required for the Project. As such, this alternative could include a reduction in impacts related to hazards and hazardous materials. However, as with the proposed Project, construction and operation of the Single Tank Alternative would involve limited transport, storage, use, and disposal of hazardous materials that could result in the potential release of hazardous materials into the environment.

Impact HAZ-1: Construction creates a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (Less Than Significant)

Construction Impacts

Construction requirements are noticeably less than those required for the proposed Project as one less tank would be constructed; however, construction would still involve limited transport, storage, use, and disposal of hazardous materials. Therefore, the routine transport, storage, use, or disposal that may create a significant hazard to the public or the environment would be similar to the proposed Project.

CEQA Impact Determination

The Single Tank Alternative, like the proposed Project, would have a less-than-significant impact related to the routine transport, storage, use, or disposal of hazardous materials.

Mitigation Measures

No mitigation would be required.

Impact HAZ-2: Construction creates 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)

Construction Impacts

Construction requirements are less than those required for the proposed Project as one less tank would be constructed; however, construction would still involve hazardous materials that, if not properly managed, could be accidentally released. Therefore, the potential for construction to create a significant hazard through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment would be similar compared to the proposed Project. As with the proposed Project, implementation of the existing SWPPP and the reliance on existing contingency plans, would ensure that the potential impact from upset or accidental spills of hazardous materials during construction would be reduced.

CEQA Impact Determination

The Single Tank Alternative, like the proposed Project, would have a less than significant impact related to the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Mitigation Measures

No mitigation would be required.

Impact HAZ-3: Operation creates a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (Less Than Significant)

Operation Impacts

Operation activities would be less than those required for the proposed Project as one less tank would be operated and maintained, specifically one tank opposed to two would require activities including cleaning sludge from tank bottoms, dewatering, and inspections. However, operation would still involve hazardous materials that, if not properly managed, could create a significant hazard to the public or the environment. Therefore, related impacts would be reduced slightly compared to the proposed Project. As with the proposed Project, implementation of the existing SWPPP and the reliance on existing contingency plans, would ensure that the potential impact from upset or accidental spills of hazardous materials during construction would reduce impacts.

CEQA Impact Determination

The Single Tank Alternative, like the proposed Project, would have a less-than-significant impact on the potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Mitigation Measures

No mitigation would be required.

Impact HAZ-4: Operation creates 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)

Operation Impacts

Operation activities would be less than those required for the proposed Project as one less tank would be operated and maintained. However, operation would still involve hazardous materials that, if not properly managed, could result in reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment that could create a significant hazard to the public or environment. Therefore, related impacts would be reduced slightly compared to the proposed Project. As with the proposed Project, implementation of the existing SWPPP and updated contingency plans and adherence to existing laws, regulations, and established emergency and hazardous materials responses and procedures, would ensure the potential impact from upset or accidental spills of hazardous materials during construction would be reduced.

CEQA Impact Determination

The Single Tank Alternative, like the proposed Project, would have a less-than-significant impact on the potential to 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.

Mitigation Measures

No mitigation would be required.

3.4.5.3 Alternative 2 – No Project Alternative

Impact HAZ-1: Construction creates a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (No Impact)

Construction Impacts

Under the No Project Alternative, the proposed Project would not be constructed, so the impacts associated with construction of the Project would not occur.

CEQA Impact Determination

Under the No Project Alternative, no construction would occur. There would be no impact related to the routine transport, use, or disposal of hazardous materials during construction under the No Project Alternative.

Mitigation Measures

No mitigation would be required.

Impact HAZ-2: Construction creates 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. (No Impact)

Construction Impacts

Under the No Project Alternative, the proposed Project would not be constructed, so the impacts associated with construction of the Project would not occur.

CEQA Impact Determination

Under the No Project Alternative, no construction would occur. There would be no impact related to the accidental spill or release of hazardous materials under the No Project Alternative.

Mitigation Measures

No mitigation would be required.

Impact HAZ-3: Operation creates a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (No Impact)

Operation Impacts

Under the No Project Alternative, the existing tanks would continue to operate the same as existing conditions. No impacts would occur from continued operation of the existing tanks.

CEQA Impact Determination

Under the No Project Alternative, the proposed Project would not be implemented, and impacts related to the routine transport, use, or disposal of hazardous materials during operations would not occur.

Mitigation Measures

No mitigation would be required.

Impact HAZ-4: Operation creates 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. (No Impact)

Operation Impacts

Under the No Project Alternative, the existing tanks would continue to operate the same as existing conditions. No impacts would occur from continued operation of the existing tanks.

CEQA Impact Determination

Under the No Project Alternative, the proposed Project would not be implemented, and impacts related to the accidental spill or release of hazardous materials during operations would not occur.

Mitigation Measures

No mitigation would be required.

3.4.6 Cumulative Impacts

The following discussion evaluates whether hazards and hazardous materials impacts of the proposed Project would be cumulatively significant within the context of impacts caused by other past, present, or reasonably foreseeable future projects in the geographic location of the Project.

3.4.6.1. Geographic Extent/Context

The geographic extent for the analysis of cumulative impacts related to hazardous materials is limited to the Project site, consisting of the construction yard and staging area, and the immediate vicinity surrounding the Project site, which includes the adjacent harbor waters and land areas, and roadways adjacent to and in the vicinity of the proposed Project. These geographic limits are appropriate to consider the potential cumulative impacts, as the current and past land uses on the Project site and those in the immediate vicinity of the Project site are the most important factors in evaluating the potential for environmental contamination to occur or have occurred at

the Project site. Impacts would have the potential to occur during construction and would be limited to the areas where and times when concurrent construction is occurring.

3.4.6.2. Existing Cumulative Condition

As discussed in Section 3.4.1, *Environmental Setting*, hazardous materials such as vehicle fuels, oils, hydraulic fluid, and other vehicle and equipment maintenance fluids would be used and stored in the construction yard and on-site staging area. As discussed in the Environmental Contamination discussion in Section 3.4.1.2, *Hazards and Hazardous Materials Setting*, soil and groundwater contamination is present at the Project site. Additionally, several known contaminated sites are located nearby and adjacent to the Project. These sites have undergone or are undergoing remediation in accordance with regulatory agency standards. Construction activities associated with the Project and other current and reasonably foreseeable projects, either individually or collectively, could result in hazardous materials being used or encountered. Hazardous materials are potentially located in areas adjacent to the Project and throughout the POLB. However, the Project would comply with all applicable standards, regulations, requirements, and mitigation measures to reduce potential impacts from hazards and hazardous materials. It is anticipated that the listed current and reasonably foreseeable projects would be implemented in a similar manner.

3.4.6.3. Reasonably Foreseeable Projects

Table 2-1 provides a listing of current and reasonably foreseeable projects, including other proposed or approved projects in the geographic area, such as POLB- or POLA-authorized actions or activities, proposed or approved projects within areas under the jurisdiction of the POLB, POLA, County of Los Angeles or surrounding cities, and other actions or activities that the POLB consider reasonably foreseeable. Most of these projects have either undergone independent environmental review pursuant to CEQA and/or the National Environmental Policy Act or will do so prior to approval. Even if environmental review has not been completed for the projects described in Table 2-1, their effects were considered in the cumulative impacts analyses in this EIR, as appropriate. Foreseeable future projects identified for this analysis include POLB and POLA pier facility improvement, expansion, modification, and development projects, decommissioning and remediation projects, channel deepening projects, road and bridge replacement projects, transmission tower replacement projects, and residential, commercial, and mixed-use development projects. The list was reviewed to identify cumulative projects that are planned in the hazards and hazardous materials geographic extent. Review of Table 2-1 identified no projects with cumulatively considerable impacts.

3.4.6.4. Impacts and Mitigation Measures

As discussed in Section 3.4.5, all impacts related to hazards and hazardous materials associated with the proposed Project would be less than significant with implementation of applicable standards, regulations, and implementation of the existing emergency contingency plans and existing facility SWPPP. As such, the proposed Project would not have the potential to combine with impacts from other projects and would not be cumulatively considerable. No cumulative impacts would occur. Furthermore, it is assumed that all of the identified current and foreseeable projects (see Table 2-1) would be evaluated on a project-by-project basis and would incorporate measures to reduce potential hazards and hazardous materials impacts to less than significant. These measures would also be expected to be consistent with applicable standards, regulations, and requirements to reduce potential impacts from hazards and hazardous materials. It is anticipated that other related projects would be implemented in a similar manner, with similar protection and mitigation measures in place, as related to hazards and hazardous material impacts.

3.4.7 Mitigation Monitoring Program

Because no mitigation measures would be required for hazards and hazardous materials, no mitigation monitoring program is required.

3.5. Hydrology, Water Quality and Sea-Level Rise

This section describes the potential impacts on hydrology and water quality that could result from implementation of the proposed Project and its alternatives. This section also describes the potential effects of sea-level rise on the proposed Project. Located in the San Pedro Bay Harbor, the Port of Long Beach (Port or POLB) Harbor District (Harbor District) includes the Inner Harbor and Middle Harbor (with 62 berths on 10 piers designated by letters A–H, J, S, and T; Channels 2 and 3, and the Back Channel; and the East and West Basins); Outer Harbor (open-water area for navigation and maneuvering) and the Long Beach Channel; and Cerritos Channel (connecting the Inner Harbor to the Port of Los Angeles).

3.5.1. Environmental Setting

3.5.2. Area of Influence

The area of influence for effects on hydrology, water quality, and sea-level rise is defined as the Inner Harbor and Outer Harbor waters as well as upland portions of the Harbor District.

3.5.2.1. Hydrology and Water Quality Setting

The San Pedro Bay Harbor is a southern extension of the relatively flat coastal plain, bounded on the west by the Palos Verdes Hills and on the seaward side by the three breakwaters that protect port facilities (as shown in Figure 1-4). The San Pedro Bay Harbor was originally a tidal estuary of wetlands and mudflats that received freshwater from the Los Angeles and San Gabriel Rivers and marine waters from the Pacific Ocean. Over the past 80 to 100 years, development of the San Pedro Bay Port Complex (made up of the Ports of Long Beach and Los Angeles), through dredging, filling, oil field production, channelization, and construction of breakwaters and other structures such as wharves and piers, has completely altered the local estuarine physiography.

The Harbor District consists of approximately 3,200 acres of land and 4,600 acres of water with two major hydrologic components: marine and freshwater. The Outer Harbor is marine and primarily influenced by the Southern California coastal marine environment known as the Southern California Bight. The main freshwater influx into the Inner Harbor is from the now channelized Los Angeles and San Gabriel Rivers that both discharge into the east side of Long Beach Harbor and through Dominguez Channel via the Consolidated Slip. The Los Angeles River carries the largest storm flow of any river in Southern California and is a major source of pollutant inputs, including nutrients, bacteria, and metals to the coastal environment. Freshwater sources also include numerous large Los Angeles County, City of Los Angeles, and City of Long Beach storm drains, some of which discharge to the harbor, and discharges of approximately 15 million gallons per day (mgd) of tertiary treated (with microfiltration reverse osmosis) sewage effluent from the Terminal Island Water Reclamation Plant into the Outer Harbor. Direct precipitation on water surfaces also adds freshwater runoff and small amounts of dry-weather runoff to harbor waters. Most stormwater outfalls in the Harbor District discharge stormwater that originates from inside the Harbor District. All stormwater outfalls discharge to Long Beach Harbor or the Los Angeles River Estuary. However, the land area of the Harbor District represents only a small portion of the total land area of the watersheds that influence hydrology and water quality within the Port. Beneficial uses assigned to uses of San Pedro Bay Harbor receiving waters and adjacent watershed drainage sources are listed in Table 3.5-1. Beneficial uses refer to the existing and potential uses that the different waterbodies provide such as species habitat, public recreation, or commercial benefits. Examples of benefits include fishing and or recreational boating.

Table 3.5-1. Beneficial Uses of Los Angeles/Long Beach Receiving Waters and Adjacent Watershed Drainage Sources

	Beneficial Uses												
	Commerce and Navigation				Habitat and Species							Recreation	
	Industrial Service Supply	Navigation	Commercial and Sports Fishing	Shellfish Harvesting	Estuarine Habitat	Marine Habitat	Wildlife Habitat	Rare Threatened or Endangered Species	Aquatic Habitat	Spawning, Reproduction and/or Early Development	Wetland Habitat ¹	Contact Water Recreation	Non-Contact Water Recreation
Outer Harbor		E	E	P		E		E				E	E
Marinas	E	E	E	P		E		E				E	E
Public Beach Areas		E		E	E	E		E		P		E	E
All Other Inner Areas	E	E	E	P		E		E ³				P	E
Dominguez Channel ^{2,5}		P	E		E	E	E	E ³	E ⁴	E ⁴		E	E
Los Angeles River Estuary ^{2,5}	E	E	E	P	E	E	E	E ³	E ⁴	E ⁴	E	E	E

Source: LARWQCB, 2019.

Acronyms: E= Existing Beneficial Use, P=Potential Beneficial Use.

1 Water bodies designated as WET may have wetlands habitat associated with only a portion of the water body. Any regulatory action would require a detailed analysis of the area.

2 Coastal water bodies that are also listed in inland surface water or in wetlands.

3 One or more rare species utilizes all ocean, bays, estuaries, and coastal wetlands for foraging and/or nesting.

4 Aquatic organisms utilize all bays, estuaries, lagoons, and coastal wetlands, to a certain extent, for spawning and early development. This may include migration into areas that are heavily influenced by freshwater inputs.

5 These areas are engineered channels. All references to Tidal Prisms in the Regional Water Quality Control Board documents are functionally equivalent to estuaries.

Groundwater

The general regional groundwater flow pattern in the vicinity of the Harbor District is southward and westward from the Central Coastal Plain toward the ocean. Groundwater elevations are typically below sea level due to historic over-pumping of groundwater. The local groundwater is classified as saline in some areas of the Harbor District due to seawater intrusion. Groundwater quality within the Harbor District sometimes reflects contaminant inputs from historical and ongoing industrial operations.

Existing beneficial uses for the groundwater basin underlying areas within the Harbor District (West Coast Sub-basin; Sub-basin 4-11-03¹) include Industrial Service Supply, Industrial Process Supply, and Agricultural Supply (LARWQCB, 2019). The groundwater beneath the Harbor District is currently not considered potable water and is outside of a California Department of Water Resources recognized groundwater basin. It would likely not be considered a potable water source in the future due to salinity. As a result, the Los Angeles Regional Water Quality Control Board (LARWQCB) has not designated a municipal beneficial use for groundwater in the Harbor District area. Municipal beneficial use is defined as uses of water for community, military, or

¹ The Project area within the West Coast Sub-basin includes areas underlying the Ports of Los Angeles and Long Beach and underlying El Segundo, seaward of the Barrier. The remainder of the West Coast Sub-basin does include municipal and domestic supply as a beneficial use.

individual water supply systems including, but not limited to, drinking water supply. Instead, potable (drinking) water is provided to the area by the Metropolitan Water District. At the Project site, a 2018 geotechnical update report prepared by Albus-Keefe states that groundwater was encountered at depths ranging from 5 to 6 feet below the existing ground surface (Albus-Keefe, 2018).

Upland Surface Water

The upland portion of the Harbor District generally consists of artificial fill that has been substantially altered by dredge and fill operations and industrial construction. Developed lands comprise approximately 99.8 percent of the upland portion of the Port (City of Long Beach, 2015). There are no natural or topographic features and no natural or artificial surface water bodies within the Harbor District. Instead, surface waters within upland portions consist of wet and dry-weather runoff that is directed via topographic grading to numerous large storm drain systems operated by the City and County of Los Angeles and the City of Long Beach.

Given that major portions of the upland areas of the Harbor District are covered with impervious surfaces, percolation of rain into surface soils is minimal. Stormwater discharges from individual properties within the Harbor District are regulated by individual and general permits, including the Los Angeles and Ventura Counties Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) permit, in accordance with state and federal regulations (see Section 3.5.3, *Regulatory Setting*).

Following storm events, the quality of surface water may be degraded due to loading from petroleum hydrocarbons, chlorinated compounds such as polychlorinated biphenyls (PCBs), the pesticide residue dichlorodiphenyltrichloroethane (DDT), metals, semi-volatile organic compounds (VOCs), and other particulate matter (PM) associated with the industrial land uses and runoff from roadways. Discharges from select storm drain outfalls are monitored routinely in accordance with the Los Angeles County MS4 NPDES permit. During three separate, wet-weather sampling events within the 2020-2021 monitoring period, total suspended solids concentrations ranged from 7.5 to 186 milligrams per liter (mg/L) (Michael Baker, 2021). Fecal indicator bacteria (total coliforms, fecal coliforms, and enterococci) concentrations frequently exceeded 1,000 most probable number per 0.1 liter (10/1,000 mL). Of the three metals (total copper, total lead, and total zinc) analyzed, concentrations of copper and lead occasionally exceeded their respective water quality criteria as determined by the NPDES permit. Select organic compounds, polycyclic aromatic hydrocarbons (PAHs), PCBs, and DDT residues were also analyzed, and concentrations for total PAHs ranged from 0.1 to 3.3 µg/L, concentrations of total PCBs ranged from 0.5 to 9.9 nanograms per liter (ng/L), and concentrations of DDT ranged from 0.2 to 3.9 ng/L (Michael Baker, 2021). The MS4 permit does not identify numerical limits for these constituents in runoff; instead, compliance is based on achieving waste load allocations (i.e., mass per year) and sediment and fish tissue target concentrations or achieving compliance with Sediment Quality Objectives (SQOs). No beneficial uses have been assigned to freshwater surface water bodies in upland portions of the Harbor District because none exist. The Basin Plan and State Water Quality Control Plan for Enclosed Bays and Estuaries discussed below also set load limits.

Coastal Receiving Waters and Sediments

Water and sediment quality within the San Pedro Bay Port Complex has been extensively studied for many years and has improved considerably since the 1960s as a result of pollution control measures. Water quality in the Port continues to be monitored through ongoing monitoring and special study sampling programs. Marine water and sediment quality in the Port is affected primarily by climate, circulation (including tidal currents), biological activity, surface runoff including release of contaminants from soil and pollutant loadings related to industrial activities

within the Harbor District. Suspension of bottom sediments, such as from dredging or ship propeller disturbance, can also affect water quality through release of contaminants through suspended sediments and by reducing dissolved oxygen concentrations. Sediments within the San Pedro Bay Port Complex vary spatially, but mainly consist of silt with smaller amounts of sand and clay (MBC and Merkel & Associates, 2016). Sediment quality within the San Pedro Bay Port Complex is assessed as part of the POLB's sediment monitoring program using California's SQOs. The SQOs are based on a multiple-lines-of-evidence approach that includes sediment toxicity, sediment chemistry, and benthic community condition.

Circulation

Water circulation in the San Pedro Bay Port Complex is strongly influenced by the presence of the federal breakwater, consisting of three individual rock structures, that provides protection from waves and swells, but also reduces water exchange with the greater San Pedro Bay (MBC and Merkel & Associates, 2016). Circulation within inner portions of the San Pedro Bay Port Complex is influenced by tides, winds, and stormwater flows that are affected by bathymetry (underwater topography) and configuration of port facilities.

Tidal flushing is generally good in the Outer Harbor due to proximity to San Pedro Bay Port Complex entrances but decreases substantially toward the Inner Harbor (MBC and Merkel & Associates, 2016). Tidal currents move in and out of the San Pedro Bay Port Complex through Angels Gate, Queens Gate, and the opening between Pier J and the Long Beach Breakwater. Tidal current velocities are generally small, with maximum velocities typically less than 0.3 feet per second, except in the vicinity of the harbor entrances, where current velocities are higher at 0.7 feet per second. The highest current velocities occur near the harbor entrances and along the main channels, and generally decrease toward the Inner Harbor (MBC and Merkel & Associates, 2016).

In general, winds tend to affect surface currents, while producing a counter-current in the mid- to bottom water depths (Seabergh, et al., 1994). Winds are typically from the southwest in the Outer Harbor and from the south in the Inner Harbor. This spatial variation in dominant wind direction drives surface waters in a counterclockwise circulation pattern in the Inner Harbor, particularly along the Cerritos Channel, Channel 2, and Port of Los Angeles Main Channel (MBC and Merkel & Associates, 2016).

During rain events, stormwater runoff can noticeably affect harbor currents. Stormwater flows can easily exceed tidal currents in velocity, especially in the Inner Harbor where tidal current velocities are small. Previous modeling has shown that the western portion of the San Pedro Bay Port Complex receives a greater amount of runoff due to the larger watershed drainage into that area. During rain events, flows along the Cerritos Channel typically move eastward. Modeling also shows that discharges from the Los Angeles and San Gabriel Rivers into Queensway Bay can flow into the Harbor District (POLA and POLB, 2009a). Given the large areas and highly industrialized nature of the associated watersheds, these discharges can influence water quality within the Harbor District.

Tides

Tides are sea level variations that result from astronomical and meteorological conditions. The Harbor has two high waters and two low waters each day, consisting of higher high water and lower high water, and higher low water and lower low water (LLW) tides. The mean tidal range for the Outer Harbor, calculated by averaging the difference between all high and low waters, is approximately 3.76 feet; and the mean diurnal range, calculated by averaging the difference between all the higher high water and LLW, is approximately 5.6 feet (USACE and LAHD, 1992). The extreme tidal range (between maximum high and maximum low waters) is about 10.5 feet.

The highest and lowest tides reported are about 7.96 feet above mean lower low water (MLLW) and about -2.56 feet below MLLW, respectively (USACE and LAHD, 1992). MLLW is the mean of all LLWs, equal to 2.8 feet below mean sea level, and is the datum from which Southern California tides are measured.

Waves

The San Pedro Bay Port Complex is directly exposed to ocean swells entering from two main exposure windows to the south and southeast, regardless of swell origin. The more severe waves from extratropical storms (Hawaiian storms) enter from a southerly direction. The Channel Islands and Santa Catalina Island provide some sheltering from these larger waves, depending on the direction of approach. The other major exposure window opens to the south, allowing swells to enter from storms in the Southern Hemisphere, tropical storms, and southerly waves from extratropical storms. Waves and seas entering the harbor are greatly diminished by the time they reach the Inner Harbor.

Contaminants

Contaminants in the water column can include metals, particularly cadmium, chromium, copper, lead, mercury, nickel, silver, and zinc; chlorinated pesticides (e.g., DDT and chlordanes); PCBs; and petroleum hydrocarbons, including PAHs, as well as fecal indicator bacteria. The Port's Watershed Management Program (WMP) monitors concentrations of metals, chlorinated pesticides, PAHs, and PCBs at three locations during two wet-weather and one dry-weather sampling events for each monitoring year. During the 2021-2022 monitoring period, chemical contaminants were below the respective California Toxics Rule (CTR) limits with the exception of several exceedances due to elevated dissolved copper concentrations in Consolidated Slip, Inner Los Angeles Harbor, Cabrillo Marina, and elevated total DDT metabolites (DDx) concentrations in Inner Long Beach Harbor and Los Angeles River Estuary. Fecal and total coliform and Enterococci indicator bacteria levels were above the Basin Plan single sample limits during the wet-weather sampling event in November 2022 (Anchor QEA, 2020b; 2021a). Since monitoring began in 2016, Basin Plan exceedances have occurred for total and fecal indicator bacteria, copper, DDT, and total DDx with many of these exceedances occurring at the Los Angeles River Estuary monitoring site, located at the end of the Los Angeles River (Anchor QEA, 2020a; 2020b; 2021a; 2021b). These results were similar to those presented in the 2021/2022 Annual Report for the Harbor Toxics Total Maximum Daily Loads (TMDLs) that summarized the results from four separate water column monitoring events from summer 2021 to summer 2022 (LARWQCB, 2014). Water column concentrations of contaminants were compared to numeric water quality criteria for both the Protection of Aquatic Life (aquatic life) and the Protection of Human Health for consumption of organisms only (human health) found in the California Toxic Rule. In general, analytical results showed concentrations at undetectable levels or below water quality criteria with the exception of dissolved copper and chlordane.

Beneficial uses for surface waters in Long Beach/Los Angeles Harbor are designated by the LARWQCB in the Water Quality Control Plan Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan) (LARWQCB, 2019). As detailed in Table 3.5-1, beneficial uses of coastal waters in the Inner Harbor areas include Industrial Service Supply, Navigation, Commercial and Sport Fishing, Marine Habitat, Contact Water Recreation, Non-contact Water Recreation, Preservation of Rare and Endangered Species, and Shellfish Harvesting (LARWQCB, 2019). Beneficial uses in the Outer Harbor are Navigation, Commercial and Sport Fishing, Marine Habitat, Preservation of Rare and Endangered Species, and Contact and Non-contact Water Recreation (LARWQCB, 2019). Several potential beneficial uses have been identified in Table 5.5-1 as well, which are goals of the Basin Plan.

To maintain these beneficial uses, the LARWQCB has set forth water quality objectives, which are described in the Basin Plan (LARWQCB, 2019). Water quality objectives are intended to: (a) protect public health and welfare; and (b) maintain or enhance water quality in relation to designated existing and potential beneficial uses of the water.

Section 303(d) of the Clean Water Act (CWA) requires states to identify waters that are not attaining water quality standards and listed beneficial uses. The State develops TMDLs for waters that are 303(d)-listed under the CWA. The intent of a TMDL is to: (1) determine the quantity of contaminants a system can assimilate while protecting water quality; (2) determine all inputs of contaminants to the system and linkages of inputs to impairments; and (3) allocate reductions to each source to bring the water body into compliance with established criteria for the protection of beneficial uses related to water quality. The Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters are listed as 303(d) impaired waters.

The Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL (Harbor Toxics TMDL) was adopted by the LARWQCB and approved by the State Water Resources Control Board (SWRCB) to protect marine life and minimize human health risks due to the consumption of fish. It addresses 79 impairments in waterbodies of the Dominguez Channel and Los Angeles and Long Beach Harbors watersheds (RWQCB and USEPA, 2011). Impairments included metals, PAHs, and chlorinated organic compounds. The most significant impairments addressed were the chlorinated organic compounds, DDT, and PCBs in sediments and fish tissue. The TMDL provides an implementation plan to meet numeric targets for toxic pollutants in the Dominguez Channel and greater Los Angeles and Long Beach Harbor Waters. The TMDL includes annual contaminant limits in surface sediment, stormwater effluent, and fish tissues in the Greater Harbor Waters.

Compliance with the TMDL for metals, bioaccumulative compounds, and PAHs is based on achieving the load and waste load allocations and/or demonstrating attainment of the SQOs. Compliance requires the elimination of toxic pollutants being loaded into Dominguez Channel and the harbors, and cleanup of contaminated sediments. In addition, sediment condition objectives were determined using sediment quality guidelines and the State Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality. Fish tissue targets were determined from Fish Contaminant Goals and Advisory Tissue Levels for Common Contaminants in California Sport Fish developed by the Office of Environmental Health Hazard Assessment to assist agencies in developing fish tissue-based criteria for pollution mitigation or elimination and to protect humans from consumption of contaminated fish (OEHHA, 2008).

Flooding

Flood zones identified by the Federal Emergency Management Agency (FEMA) in the Flood Insurance Rate Map for the Harbor District (Figure 3.5-1) are defined as Zone A, Zone AE, Zone AH, Zone X, and Zone D. Zone A is the 100-year floodplain, corresponding to an area with a one percent chance of being inundated by a flood event in any given year. Zone AE (areas subject to inundation by the one-percent-annual-chance flood event) is an area where the base floodplain (the flood having a one percent chance of being equaled or exceeded in any given year) is located and where base flood elevations (the elevation for a 100-year flood event) are provided. Zone AH is an area with a one percent annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet. Zone X (shaded) is an area of moderate flood hazard, usually between the limits of the 100-year and 500-year (0.2 percent chance of a flood event in any given year) flood level. Flood Zone X (unshaded) is an area of minimal flood hazard that usually is depicted as above the 500-year flood level. Zone D is an area with possible but undetermined flood hazards.

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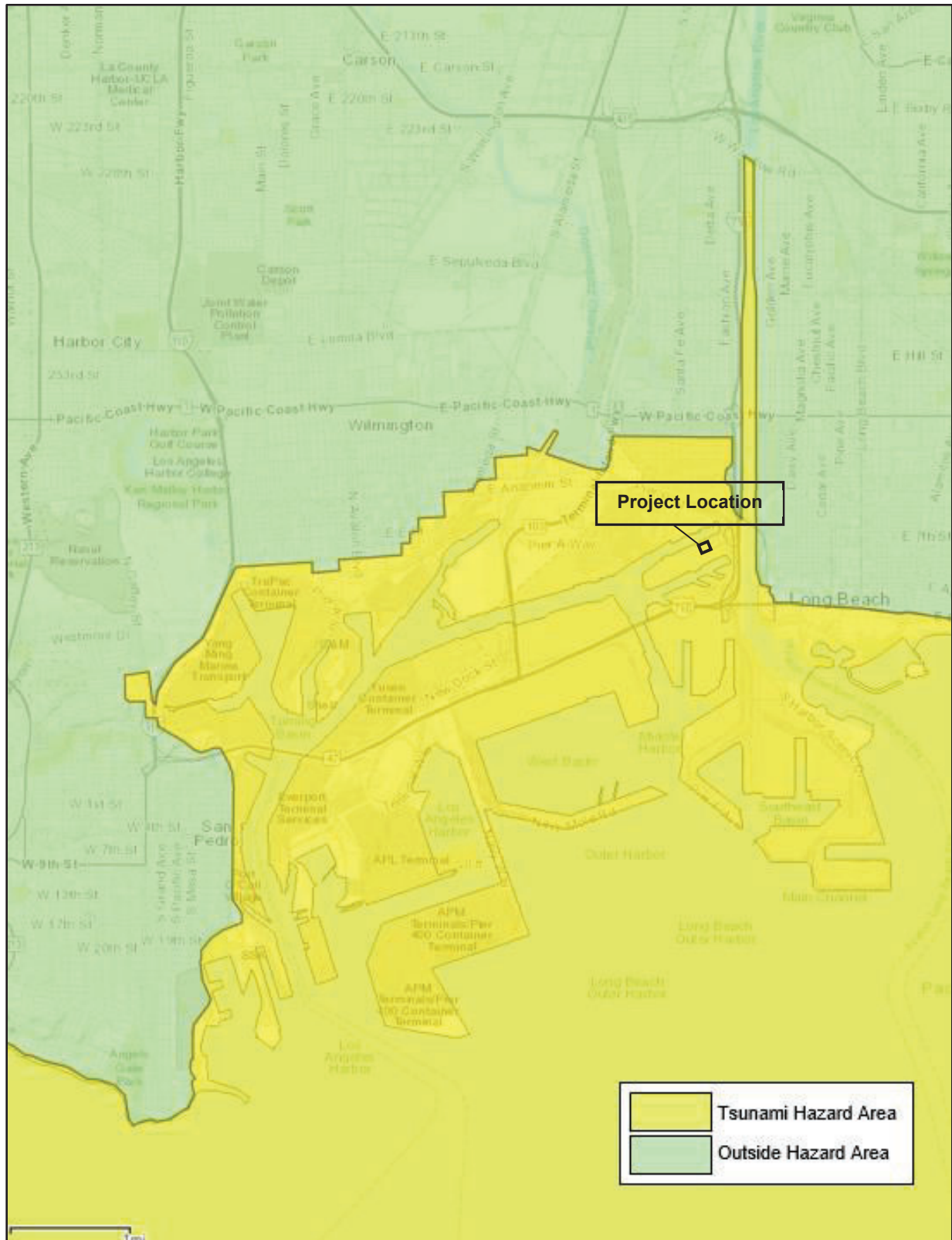


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1 **Figure 3.5-2. Tsunami Hazard Area Map**



Source: State of California, 2021.

3.5.2.2. Sea-Level Rise

The California Coastal Commission (CCC) originally released their sea-level rise (SLR) policy guidance in August 2015, and then released a science update in November 2018 based on the Ocean Protection Council's (OPC's) 2018 updated *State of California Sea-Level Rise Guidance* (OPC, 2018). The CCC *Sea-Level Rise Policy Guidance: Interpretive Guidelines for Addressing Sea Level Rise in Local Coastal Programs and Coastal Development Permits* document outlines how to address SLR in new and updated Local Coastal Programs and Coastal Development Permits according to the policies of the California Coastal Act (CCC, 2018). While the OPC evaluated multiple greenhouse gas emission scenarios, the CCC recommendations only include the high emission scenarios. The projected SLR estimates for the OPC's high emission scenario is shown in Table 3.5-2.

Table 3.5-2. Projected Sea-Level Rise (in Feet) for Los Angeles

	Probabilistic Projections (in feet)		H++ Scenario Single Scenario ²
	Low Risk Aversion	Medium-High Risk Aversion	Extreme Risk Aversion
	<i>Upper limit of "likely range"</i> <i>(~17% probability SLR exceeds...)</i>	<i>1-in-200 chance</i> <i>(0.5% probability SLR exceeds...)</i>	<i>Single scenario</i> <i>(no associated probability)</i>
2030	0.5	0.7	1.0
2040	0.7	1.2	1.7
2050	1.0	1.8	2.6
2060	1.3	2.5	3.7
2070	1.7	3.3	5.0
2080	2.2	4.3	6.4
2090	2.7	5.3	8.0
2100	3.2	6.7	9.9
2110 ¹	3.3	7.1	11.5
2120	3.8	8.2	13.8
2130	4.3	9.7	16.1
2140	4.9	11.1	18.7
2150	5.4	12.7	21.5

Source: OPC, 2018.

¹ "Most of the available climate model experiments do not extend beyond 2100. The resulting reduction in model availability causes a small dip in projections between 2100 and 2110, as well as a shift in uncertainty estimates... Use of 2110 projections should be done with caution and acknowledgment of increased uncertainty around these projections." (OPC, 2018).

² H++ is an extreme scenario associated with extreme SLR (resulting from loss of the West Antarctic ice sheet), particularly under high emissions scenarios.

3.5.3. Regulatory Setting

3.5.3.1. Federal

Clean Water Act

The CWA provides for the restoration and maintenance of the physical, chemical, and biological integrity of the nation's waters. The CWA establishes water quality standards, discharge limitations, and permit requirements. The SWRCB and its LARWQCB implement sections of the CWA through the Water Quality Control Plan and NPDES permits. Applicable sections of the Clean Water Act include the following.

Section 303(d). Section 303(d) of the CWA created the TMDL program. Section 303(d) requires that the states make a list of water bodies that are not attaining standards (the 303(d) list) and develop TMDLs for those water bodies. The US Environmental Protection Agency (USEPA) reviews and approves the State's 303(d) list and TMDL submittals. A TMDL is a quantitative assessment of water quality conditions, contributing sources, and the load reductions or control actions needed to restore and protect bodies of water in order to meet their beneficial uses. It must account for all sources of the pollutants that caused the water to be listed, including point sources such as stormwater and nonpoint sources such as aerial deposition. Section 303(d) and its implementing regulations require that approved TMDLs be incorporated into water quality control plans, such as watershed plans and regional (basin) plans, and USEPA regulations require that NPDES permits, as issued or revised, be consistent with approved TMDLs.

Section 401. Section 401 of the CWA requires any applicant for a federal license or permit to discharge into navigable waters (including dredging and construction or operation of facilities) to obtain a certification from the appropriate state or RWQCB that the discharge will meet applicable water quality standards. In the Los Angeles area, the LARWQCB issues 401 certifications.

Section 402. Section 402 of the CWA created the system known as NPDES for permitting wastewater discharges. Under NPDES, all facilities that discharge pollutants from any point source into waters of the US are required to obtain an NPDES permit. Permits under the NPDES program include individual permits tailored and issued to a specific facility, and general permits covering multiple facilities within a specific category and a specific geographical area. General permits are issued, for example, for stormwater sources and groups of facilities that require the same type of monitoring (see Section 3.5.3.2, *State*).

Rivers and Harbors Appropriation Act of 1899

The Rivers and Harbors Appropriation Act of 1899, which is administered by the US Army Corps of Engineers (USACE), prohibits discharges to navigable waters and their tributaries without a permit. It exempts storm drain and sewer discharges, but includes such discharges as dredged material, fill, and substances placed on the banks of navigable waters and their tributaries that could be washed into those waters.

Coastal Nonpoint Source Pollution Control Program

The Coastal Nonpoint Source Pollution Control Program is a joint program of National Oceanic and Atmospheric Administration (NOAA) and USEPA that was established by Congress during a reauthorization of the Coastal Zone Management Act to provide a more comprehensive solution to the problem of polluted runoff in coastal areas (NOAA, 2023). The program builds on existing

coastal zone management and water quality programs by applying a consistent set of economically achievable measures to prevent and mitigate runoff pollution problems. State programs incorporate management measures to address land-based sources of runoff from urban developments, marinas, hydromodification (e.g., stream channelization), and the loss of wetland and riparian areas.

Oil Pollution Act

As set forth in 33 U.S.C. Section 2701 et seq., this act requires vessel owners to report any hazardous waste spilled from a vessel, with owners responsible for cleanup and any damages. Marinas are responsible for any oil contamination resulting from activities at their facilities including dumping or spilling oil or oil-based paint and the use of chemically treated agents. The act is administered by the US Coast Guard.

3.5.3.2. State

California Coastal Act

The California Coastal Act of 1976 (Coastal Act) mandates that local governments prepare a land use plan and schedule of implementing actions to carry out the policies of the Coastal Act. The policies established by the Coastal Act focus on the protection of coastal resources and regulate development in the coastal zone, specifically by developing policies to govern land resources, which include environmentally sensitive habitat areas and prime agricultural lands, recreational resources, the marine environment (i.e., streams, wetlands, and coastal waters), scenic resources such as views to and along the ocean, and air quality. The Coastal Act identifies several harbor districts throughout the state, including the POLB, and mandates that the POLB not only promote maritime commerce but also “provide for other beneficial uses consistent with the public trust, including, but not limited to, recreation and wildlife habitat uses.” Consequently, the POLB is accountable for addressing water and sediment quality issues, which are key foundations of marine habitat quality.

The Coastal Act requires the protection and enhancement of marine and coastal water quality. The CCC and the SWRCB have developed a joint nonpoint source pollution control program that provides a single unified, coordinated statewide approach to dealing with nonpoint source pollution. Twenty-eight state agencies are working collaboratively through the Interagency Coordinating Committee to implement the Nonpoint Source Program Plan.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (California Water Code Section 13000 et seq.), which is the principal law governing water quality regulation in California, establishes a comprehensive program to protect water quality and beneficial uses of State waters. The act established the SWRCB and nine RWQCBs, which are charged with implementing its provisions and have primary responsibility for protecting water quality in California. The Porter-Cologne Water Quality Control Act also implements many provisions of the federal CWA, such as the NPDES permitting program. CWA Section 401 gives the SWRCB the authority to review any proposed federally permitted or federally licensed activity that may impact water quality and to certify, condition, or deny the activity if it does not comply with state water quality standards. If the SWRCB imposes a condition on its certification, those conditions must be included in the federal permit or license.

Establishment of the NPDES regulations in 1987, under Section 402(p) of the CWA, required that USEPA delegate the responsibility of the NPDES program to the State. The SWRCB was given

the responsibility to enforce the regulations of the NPDES program. Industrial facilities and construction sites are regulated by the SWRCB through general stormwater permits. Stormwater discharges from MS4s are regulated through NPDES permits issued by the RWQCB. Since 1990, operators of large storm drain systems have been required to do the following: (1) develop a stormwater management program designed to prevent harmful pollutants from being dumped or washed by stormwater runoff into the stormwater system, then discharged into local water bodies; and (2) obtain an NPDES permit.

State Water Resources Control Board Stormwater Permits

The SWRCB has developed a statewide General Construction Activities Stormwater Permit (Construction General Permit, or CGP) (Order No. 2022-00057-DWQ as amended in 2015 (2015-0122-DWQ and in 2018 (adopted but not certified), and a General Industrial Activities Stormwater Permit (Industrial General Permit, or IGP) (Water Quality Order 2014-0057-DWQ) for projects that do not require an individual permit for these activities. The General Industrial Activities Stormwater Permit is a statewide general NPDES permit issued by the SWRCB that regulates stormwater discharges associated with 10 broad categories of industrial activities. The General Industrial Activities Stormwater Permit requires dischargers to develop and implement a Stormwater Pollution Prevention Plan (SWPPP) to reduce or prevent industrial pollutants in stormwater discharges, eliminate unauthorized non-storm discharges, and conduct visual and analytical stormwater discharge monitoring to verify the effectiveness of the SWPPP.

The CGP is a statewide general NPDES permit issued by the SWRCB that regulates stormwater discharges from construction projects that encompass at least 1 acre of soil disturbance, unless the discharge is in compliance with an NPDES permit. The CGP applies to all stormwater discharges associated with construction activities within the Harbor District. Under this permit, all construction activities that disturb 1 acre or more must:

- Prepare and implement a SWPPP that specifies best management practices (BMPs) to prevent all construction pollutants from contacting stormwater. The intent of the SWPPP and BMPs is to keep all products of erosion from moving off site into receiving waters; and
- Eliminate or reduce non-stormwater discharges to storm sewer systems and waters of the US.

Long Beach Municipal Separate Storm Sewer System (MS4) Permit

The City of Long Beach is covered under the Long Beach Regional Phase 1 (MS4) Permit (Order No. R4-2021-0105 NPDES Permit No. CAS004004). This permit incorporates the following stormwater-related elements:

- | | |
|---|---|
| 1. Monitoring and reporting program (MRP) | 7. Illicit connection/illicit discharge elimination program |
| 2. Stormwater management program | 8. Geographic characterization |
| 3. Planning and land development program | 9. Education/public information program |
| 4. Regional stormwater mitigation program | 10. Annual reporting |
| 5. Construction program | |
| 6. Public agency activities program | |

1 Specifically, the MRP includes the following stormwater-related elements:

- | | |
|--|--|
| 1. Stormwater monitoring | 5. Multi-species aquatic toxicity testing |
| 2. Mass emissions monitoring | 6. Toxicity identification and reduction evaluations |
| 3. Cooperative TMDL monitoring in the Los Angeles River and Los Cerritos Channel | 7. Annual assessment and reporting |
| 4. BMPs effectiveness tracking for new development/re-developments | |

2 The City of Long Beach must comply with specified receiving water limitations; discharge prohibi-
 3 tions; stormwater management, monitoring, and reporting; and special and standard provisions.
 4 As a part of the permit-required planning and land development program, the usage of Low Impact
 5 Development (LID) design principles and BMPs is required to improve or otherwise minimize
 6 adverse impacts to stormwater quality and hydrology.

7 **Water Quality Control Plan, Los Angeles Region (Basin Plan)**

8 The Basin Plan is designed to preserve and enhance water quality and to protect beneficial uses
 9 of regional waters (inland surface waters, groundwater, and coastal waters such as bays and
 10 estuaries) (LARWQCB, 2019). The Basin Plan designates beneficial uses of surface water and
 11 groundwater, such as contact recreation or municipal drinking water supply. The Basin Plan also
 12 establishes water quality objectives, which are defined as “the allowable limits or levels of water
 13 quality constituents or characteristics which are established for the reasonable protection of
 14 beneficial uses of water or the prevention of nuisance within a specific area.”

15 The Basin Plan specifies water quality objectives for a number of constituents/characteristics that
 16 could be affected by proposed projects or alternatives. These constituents include bioaccumula-
 17 tion, bio-stimulatory substances, chemical constituents, dissolved oxygen, oil and grease, pesti-
 18 cides, acidity (pH), PCBs, suspended solids, toxicity, and turbidity. With the exceptions of dissolved
 19 oxygen and pH, water quality objectives for most of these constituents are expressed as narrative
 20 rather than numerical limits. For example, the Basin Plan defines limits for chemical contaminants
 21 in terms of bioaccumulation, chemical constituents, pesticides, PCBs, and toxicity as follows:

- 22 ■ Toxic pollutants shall not be present at levels that bioaccumulate in aquatic life to levels that
 23 are harmful to aquatic life or human health.
- 24 ■ Surface waters shall not contain concentrations of chemical constituents in amounts that
 25 adversely affect any designated beneficial use.
- 26 ■ No individual pesticide or combination of pesticides shall be present in concentrations that
 27 adversely affect beneficial uses. There shall be no increase in pesticide concentrations found
 28 in bottom sediments or aquatic life.
- 29 ■ All waters shall be maintained free of toxic substances in concentrations that are toxic to or
 30 produce detrimental physiological responses in human, plant, animal, or aquatic life.
- 31 ■ There shall be no chronic toxicity in ambient waters outside mixing zones.

32 The Basin Plan also specifies water quality objectives for other constituents, including ammonia,
 33 bacteria, total chlorine residual, and radioactive substances. These are not evaluated in this EIR
 34 because the proposed Project and its alternatives do not include any discharges or activities that
 35 would affect the water quality objectives for these parameters. A Basin Plan amendment
 36 incorporating the Harbor Toxics TMDL was enacted into law in March 2012.

California Toxics Rule

The California Toxics Rule (CTR) establishes numeric criteria for priority toxic pollutants in inland waters as well as enclosed bays and estuaries to protect ambient aquatic life (23 priority toxics) and human health (57 priority toxics). The CTR also includes provisions for compliance schedules to be issued for new or revised NPDES permit limits when certain conditions are met. The numeric criteria are the same as those recommended by USEPA in its CWA Section 304(a) guidance (USEPA, 2012).

California Bay Protection and Toxic Cleanup Program

The California Bay Protection and Toxic Cleanup Program requires the SWRCB to develop SQOs for toxic pollutants to protect the State's enclosed bays and estuaries. The SWRCB developed SQOs based on a multiple lines-of-evidence approach utilizing information on sediment chemistry, toxicity, and benthic health. The SWRCB amended the Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality (discussed below).

State Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1

The Amendments to the Water Quality Control Plan for Enclosed Bays and Estuaries Plan, Part 1 (Sediment Quality Provisions) were developed by the SWRCB to comply with California Water Code Section 13393, which requires the SWRCB to develop SQOs for toxic pollutants in California's enclosed bays and estuaries (SWRCB, 2018). This plan developed SQOs and includes narrative SQOs for the protection of aquatic life and human health, identification of the beneficial uses that the SQOs are intended to protect, and an implementation program.

The amended plan includes a methodology for assessing sediment quality for the protection of aquatic life based on the interpretation and integration of multiple lines of evidence including sediment chemistry, sediment toxicity, and the condition of the benthic community (community of sediment-dwelling aquatic organisms). Application of this methodology results in sediment categorizations that range from “unimpacted,” “likely unimpacted,” “possibly impacted,” “likely impacted,” to “clearly impacted.” Sediments that are categorized as “unimpacted” and “likely unimpacted” meet the narrative SQOs, are not contributing to exceedance of a receiving water limit and are considered to be protective of aquatic life. Sediments characterized as “possibly impacted” may still be considered by the SWRCB to be protective of aquatic life - if further monitoring, studies, and/or a formal process for stressor identification are conducted, and results can provide compelling evidence that the SQO exceedances contributing to an NPDES receiving water limit exceedance are not due to the toxic pollutants.

3.5.3.3. Local

City of Long Beach Watershed Management Program

The City of Long Beach Watershed Management Program (WMP) for the Nearshore Watersheds became effective on January 22, 2016. This WMP has been developed to implement the requirements of Los Angeles Regional Water Quality Control Board Order No. R4-2014-0024 (National Pollutant Discharge Elimination System (NPDES) Permit No. CAS004003) on a watershed scale. POLB is within the jurisdictional boundary of the WMP.

City of Long Beach Low Impact Development Ordinance

The City of Long Beach LID Ordinance became effective on February 19, 2013. LID is a storm-water management approach that works to mimic the natural hydrology of a site through strategies such as infiltration and evapotranspiration. Infiltration and other LID strategies are not only challenging to implement in a port setting, but oftentimes are an undesirable mechanism for handling stormwater runoff. LID requirements were adopted by the City of Long Beach in 2010 and are currently outlined in the amended ordinance, ORD-13-0024, which was adopted November 12, 2013.

City of Long Beach Hazard Mitigation Plan

The City of Long Beach's Hazard Mitigation Plan (2017) was prepared in response to Disaster Mitigation Act of 2000 (known as DMA, 2000). DMA 2000 requires state and local governments to prepare Mitigation Plans. The Hazard Plan evaluates the following risks to the Long Beach region:

- | | |
|--------------|--|
| ■ Earthquake | ■ Public Health |
| ■ Flood | ■ Technological and Human-Caused Hazards |
| ■ Windstorm | ■ Drought |
| ■ Tsunami | |

Each hazard specific evaluation includes information on the history, hazard causes, hazard characteristics, and a hazard vulnerability assessment. The plan also includes plans and measures to mitigate the risks.

Port Master Plan

In accordance with the Coastal Act, a Port Master Plan (PMP) was developed to ensure that short-term and long-range preferred-use plans are consistent with local, state, and federal laws and regulations (POLB, 1990). The purpose of the PMP is to provide a planning tool to guide future Port development and to ensure that projects and developments in the Harbor District are consistent with requirements of the CCA. The PMP is designed to better promote and safely accommodate foreign and domestic waterborne commerce, navigation, and fisheries in the national, state, and local public interest. The PMP also provides additional public recreational facilities within the Port consistent with sound and compatible Port planning.

Part of the PMP includes a review of all federal, State, and local regulations and guidelines that are applicable to POLB development projects. There are no regulations or guidelines within the PMP pertaining to marine water and sediment quality that go beyond previously described federal, state, and local regulations.

Port of Long Beach Stormwater Monitoring Program

POLB administers its own stormwater monitoring program that consists of three elements: (1) developing and adhering to progressive stormwater design and development standards; (2) educating and conducting outreach; and (3) ensuring compliance and enforcing regulatory requirements under the MS4 permit, IGP, and CGP that govern stormwater discharges within the Port. The POLB is committed to implementing LID principles to the maximum extent practicable and has developed a Stormwater Design Manual to promote LID concepts, such as rainwater harvesting, evapotranspiration and biofiltration, infiltration, and conventional stormwater treatment controls.

Port Tariff Number 4

The Port Tariff Number 4 (POLB, 2000) addresses pilotage, dockage, and general rules and regulations governing vessel and shoreside operations at the Port. As related to water quality, Port Tariff Number 4 addresses: storage of dangerous and hazardous materials, including barrels, drums, and tanks; handling petroleum products; vessels used to transport hazardous materials; discharges of ballast waters, bilge water and refuse; on-water vessel maintenance; and other issues related to environmental compliance and preventing conditions that could otherwise result in impacts on water quality within the Port.

Port of Long Beach Climate Adaptation and Coastal Resiliency Plan

The Port developed a Climate Adaptation and Coastal Resiliency Plan (CRP) to manage the direct and indirect risks associated with climate change and coastal hazards. The CRP provides a framework for the Port to incorporate adaptive measures related to projected climate change into its policymaking and planning processes, construction practices, infrastructure design, and environmental documents.

3.5.4. Significance Criteria

This section is focused on the potential risk of pollutant release due to flooding and or sea-level rise. Other potential impacts to hydrology and water quality were found to have no or less-than-significant impacts and are not addressed further in the EIR (see Section 1.8, *Environmental Resources Not Affected by the Proposed Project*, and Appendix B, Initial Study). Criteria for determining the significance of impacts on hydrology and water quality are based on the 2023 CEQA Guidelines, Appendix G (Environmental Checklist), and have been modified as necessary to reflect Port operations within a highly urbanized, industrial complex. While not specifically included in Appendix G, sea-level rise is also considered due to the Project's location within the marine environment. CEQA analyses generally focus on a Project's potential to affect the environment. Sea-level rise conversely considers the effect of a changing environment on the Project. Therefore, the focus of the sea-level rise analysis is to determine if the Project has the potential to exacerbate risk from a changing environment, for example, by placing development closer to an area at future risk from sea-level rise.

Impacts during construction or operation would be considered significant if the proposed Project would result in a risk of pollutant release due to inundation by flood or tsunami, and these risks would be exacerbated due to the effects of sea-level rise.

3.5.5. Assessment Methodology

Potential impacts on hydrology and water quality as a result of the proposed Project were assessed using literature data (including modeled flood, tsunami, and sea-level rise projections) to compare existing conditions to anticipated conditions resulting from construction and operations. The potential impacts on water quality, hydrology, and sea-level rise related to pollutant inputs, compliance with regulatory requirements requiring implementation of BMPs, and other consequences of the proposed Project and alternatives were evaluated using the scientific expertise of the preparers.

3.5.6. Impacts and Mitigation Measures

3.5.6.1. Proposed Project

Impact HWQ-1: Result in a risk of pollutant release due to inundation by flood or tsunami, and these risks would be exacerbated due to the effects of sea-level rise. (Less Than Significant)

The existing tanks are currently located within 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 was designed to hold the capacity of the largest tank (90,000 barrels) plus a 100-yr storm surge event, prevents the wall from falling over in the event of a spill.

Construction Impacts

Staging for construction would happen outside the containment wall at an unpaved area north of the control building. However, only construction vehicles would be staged at this location, and could be moved in the event of a tsunami warning or expected flood event. Construction of the proposed tanks would occur within the containment wall and would use small quantities of industrial chemicals such as oils, fuels, and lubricants. Inundation of the Project construction site could risk release of such pollutants to marine waters.

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. As discussed in Section 3.5.1, groundwater is present at depths ranging from 5 to 6 feet below the existing ground surface. 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 treatment and disposal. Groundwater would be disposed of in accordance with applicable regional, State, and federal regulatory requirements. Any contaminated groundwater therefore would not mix with flood waters and would not impact water quality.

Per current FEMA mapping for the Project area, the Project site is located within FEMA Special Flood Hazard Zone AE, in which there is a one percent annual chance of flooding (i.e., the 100-year flood zone). The containment wall would provide the same level of protection to the Project site during construction as it does under existing conditions (i.e., withstand the 100-year storm surge). Should flooding occur, the existing air-driven pumps could be used to divert water over the containment wall and away from the construction site into the sump at the truck loading rack and then processed through the on-site Wastewater Treatment Plant (WWTP) (see Figure 1-3).

Because of the small quantities of industrial chemicals used during construction and the presence of the containment wall and air-driven pumps, the impact would be less than significant. Construction would take place immediately following Project approval, and sea-level rise in the short term would be negligible during the construction phase, contributing no additional impact.

The Project site could potentially be affected by a tsunami, a large wave(s) 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. As discussed in Section 3.5.2.1 under “Tsunamis”, the Project site is located within a tsunami inundation area. In 2007, Moffatt & Nichol prepared the *Tsunami Hazard Assessment for the Ports of Los Angeles and Long Beach Final Report* which

analyzes such hazards using a tsunami hazard assessment model developed specifically for the POLB and Port of Long Beach area.

This study evaluated several tsunami scenarios and determined that impacts from a tsunami would be equal to or more severe than those from a seiche, and tsunami maximum water levels would 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 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 Ocean and NOAA/Pacific Marine Environmental Laboratory modeled 322 possible earthquake scenarios. The study 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 Ribost Terminal, nor would they be associated with construction of the proposed Project. Additionally, the 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 City of Long Beach's Hazard Mitigation Plan (2017) also finds that the tsunami threat to the City is considered extremely low. If a tsunami were to occur, the southern boundary of the Port of Long Beach may be susceptible to a run up of 12 feet.

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 the protective 12.5 - to 13-foot-high containment wall. In case of a seiche event during construction, the containment wall 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, including an early warning system and landside containment walls.

Operation Impacts

Following construction, the proposed tanks would be used to hold crude oil products for Ribost, as described in Chapter 1, *Introduction and Project Description*. Operation of the terminal would be similar to existing conditions. The proposed Project would remain in compliance with existing water quality standards. Operation of the proposed tanks would occur behind the containment wall with the continued protection of existing the air-driven pumps. The new tanks would be on stable foundations and would not be subject to substantial damage from inundation.

The existing 12.5- to 13-foot-high containment walls would provide the same level of protection to the new tanks as they do for the existing tanks in the event of flooding, a tsunami, or a seiche. Thus, operation of the new tanks would not exacerbate the existing potential for inundation by flooding by storms or geological events beyond existing conditions, nor would it risk release of pollutants should inundation occur. Impacts would be less than significant.

However, because the area is susceptible to sea-level rise, there is a potential for future impacts. To consider the effects of future sea-level rise in combination with a 100-year storm surge, the

POLB completed a Climate Adaptation and Coastal Resiliency Plan (CRP) in 2016. The CRP inundation mapping was updated in December 2022 to reflect the updated *State of California Sea-Level Rise Guidance* (OPC, 2018). The 2018 OPC SLR Guidance recommends evaluating various future-looking SLR scenarios depending on the type of project and the level of risk associated with the development type. These scenarios include 1) “low risk aversion scenario” for projects that would have limited consequences or higher ability to adapt (unpaved coastal trails, public access ways, small temporary structures), 2) “medium-high aversion scenario” for projects with greater consequences and/or lower ability to adapt (residential and commercial structures), and 3) “extreme risk aversion scenario” for projects that have little to no adaptive capacity that would be irreversibly destroyed or significantly costly to repair, and/or would have considerable public health, public safety, or environmental impacts (new wastewater treatment plants, power stations, highways). For the proposed Project, OPC’s medium-high risk aversion scenario would be appropriate. According to the updated CRP inundation mapping, under the medium-high risk aversion scenario, the Project site could experience permanent inundation of zero to 4.3 feet by 2080. In addition, the 2018 OPC Guidance states that under the medium-high risk aversion scenario there is an approximate 1 in 200 chance, or 0.5% probably, that sea-level rise meets or exceeds 4.3-foot of rise, including a 100-year storm surge, by 2080 (POLB, 2022b; 2022c, OPC, 2018). This 4.3-foot sea-level rise scenario was identified as a suitable scenario for future planning based on the lifespan of Project assets, as it would be representative of a medium-high risk sea-level rise projection for the year 2080.

The proposed tanks would be constructed and installed within the existing containment wall that is designed to withstand a 100-year storm surge event and the new tanks are rated for a 50 year lifespan aligning with the 2080 timeframe discussed above. The existing design basis of the containment wall includes a reasonable worst-case scenario of failure of the largest tank (94,000 bbl) plus a 100-year storm event based on the USEPA’s Worst Case Discharge scenario, as required under 40 Code of Federal Regulations (CFR) 112, Appendix D. The facility’s USEPA Worst Case Discharge is 89,884 bbl, which is based on the storage volume of the largest tank (94,000 bbl). The existing containment wall was designed to hold 90,000 bbl plus a 100-year storm event. Therefore, the existing containment wall is designed in accordance with 40 CFR 112, Appendix D, as it would sufficiently contain the USEPA Worst Case Discharge volume.

The containment wall would continue to offer the same level of protection for the proposed tanks as they do for the existing tanks. Considering the 100-year storm surge (7.61 feet) with the containment wall height of 12.5-13 feet, it would also protect against temporary inundation of up to an additional 4 feet. An inundation of 4.3 feet of sea-level rise, compounded with a 100-year storm, may overtop the containment wall in its lowest places in the future (2080; 56 years in the future). The existing air-driven pumps described above would be used to sufficiently divert stormwater over the containment wall during a flood event into existing sumps that would drain to the on-site WWTP (see Figure 1-3), in the case of isolated overtopping related to sea-level rise or storm surge. The two existing air driven pumps are adjustable and can pump approximately 85 to 130 barrels per hour. In an unlikely extreme scenario, additional pumps can be provided by Ribost’s Oil Spill Response Organization, Lunday-Thagard Refinery (World Oil Refining), or DeMenno-Kerdoon (World Oil Recycling) to sufficiently divert water.

Sea-level rise also has the potential to raise coastal water tables (by pushing under the water table), resulting in groundwater hazards that could threaten shallow infrastructure (USGS, 2020). As discussed earlier, groundwater is already shallow at the Project area and emergent groundwater could mix with localized accidental spills and result in a release of pollutants. Based on modeling developed as part of the “Our Coast, Our Future” collaborative user-driven support tool between Point Blue Conservation Science and the US Geological Survey, groundwater could

begin to emerge in the Project area at around 3 feet of permanent sea-level rise. At 4 feet, there could be localized flooding due to emergent groundwater (Point Blue Conservation Science and USGS, 2018). In such a scenario, the air-driven pumps described above would be used to divert emergent groundwater over the containment wall during a flood event, in the case of isolated overtopping related to sea-level rise.

CEQA Impact Determination

As discussed, the risks of tsunamis at the site are extremely low and risks are considered less than significant. As noted, there is a risk of inundation of the Project site during flood conditions in combination with future sea-level rise. The containment wall, which is designed to protect against a 100-year storm surge event, would protect assets against projected sea-level rise up to 4 feet. The presence of air-driven pumps, which would be used to divert water at a rate of approximately 85 to 130 barrels per hour should flooding occur (e.g., during the high-end of the medium-high risk sea-level rise scenario combined with a 100-year storm event), would help reduce that risk depending on the storm, but may not be enough to prevent minor periodic flooding occurring by 2080. This flooding does not exceed the containment wall height and would not create flooding to the extent that it could result in a risk of pollutant release because it would not be enough to make the tank fail, and any water would drain to the on-site WWTP. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

3.5.6.2. Alternative 1 – Single Tank Alternative

The major difference in the Single Tank Alternative and the proposed Project is that one less tank would be constructed which would reduce construction and operation activities. As such, this alternative could include a reduction in impacts related to hydrology, water quality, and sea-level rise.

Impact HWQ-1: Result in a risk of pollutant release due to inundation by flood or tsunami, and these risks would be exacerbated due to the effects of sea-level rise. (Less Than Significant)

Construction Impacts

Construction would be less than required for the proposed Project, as one less tank would be constructed. Therefore, impacts related to the risk of pollutant release due to inundation by flood or tsunami and the potential for these risks to be exacerbated by sea-level rise would be slightly reduced and less than significant.

Operation Impacts

Operations under Alternative 1 would be less than the proposed Project, as only one tank would be operated; however, as discussed under the proposed Project discussion, there is a low but present risk of flood/storm event, tsunami, or seiche affecting the site. Therefore, the risk of pollutant release would be slightly reduced. As with the proposed Project, the containment wall and air-driven pumps are sufficient to protect against these risks.

CEQA Impact Determination

As with the Proposed Project, although there is a risk of inundation of the Project site during flood conditions, which would be increased by future sea-level rise, existing operations are within the containment wall, which is designed to protect against a 100-year storm event. Plus, the presence

of existing air-driven pumps would be used to divert water should overtopping occur (e.g., during the high-end sea-level rise scenario combined with a 100-year storm event) ensures that risk is less than significant.

Mitigation Measures

No mitigation would be required.

3.5.6.3. Alternative 2 – No Project Alternative

Impact HWQ-1: Result in a risk of pollutant release due to inundation by flood or tsunami, and these risks would be exacerbated due to the effects of sea-level rise. (Less Than Significant)

Under the No Project Alternative, the Project site would still be located within FEMA Special Flood Hazard Zone AE, in which there is a one percent annual chance of flooding (i.e., the 100-year flood zone). The containment wall and air-driven pumps discussed under Alternative 1 are already in place and would continue to provide protection for the existing site under the No Project Alternative. Current operations would continue at the site, but the proposed new tanks, tank foundations, pumps, and pipeline connections would not be constructed. The seven existing petroleum tanks would continue to store petroleum products including crude oil and different grades of marine fuels. Loading rack truck traffic and barrels transported would remain the same as existing permitted conditions. No additional flexibility in operations would be achieved, and no additional tanks would be available to lease to customers.

Construction Impacts

Because the No Project Alternative does not involve any construction activities, there would be no construction impacts associated with this alternative.

Operation Impacts

Operations under the No Project Alternative would remain the same. As discussed under Alternative 1, there is a low but present risk of flood/storm event, tsunami, or seiche affecting the site. The containment wall and air-driven pumps are sufficient to protect against these risks. Therefore, no impacts would occur.

CEQA Impact Determination

As with the Proposed Project, although there is a risk of inundation of the Project site during flood conditions, which would be increased by future sea-level rise, existing operations are within the containment wall, which is designed to protect against a 100-year storm event, and the presence of existing air-driven pumps which would be used to divert water should flooding occur (e.g., during the high-end sea-level rise scenario combined with a 100-year storm event) ensures that risk is less than significant.

Mitigation Measures

No mitigation would be required.

3.5.7. Cumulative Impacts

The following discussion evaluates whether impacts to hydrology, water, and sea-level rise from the proposed Project would be cumulatively significant within the context of impacts caused by other past, present, or reasonably foreseeable future projects in the geographic location of the Project.

3.5.7.1. Geographic Extent/Context

The region of influence for cumulative impacts on hydrology and water quality is the Long Beach-Los Angeles Harbor Complex (Inner and Outer Harbor areas of the POLB and Port of Los Angeles). This is defined as the geographic extent for cumulative impacts for marine water and marine sediment quality. The Project's cumulative impacts to marine water and sediment quality outside of this area would be diminished or negligible because the effects of such impacts would generally be localized and decrease in potential severity with increasing distance from the area (e.g., due to mixing and dilution with waters from the open ocean) such that cumulative impacts would not be expected to exceed regulatory water quality standards.

3.5.7.2. Existing Cumulative Condition

The proposed Project would redevelop an existing tank farm within the POLB. The Project area is located within the Inner Harbor area of the POLB, where the closest marine waters and marine sediment are located in Channel 2, Cerritos Channel, POLB Turning Basin and Back Channel. The Project marine water area is also hydraulically connected to the Middle Harbor, and Outer Harbor, as well as Port of Los Angeles waters adjacent to the Cerritos Channel (e.g., East Basin, East Basin Channel).

3.5.7.3. Reasonably Foreseeable Projects

Current and/or reasonably foreseeable projects have been considered, as listed in Table 2.1-1 (see Chapter 2, *Related Projects and Relationship to Local and Regional Plans*). Projects within the geographic extent that terminal construction would have the potential to directly affect hydrology and water quality through runoff of sediments and pollutants during construction and operation activities. The projects listed in Table 2.1-1 (Related Projects) with relevant potential environmental factors that could result in cumulative impacts to marine water and sediment quality in the Project area are listed below. The projects located nearest to the Project site and would have potential effect for cumulative impacts include the following:

- Pier B Rail Yard Expansion (On-Dock Rail Support Facility)
- Toyota Facility Improvements Project
- Southern California Edison Transmission Tower Replacement Project
- Piers G and J Terminal Redevelopment Project,
- Shoemaker Bridge Replacement, between Shoreline Drive and 9th Street

Additional projects which are hydraulically more distant from the Project area are listed below. These projects are located in the Port of Los Angeles.

- Berth 163-164 [Nustar-Valero] Marine Oil Terminal Wharf Improvements Project
- Berths 191-194 Dry Bulk Terminal,
- Berths 191-194 (Ecocem) Low-Carbon Cement Processing Facility
- Berths 167-169 (Shell) Marine Oil Terminal Wharf Improvements Project
- Berth 164 (Valero) Marine Oil Terminal Wharf Improvements Project
- Berths 238-239 [PBF Energy] Marine Oil Terminal Improvement Project
- Berths 187-191 (Vopak) Liquid Bulk Terminal Wharf Improvements and Cement Terminal Project

Construction related water quality and hydrology impacts would have the potential to occur if projects within the geographic extent are under construction at the same time as, immediately before, or immediately after the proposed Project. The following projects could be constructed

1 within this timeframe: Toyota Facility Improvements Project, Piers G and J Terminal Redevelop-
2 ment Project, Berth 163-164 [Nustar-Valero] Marine Oil Terminal Wharf Improvements Project,
3 and Berths 167-169 (Shell) Marine Oil Terminal Wharf Improvements Project.

4 Projects and activities that are on hold, or where the construction schedules are anticipated to
5 begin after completion of construction of the proposed Project, are for the purpose of this analysis,
6 not considered to contribute to cumulative hydrology and water quality impacts.

7 Thus, the scenario for determining cumulative construction impacts considers the Toyota Facility
8 Improvements Project, Piers G and J Terminal Redevelopment Project, Berth 163-164 [Nustar-
9 Valero] Marine Oil Terminal Wharf Improvements Project, and Berths 167-169 (Shell) Marine Oil
10 Terminal Wharf Improvements Project in conjunction with the proposed Project.

11 **3.5.7.4. Impacts and Mitigation Measures**

12 The proposed Project would not directly contribute to cumulative impacts to hydrology, water
13 quality, and sea-level rise because it would have no or negligible increase in impacts compared
14 to existing conditions, and because it is within a contained site protected by an existing contain-
15 ment wall. Although risks associated with coastal disaster are projected to increase over time with
16 sea-level rise, the proposed Project is protected by the existing containment wall and air-driven
17 pumps, which are expected to be fully protective to scenarios including an extreme sea-level rise
18 scenario combined with a 100-year storm event. Therefore, the proposed Project's impacts to
19 hydrology, water quality, and sea-level rise would not be cumulatively considerable in combination
20 with other past, present, and foreseeable future projects.

21 **3.5.8. Mitigation Monitoring Program**

22 Because no mitigation measures would be required for this impact area, no mitigation monitoring
23 program is required for hydrology, water quality, and sea-level rise for this proposed Project.

CHAPTER 4. OTHER REQUIRED SECTIONS

California Environmental Quality Act (CEQA) Guidelines Section 15126 requires a discussion of significant environmental effects that cannot be avoided if the proposed Project is implemented, significant irreversible environmental changes that would result if the proposed Project is implemented, and growth-inducing impacts of the proposed Project. The following sections provide these discussions.

4.1. Unavoidable Significant Impacts

State CEQA Guidelines Section 15126.2(c) requires an Environmental Impact Report (EIR) to identify the significant environmental impacts that cannot be avoided if the proposed Project is implemented. Based on analyses described in Sections 3.1 through 3.5, development of the proposed Project would not result in significant, unavoidable impacts.

4.2. Significant Irreversible Impacts

4.2.1. Introduction

State CEQA Guidelines Section 15126.2(d) requires that an EIR identify significant irreversible environmental changes that would be caused by a proposed project. Section 15126.2(d) states:

Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvements which provide access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

4.2.2. Analysis of Irreversible Changes

Construction of the proposed Project would require an irretrievable commitment of natural resources from direct consumption of fossil fuels, construction materials, and energy required to produce the materials. However, the proposed Project does not represent an uncommon construction project that uses an extraordinary quantity of raw materials in comparison to other urban or industrial development projects of similar scope and magnitude.

Resources that are committed irreversibly and irretrievably are those that would be used by a project on a long-term and permanent basis. The proposed Project would construct and operate two new petroleum tanks with internal floating roofs within the existing Ribost Terminal. The proposed Project would not require additional land or marine areas and therefore would not reduce existing open space or marine areas in the Port. Water would be temporarily used during construction for dust suppression and hydrotesting. No increase in long-term water use is anticipated during operations, as the number of staff is expected to remain the same. Therefore, the proposed Project would not create any additional irretrievable commitments regarding the use of land or water.

Fossil fuels and energy would be consumed in the form of diesel, oil, and gasoline used for equipment and vehicles during construction and operation activities. On-site natural gas used by the

loading rack vapor control thermal oxidizer would cause a small increase in the maximum daily, but not long-term use of natural gas. Although the increase in the quantity of materials and energy used would be insignificant, it would nevertheless be unavailable for other uses.

State CEQA Guidelines Section 15126.2(d) also requires that an EIR evaluate the irretrievable commitments of resources to assure that current consumption is justified. The irretrievable commitment of resources required by the proposed Project is justified by the objectives of the Project, which are to increase efficiency of terminal operations, realign storage capacity need, and make more existing tanks available for lease by customers. No increases in inefficiencies or unnecessary energy consumption are expected to occur as a direct or indirect consequence of the proposed Project. Therefore, no mitigation measures are proposed beyond the policies and procedures set by other entities that already exist.

4.3. Growth Inducement

4.3.1. Introduction

CEQA requires a discussion of the ways in which a proposed project could induce growth and the impacts of such growth. State CEQA Guidelines Section 15126.2 (e) identify a project to be growth-inducing if it fosters economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. New employees hired for proposed commercial and industrial development projects and population growth resulting from residential development projects represent direct forms of growth. Other examples of projects that are growth-inducing are the expansion of urban services into a previously un-served or under-served area, the creation or extension of transportation links, or the removal of major obstacles to growth.

It is important to note that these direct forms of growth have secondary effects of expanding the size of local markets and attracting additional economic activity to the area. Typically, the growth-inducing potential of a project would be considered significant if it fosters growth or a concentration of population above what is assumed in local and regional land use plans, or in projections made by regional planning authorities, and such growth would result in significant impacts to other resources. Significant growth impacts could also occur if the project provides infrastructure or service capacity to accommodate growth levels beyond those permitted by local or regional plans and policies.

4.3.2. Direct Growth-Inducing Impacts

Construction of the proposed Project would occur over an approximately 10-month period, requiring an estimated maximum of eight workers per day (see Table 1-1). Construction employees would likely be accommodated by the existing labor pool within the greater Long Beach area. Because of the existing sizable local and regional labor pool and minimal number of construction workers, no significant influx of workers into the local communities is anticipated. Thus, the Project would not induce unplanned direct population growth in the area.

During operation and maintenance of the proposed Project, no increase in required site staffing levels would be required. As such, increases in population and housing would not occur as a result of operation of the proposed Project, and no economic impacts on the region would occur. Therefore, the proposed Project would not generate significant direct growth-inducing impacts.

4.3.3. Indirect Growth-Inducing Impacts

A project would indirectly induce growth if it would trigger the construction of new community service facilities that could increase the capacity of infrastructure in an area that currently meets the demands (e.g., an increase in the capacity of a sewage treatment plant or the construction or widening of a roadway beyond that which is needed to meet existing demand).

The proposed Project would be constructed to realign Ribost's storage capacity needs and make more existing tanks available for lease by customers. Although the Project would construct two new tanks providing additional storage capacity for crude oil, the Project would not create the potential for indirect growth. The potential for indirect growth resulting from increased fuel storage capacity is discussed in detail in Section 1, *Introduction and Project Description*. Existing throughput limits would continue to be enforced by South Coast Air Quality Management District in the facility's Permits to Operate. No changes to conditions in Ribost's existing Permits to Operate for the existing tanks are proposed or needed to implement the proposed Project; the existing tanks would continue to operate as currently permitted.

The short-term indirect effects from construction could incrementally increase activity in nearby retail establishments resulting from construction workers patronizing local establishments. However, this would be a negligible effect given the small construction workforce anticipated (8 workers per day), and no long-term effects would occur, as the number of workers during operations would remain the same. Therefore, the proposed Project would not generate significant indirect growth-inducing impacts.

CHAPTER 5. ALTERNATIVES COMPARISON

5.1. Introduction

CEQA requirements for an EIR to evaluate alternatives are detailed in Section 1.6, *Project Alternatives*. State CEQA Guidelines, Section 15126.6, requires that an EIR present a range of reasonable alternatives to a proposed project, or to the location of the project that could feasibly attain most of the basic project objectives, but would avoid or substantially lessen any significant impacts. State CEQA Guidelines Section 15126.6 also requires an evaluation of the comparative merits of the alternatives. An EIR is not required to consider alternatives that are infeasible.

This chapter presents the comparison of the proposed Project to the other alternatives considered during preparation of this EIR. Descriptions of the potential alternatives to the proposed Project are provided below. Chapter 3 evaluates the environmental impacts associated with each alternative for those issue areas determined to result in potentially significant impacts. Based on the Port's alternatives screening process, two alternatives to the proposed Project were identified and have been carried forward for more detailed analysis in this EIR. The alternatives to the proposed Project are the Single Tank Alternative (Alternative 1) and the No Project Alternative (Alternative 2).

It should be noted, however, that the proposed Project does not result in any significant impacts that could otherwise be reduced by a project alternative.

5.1.1. Alternative 1: Single Tank Alternative

Under this alternative a single 25,000 bbl tank would be constructed as opposed to two tanks. However, having a single tank would reduce the terminal's crude dewatering capability, which is a critical operation. Crude oil contains a small amount (~1%) of emulsified water, which if not removed prior to delivery to refineries, can instantly flash to steam at refinery operating temperatures and pressures, causing equipment damage and/or over-pressurization. Typical operation requires resting new deliveries of crude oil to allow for the water and oil to separate and to pump out the water layer. Tank redundancy is also needed when tanks are removed from service for inspection or repair. Given the quantity of the existing crude deliveries, the time it takes to allow the oil/water to naturally separate, and the fact that storage tanks require routine maintenance which periodically removes them from service, a minimum of three tanks (would include two existing tanks that will remain in crude service) need to be in service at the terminal to ensure uninterrupted crude operations, leaving only one tank available for leasing to customers which does not fully meet Project objectives compared to leasing two tanks. This alternative would at least partially realign storage capacity needs, provide for some marginal improvement in the efficiency of terminal operations, and would provide for one tank to be available for lease to customers.

5.1.2. Alternative 2: No Project Alternative

Under CEQA the No Project Alternative must consider the conditions that would exist if a project does not proceed, which includes consideration of predictable actions, such as the proposal of some other project (State CEQA Guidelines §15126.6(e)(3)(B)). The No Project Alternative considers the scenario of Ribost continuing existing operations without constructing the two new tanks, tank foundations, pumps, or connections to the existing pipeline system. The seven existing petroleum tanks would continue to store petroleum products including crude oil and different grades of marine fuels. Loading rack truck traffic and barrels transported would remain the same

as existing permitted conditions. No additional flexibility in operations would be achieved, and no additional tanks would be available to lease to customers.

5.1.3. Alternatives Considered but Not Carried Forward for Analysis

The following alternatives were initially considered, but eliminated from further analysis (refer to Section 1.6.2 for detailed descriptions and reasons for elimination):

- Reducing the number of tanks to one large tank with equal overall volume to the two proposed tanks (50,000 bbl);
- Reducing the size of both of the tanks so that capacity is less than 25,000 bbl each;
- Increasing the size of one tank and reducing the size of the second tank such that total capacity is 50,000 bbl; and
- Placing the tanks at another site.

5.2. Comparison of Alternatives

This section summarizes and compares the environmental issues and impacts of the proposed Project and alternatives described in Chapter 3. This section is intended to provide decision-makers with information about the merits and disadvantages of each of the alternatives. This will assist them in the consideration of POLB's pending application for the proposed Project, and to assist the public in understanding the differences between the alternatives.

Table 5-1 presents a summary matrix of the environmental impacts (see discussion of significance classification system in Section 3.0.2, *Environmental Analysis Procedures*) associated with the proposed Project and alternatives, as described in Chapter 3, *Environmental Setting and Project Impacts*. The matrix provided in Table 5-1 is organized by environmental issue area, for those issue areas analyzed in detail within this EIR (see Section 1.8, *Environmental Resources Not Affected by the Proposed Project*, for other issue areas), and impact parameter. Significance conclusions are denoted as "Significant" for significant unavoidable impacts, "LTS" for less than significant impacts, and "LST-M" for less than significant impacts with incorporation of mitigation measures. To further allow for comparison of the proposed Project and alternatives, Table 5-1 presents a summary matrix of the environmental issues and impacts associated with the proposed Project and compares these to the alternatives, as described in Chapter 3, *Environmental Setting and Project Impacts*.

Table 5-1. Summary of Impacts and Ranking

Issue Area	Impact Title	Proposed Project	Alternative 1 Single Tank Alternative	Alternative 2 No Project Alternative
Air Quality and Health Risk	AQ-1: Construction conflicts with or obstructs implementation of the applicable air quality plan.	LTS	LTS	No Impact
	AQ-2: Construction results in a cumulatively considerable net emission increase exceeding a South Coast Air Quality Management District (SCAQMD) threshold of significance.	LTS	LTS	No Impact

Issue Area	Impact Title	Proposed Project	Alternative 1 Single Tank Alternative	Alternative 2 No Project Alternative
	AQ-3: Construction results in off-site ambient air pollutant concentrations exceed a SCAQMD Localized Significance Threshold.	LTS	LTS	No Impact
	AQ-4: Construction exposes sensitive receptors to substantial levels of toxic air contaminants (TACs).	LTS	LTS	No Impact
	AQ-5: Construction creates objectionable odors during construction affecting a substantial number of people.	LTS	LTS	No Impact
	AQ-6: Operation conflicts with or obstruct implementation of the applicable air quality management plan.	LTS	LTS	No Impact
	AQ-7: Operation results in a cumulatively considerable net emission increase exceeding any of the SCAQMD thresholds of significance.	LTS	LTS	No Impact
	AQ-8: Off-site ambient air pollutant concentrations from operations exceeding a SCAQMD Localized Significance Threshold.	LTS	LTS	No Impact
	Impact AQ-9: Operations exposes sensitive receptors to substantial levels of TACs.	LTS	LTS	No Impact
	Impact AQ-10: Operation creates objectionable odors affecting a substantial number of people.	LTS	LTS	No Impact
Geology and Soils	Impact GEO-1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: <ul style="list-style-type: none"> 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. ii) Strong seismic ground shaking iii) Seismic-related ground failure, including liquefaction iv) Landslides 	LTS	LTS	No Impact
	Impact GEO-2: Construction results in substantial soil erosion or the loss of topsoil.	LTS	LTS	No Impact
	Impact GEO-3: Operations results in substantial soil erosion or the loss of topsoil.	LTS	LTS	No Impact

Issue Area	Impact Title	Proposed Project	Alternative 1 Single Tank Alternative	Alternative 2 No Project Alternative
	Impact GEO-4: 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.	LTS	LTS	No Impact
	Impact GEO-5: 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.	LTS	LTS	No Impact
Greenhouse Gas Emissions	GHG-1: Generate GHG emissions, either directly or indirectly, during construction that may have a significant impact on the environment.	LTS	LTS	No Impact
	GHG-2: Generate GHG emissions, either directly or indirectly, during operations that may have a significant impact on the environment.	LTS	LTS	No Impact
	GHG-3: Conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of GHG.	LTS	LTS	No Impact
Hazards and Hazardous Materials	HAZ-1: Construction creates a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	LTS	LTS	No Impact
	HAZ-2: Construction creates 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.	LTS	LTS	No Impact
	HAZ-3: Operation creates a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	LTS	LTS	No Impact
	HAZ-4: Operation creates 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.	LTS	LTS	No Impact
Hydrology, Water Quality, and Sea-Level Rise	HWQ-1: Result in a risk of pollutant release due to inundation by flood or tsunami, and these risks would be exacerbated due to the effects of sea-level rise.	LTS	LTS	LTS

1 **Table 5-2. Summary Comparison of Environmental Issues Compared to Alternative 1**

Proposed Project	Alternative 1 – Single Tank Alternative	Alternative 2 – No Project Alternative
Air Quality and Health Risk		
Impacts related to implementation of the applicable air quality plans would be less than significant, as construction and operation activities would be required to comply with all applicable air quality permitting requirements, regulations, BMPs, and management plans.	Impacts related to implementation of the applicable air quality plans would be less than significant, as construction and operation would be required to comply with all applicable air quality permitting requirements, regulations, BMPs, and management plans.	No potential for impacts related to implementation of the applicable air quality plans, as no construction or change in operation that could conflict with applicable plans would occur.
Impacts related to emission increases subject to SCAQMD daily thresholds would be less than significant, as construction and operation emissions would not exceed these thresholds.	Impacts related to emission increases subject to SCAQMD daily thresholds would be less than significant, as construction and operation emissions would not exceed these thresholds.	No potential for impacts related to emission increases subject to SCAQMD daily thresholds, as no construction or change in operation would occur that would create an emissions increase.
Impacts related to off-site ambient pollutant concentrations would be less than significant, as construction and operation emissions of criteria pollutants would be below all SCAQMD LSTs.	Impacts related to off-site ambient pollutant concentrations would be less than significant, as construction and operation emissions of criteria pollutants would be below all SCAQMD LSTs.	No potential for impacts related to off-site ambient pollutant concentrations, as no construction or change in operation would occur and change off-site ambient air pollutant concentrations.
Impacts related to exposure of sensitive receptors to TACs would be less than significant, as TAC emissions during construction and operation would not expose sensitive receptors to substantial pollutant concentrations that would exceed SCAQMD health risk thresholds.	Impacts related to exposure of sensitive receptors to TACs would be less than significant, as TAC emissions during construction and operation would not expose sensitive receptors to substantial pollutant concentrations that would exceed SCAQMD health risk thresholds.	No potential for impacts related to exposure of sensitive receptors to TACs, as no construction or change in operation would occur that could result in a change in ambient levels of TACs.
Impacts related to the creation of objectionable odors during Project construction and operations would be less than significant.	Impacts related to the creation of objectionable odors during construction and operations would be less than significant.	No potential for impacts related to the creation of objectionable odors, as no construction or change in operation would occur that could result in a change in ambient odor levels.

Proposed Project	Alternative 1 – Single Tank Alternative	Alternative 2 – No Project Alternative
Geology and Soils		
Impacts related to rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, and landslides would be less than significant due to the incorporation of a ground improvement system, a mat-raft foundation system, and compliance with applicable State and local building codes, including CBC and municipal code provisions.	Impacts related to rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, and landslides would be less than significant due to the incorporation of a ground improvement system, a mat-raft foundation system, and compliance with applicable State and local building codes, including CBC and municipal code provisions.	There would be no impacts related to the fault rupture, strong seismic ground shaking, seismic-related ground failure, or landslides, as no new construction and/or operational activities would occur.
Impacts related to erosion during construction would be less than significant due to reliance on the existing facility SWPPP during construction.	Impacts related to erosion during construction would be less than significant due to reliance on the existing facility SWPPP during construction.	No potential for construction impacts related to erosion, as no construction would occur.
Impacts related to erosion during operation would be less than significant. Operation would rely on the existing facility SWPPP.	Impacts related to erosion during operation would be less than significant. Operation would rely on the existing facility SWPPP.	Operational activities would continue for the existing tanks and there would be no increase in operational activities. There would be no new impact related to erosion.
Impacts related to the placement of proposed Project structures on unstable geologic units or soils would be less than significant due to the incorporation of a ground improvement system, a mat-raft foundation system, and compliance with applicable State and local building codes, including CBC and municipal code provisions.	Impacts related to the placement of proposed structures on unstable geologic units or soils would be less than significant due to the incorporation of a ground improvement system, a mat-raft foundation system, and compliance with applicable State and local building codes, including CBC and municipal code provisions.	There would be no impacts related to the location of the proposed Project structures on unstable geologic units or soils, as no new construction and/or operational activities would occur.
Impacts related to expansive soil would be less than significant due to the incorporation of the recommendations of the 2018 geotechnical update report and the compliance with applicable State and local building codes, including CBC and municipal code provisions.	Impacts related to expansive soil would be less than significant due to the incorporation of the recommendations of the 2018 geotechnical update report and the compliance with applicable State and local building codes, including CBC and municipal code provisions.	There would be no impacts related to the location of proposed Project structures on expansive soils, as no new construction and/or operational activities would occur.

Proposed Project	Alternative 1 – Single Tank Alternative	Alternative 2 – No Project Alternative
Greenhouse Gas Emissions		
Impacts related to GHG emissions would be less than significant, as the combined effects of Project construction and operation would not generate GHG emissions at a level that could have a significant impact on the environment.	Impacts related to GHG emissions would be less than significant, as the combined effects of construction and operation would not generate GHG emissions at a level that could have a significant impact on the environment.	No potential for impacts related to the generation of GHG emissions that may have a significant impact on the environment, as no construction or change in operations would occur.
Impacts related to applicable GHG emissions reduction plans, policies, or regulations would be less than significant, as the Project would not create a potential conflict with an applicable plan, policy, or regulation adopted for the purposes of GHG emissions reductions.	Impacts related to applicable GHG emissions reduction plans, policies, or regulations would be less than significant, as Alternative 1 would not create a potential conflict with an applicable plan, policy, or regulation adopted for the purposes of GHG emissions reductions.	No potential for impacts related to applicable GHG emissions reduction plans, policies, or regulations, as no construction or change in operations would occur that would conflict with an applicable plan, policy, or regulation adopted for the purposes of GHG emissions reductions.
Hazards and Hazardous Materials		
Impacts related to the routine transport, use, or disposal of hazardous materials during construction would be less than significant. Construction would rely on the existing SWPPP and emergency contingency plans. Standard operating procedures will address the excavation, handling, and disposal of contaminated material during grading and deep foundation construction.	Impacts related to the routine transport, use, or disposal of hazardous materials during construction would be less than significant. Construction would rely on the existing SWPPP and emergency contingency plans. Standard operating procedures will address the excavation, handling, and disposal of contaminated material during grading and deep foundation construction.	No potential for construction impacts related to the routine transport, use, or disposal of hazardous materials, as no construction would occur.
Impacts related to foreseeable upset and accident conditions involving the release of hazardous materials in the environment during construction would be less than significant. Construction would rely on the existing SWPPP and emergency contingency plans.	Impacts related to foreseeable upset and accident conditions involving the release of hazardous materials in the environment during construction would be less than significant. Construction would rely on the existing SWPPP and emergency contingency plans.	No potential for construction impacts related to the accidental spill or release of hazardous materials, as no construction would occur.

Proposed Project	Alternative 1 – Single Tank Alternative	Alternative 2 – No Project Alternative
Impacts related to the routine transport, use, or disposal of hazardous materials during operation would be less than significant due to the implementation of the existing facility SWPPP and required updates emergency contingency plans.	Impacts related to the routine transport, use, or disposal of hazardous materials during operation would be less than significant due to the implementation of the existing facility SWPPP and required updates emergency contingency plans.	Operational activities would continue for the existing tanks and there would be no increase in operational activities. There would be no new impact related to the routine transport, use, or disposal of hazardous materials during operations.
Impacts related to foreseeable upset and accident conditions involving the release of hazardous materials in the environment during operation would be less than significant due to the implementation of the existing facility SWPPP and required updates emergency contingency plans.	Impacts related to foreseeable upset and accident conditions involving the release of hazardous materials in the environment during operation would be less than significant due to the implementation of the existing facility SWPPP and required updates emergency contingency plans.	Operational activities would continue for the existing tanks and there would be no increase in operational activities. There would be no new impact related to the accidental spill or release of hazardous materials during operations.
Hydrology, Water Quality, and Sea-Level Rise		
<p>There is a low but present risk of flood/storm event, earthquake, tsunami, or seiche affecting the site. Only small quantities of industrial chemicals would be used during construction. Combined with the presence of the containment wall and air-driven pumps, the potential to release pollutants during construction due to Project site inundation would be less than significant. Sea-level rise between the current day and the time of construction would be negligible and would not exacerbate risks.</p> <p>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 against pollutant release due to inundation by flood or tsunami for the proposed tanks as they do for the existing tanks even when considering projected sea-level rise.</p>	<p>There is a low but present risk of flood/storm event, earthquake, tsunami, or seiche affecting the site. Only small quantities of industrial chemicals would be used during construction. Combined with the presence of the containment wall and air-driven pumps, the potential to release pollutants during construction due to site inundation would be less than significant. Sea-level rise between the current day and the time of construction would be negligible and would not exacerbate risks. 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 against pollutant release due to inundation by flood or tsunami for the proposed tanks as they do for the existing tanks even when considering projected sea-level rise.</p>	<p>There would be no construction as part of Alternative 1 and therefore no impacts.</p> <p>Impacts would not increase from existing conditions. The containment wall and air-driven pumps are sufficiently protective; impacts are less than significant.</p>

5.3. Environmentally Superior Alternative

In accordance with CEQA requirements, an “environmentally superior alternative” must be identified among the alternatives analyzed in the EIR. The environmentally superior alternative is the alternative found to have an overall environmental advantage compared to the other alternatives based on the impact analysis in the EIR. If the environmentally superior alternative is also the No Project Alternative, State CEQA Guidelines Section 15126.6(e)(2) requires the EIR to identify an environmentally superior alternative from among the other alternatives. As such, the environmentally superior alternative would be the Single Tank Alternative (Alternative 1). This alternative would result in marginally less construction emissions and approximately half as much operational emissions compared to the proposed Project; however, air quality and greenhouse gas emission are not significant. Additionally, with only a single new tank, Alternative 1 does not provide for enough of an efficiency improvement for Ribost to conduct business and severely limits opportunities to lease the one existing tank that would be available under this alternative, as most leases want at least two tanks. Therefore, while Alternative 1 is considered the environmentally superior alternative it is rejected because it does not fully meet the Project objectives, severely limits customer leasing, and would not be pursued by Ribost. There are no significant impacts associated with the construction and operation of the proposed Project even if incrementally higher than Alternative 1. The proposed Project better meets the objectives, and thus, there is no environmental basis or reason to adopt Alternative 1, which does not meet all the objectives.

1 **CHAPTER 6. ORGANIZATIONS AND PERSONS CONSULTED**

2 No organizations and/or persons were consulted in the preparation of this EIR, beyond those
3 references identified in Chapter 8.

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CHAPTER 9. COMMENTS RECEIVED AND RESPONSES TO COMMENT

9.1. Public Comment Process

The Draft EIR was issued for a 45-day public review period, beginning on October 25, 2023, and ending on December 11, 2023 at 4 p.m. The POLB granted a 4-day extension to the public review period to December 15, 2023. The Draft EIR was made available for review at the POLB's Administration Building, various public libraries, and online at the POLB website. Two public hearings were held during the Draft EIR public review period on November 8, 2023 (virtual), and November 9, 2023 (in-person at the POLB Administration Building, Multi-Purpose Room, First Floor 415 West Ocean Boulevard, Long Beach, CA 90802).

Table 9-1 presents a list of the agencies, organizations, and individuals that submitted written comments on the Draft EIR and oral comments at the Draft EIR public hearings.

9.2. Comments on the Draft EIR

The POLB received 16 comment letters on the Draft EIR during the public review period. One comment letter addressing the Coastal Act and Port Master Plan Consistency Analysis was received from the CCC. The CCC comment letter and POLB responses are addressed separately in Section 7 (*Public Comments*) of the Application Summary Report (ASR). Eighteen (18) members of the public attended the first public hearing held virtually on November 8, 2023; five provided oral comments. One member of the public attended and provided oral comments at the second in-person meeting held on November 9, 2023 at the Port Administration Building.

Table 9-1 lists the public agencies, organizations, and individuals that provided comments on the Draft EIR. Each letter is given an acronym representing the commenter agency, organization, or individual name (e.g., California Transportation Commission is given the acronym "CATC"). The individual comments within the letter are annotated in the margin using the acronym followed by consecutive numbering (e.g., CATC-1, CATC-2, etc.). Responses to the comments use the same annotation in order to easily correspond with the commenter. These letters, immediately followed by the responses, are located on the following pages.

Table 9-1. Public Comments Received on the Draft EIR

Acronym	Date	Individual / Organization	Page #
Public Agencies			
CATC	12/11/23	California Transportation Commission	9-3
AQMD	12/13/23	South Coast Air Quality Management District	9-5
CalGEM	12/14/23	CalGEM Southern District	9-7
SWRCB	11/06/23	State Water Resources Control Board Division of Drinking Water	9-11
CCC	12/27/24	California Coastal Commission	Refer to ASR Section 8 ¹

¹ To the extent that the CCC comments are construed as comments on the Draft EIR, the responses provided in the Application Summary Report (ASR) are incorporated herein by reference.

Acronym	Date	Individual / Organization	Page #
Groups, Organizations, and Companies			
EJ	11/07/23	Earthjustice	9-14
CBE	11/14/23	Communities for a Better Environment	9-17
PCCC	12/14/23	Purpose Centered Coaching and Consulting	9-21
SBACC	12/14/23	South Bay Association of Chambers of Commerce	9-23
HAIC	12/16/23	Harbor Association of Industry and Commerce	9-26
BF	12/15/23	BizFed	9-29
LCWTF	12/15/23	Los Cerritos Wetlands Task Force, Sierra Club	9-32
CBD	12/15/23	Center for Biological Diversity; Coalition for Clean Air; Communities for a Better Environment; Earthjustice; East Yard Communities for Environmental Justice; Long Beach Environmental Alliance; Sierra Club	9-40
DLBA	12/15/23	Downtown Long Beach Alliance	9-272
LBACC	12/15/23	Long Beach Area Chamber of Commerce	9-274
TPG	11/17/23	The Polaris Group, Robert L. Rodine	9-276
Individuals			
NW	12/14/23	Nancy Wallace	9-278
Public Hearing #1 Comments (Virtual)			
AC	11/8/23	Ann Cantrell	9-284
TM	11/8/23	Tyler Matthews	9-284
JP	11/8/23	Jay Parepally, Communities for a Better Environment	9-285
ACH1	11/8/23	Anna Christensen, Sierra Club Los Cerritos Wetlands Task Force	9-285
MH	11/8/23	Mia Hernandez	9-286
Public Hearing #2 Comments (In-Person)			
ACH2	11/9/23	Anna Christensen, Los Cerritos Wetlands Task Force, Sierra Club	9-296

Comment from California Transportation Commission (CATC)**Email: World Oil Tank Installation Project**

From: Zamora, Cherry@CATC <Cherry.Zamora@catc.ca.gov>

Sent: Monday, December 11, 2023 3:33 PM

To: Port of Long Beach Environmental Planning <CEQA@polb.com>

Cc: Pennebaker, Laura@DOT <Laura.Pennebaker@catc.ca.gov>

Subject: World Oil Tank Installation Project - Notice of Completion and Availability

CATC-1

Dear Jennifer Blanchard:

The California Transportation Commission (Commission) has received the Port of Long Beach's *Notice of Completion and Availability of Draft Environmental Impact Report/Notice of Public Hearings* for the World Tank Installation Project Draft Environmental Impact Report (State Clearinghouse No. 2020100119). Commission staff do not have comments at this time.

For all projects that are anticipated to require Commission approval for discretionary actions, including route adoptions, new public road connections, or funding allocation requests, full compliance with the California Environmental Quality Act (CEQA) is required. The Commission will not allocate funds to projects for design, right-of-way, or construction, or approve route adoptions or new public road connections, until the environmental document is complete, and the Commission has approved the environmentally cleared project. The CEQA lead agency must contact and work with the Commission directly to ensure the final environmental document is brought forward to the Commission for action.

CATC-2

Regards,

Cherry Zamora
Assistant Deputy Director – Transportation Planning
California Transportation Commission
(916) 716-4656 | cherry.zamora@catc.ca.gov

Responses to Comments – California Transportation Commission (CATC)
Cherry Zamora, Assistant Deputy Director – Transportation Planning
December 11, 2023

- CATC-1** CATC acknowledges receipt of the Port's Notice of Completion and Availability of Draft EIR/Notice of Public Hearings for the proposed Project. CATC staff indicate that they do not have comments at this time.
- CATC-2** This comment states that full compliance with CEQA is required for all discretionary actions requiring approval from the California Transportation Commission. This comment is acknowledged, and no further response is required.

Comment from South Coast Air Quality Management District (AQMD)**Email: World Oil Tank Installation Project**

From: Danica Nguyen <dnguyen1@aqmd.gov>
Sent: Wednesday, December 13, 2023 7:53 AM
To: Blanchard, Jennifer <jennifer.blanchard@polb.com>
Cc: Sam Wang <swang1@aqmd.gov>; Barbara Radlein <bradlein@aqmd.gov>; Diana Thai <dthai@aqmd.gov>; Belinda Huy <BHuy@aqmd.gov>; Paul Tran <ptran@aqmd.gov>
Subject: Draft EIR World Oil Tank Installation Project

Good Morning Ms. Jennifer Blanchard,

South Coast AQMD staff would like to thank the Port of Long Beach staff for collaborating and identifying South Coast AQMD as a Responsible Agency for the World Oil Tank Installation Project, for which air permits will be required by South Coast AQMD. South Coast AQMD has no further comment on the Draft Environmental Impact Report for the Project.

Regards,

Danica Nguyen
Air Quality Specialist, CEQA-IGR
Planning, Rule Development & Implementation
South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765
Phone: (909) 396-3531
E-mail: dnguyen1@aqmd.gov
Please note South Coast AQMD is closed on Mondays.

AQMD-1

Response to Comment – South Coast Air Quality Management District (AQMD)
Danica Nguyen, Air Quality Specialist, CEQA-IGR
December 13, 2023

AQMD-1 The comment thanks POLB staff for collaborating with the South Coast Air Quality Management District (AQMD) and acknowledges its role as a Responsible Agency for the World Oil Tank Installation Project, for which air permits will be required from the AQMD. The AQMD provides no further comment on the EIR. No further response is required.

Comment from California Geologic Energy Management Division (CalGEM) Southern District**Email: World Oil Tank Installation Project**

From: CalGEMSouthern@DOC <CalGEMSouthern@conservation.ca.gov>
Sent: Thursday, December 14, 2023 11:25 AM
To: Blanchard, Jennifer <jennifer.blanchard@polb.com>
Cc: Welty, Curtis@DOC <Curtis.Welty@conservation.ca.gov>; state.clearinghouse@opr.ca.gov; OLRA@DOC <OLRA@conservation.ca.gov>; Perez, Jan@DOC <Jan.Perez@conservation.ca.gov>
Subject: WORLD OIL TANK INSTALLATION PROJECT

Dear Ms. Blanchard:

Attached is a copy of the California Geologic Energy Management Division response letter for the Notice of Completion of a Draft EIR for the Port of Long Beach/World Oil Tank Installation Project located in Los Angeles County, California, SCH: NO. 2020100119.

Please contact Curtis Welty at (562) 637-4400 or email CalGEMSouthern@conservation.ca.gov if you have any questions.

Regards,

CalGEM Southern District

**Charlina Everfield**

Office Assistant
Geologic Energy Management Division

California Department of Conservation

3780 Kilroy Airport Way, Suite 400
Long Beach CA 90806
Main: (562) 637-4400
calgemsouthern@conservation.ca.gov

CalGEM-1



Gavin Newsom, Governor
David Shabazian, Director

December 14, 2023

VIA EMAIL

Jennifer Blanchard, Environmental Specialist
Port of Long Beach
415 W. Ocean Blvd.
Long Beach, CA 90802
Email: jennifer.blanchard@polb.com

Dear Ms. Blanchard:

**WORLD OIL TANK INSTALLATION PROJECT
NOC - NOTICE OF COMPLETION OF A DRAFT EIR
PORT OF LONG BEACH
SCH: NO. 2020100119**

The Department of Conservation's Geologic Energy Management Division (Division) has reviewed the above-referenced project for impacts with Division jurisdictional authority. The Division supervises the drilling, maintenance, and plugging and abandonment of oil, gas, and geothermal wells in California. The Division offers the following comments for your consideration.

The project area is in Los Angeles County and is within the Wilmington oil field. Division mapping shows three abandoned oil and gas wells are located just west and northwest of the proposed new tanks. Division information can be found at: www.conservation.ca.gov. Individual well records are also available on the Division's web site, or by emailing CalGEMSouthern@conservation.ca.gov.

The scope and content of information that is germane to the Division's responsibility are contained in Section 3000 et seq. of the Public Resources Code, and administrative regulations under Title 14, Division 2, Chapters 2, 3 and 4 of the California Code of Regulations.

If any wells, including any plugged, abandoned or unrecorded wells, are damaged or uncovered during excavation, grading or other project operations, remedial plugging operations may be required. If such damage or discovery occurs, the Division's district office must be contacted to obtain information on the requirements and approval to perform remedial operations.

The possibility for future problems from oil and gas wells that have been plugged and abandoned, or reabandoned, to the Division's current specifications are remote.

CalGEM-2

CalGEM-3

CalGEM-4

CalGEM-5

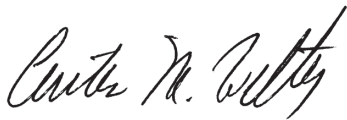
State of California Natural Resources Agency | Department of Conservation
Southern District, 3780 Kilroy Airport Way, Suite 400, Long Beach, CA 90806
conservation.ca.gov | T: (562) 637-4400 | F: (562) 424-0166

SCH: No. 2020100119
Port of Long Beach
December 14, 2023
Page 2

However, the Division recommends that a diligent effort be made to avoid building over any plugged and abandoned well.

Questions regarding the Division's Construction Site Well Review Program can be addressed to the local Division's office in Long Beach by emailing CalGEMSouthern@conservation.ca.gov or by calling (562) 637-4400.

Sincerely,



Curtis M. Welty, PG
Associate Oil and Gas Engineer

cc: Governor's Office of Planning and Research, State Clearinghouse Unit
Email: state.clearinghouse@opr.ca.gov
Office of Legislative and Regulatory Affairs
Email: OLRA@conservation.ca.gov
Jan Perez, CalGEM CEQA Unit
Email: Jan.Perez@conservation.ca.gov
Environmental CEQA File

**CalGEM-5
(con't)**

**Responses to Comments - California Geologic Energy Management Division (CalGEM)
Southern District
Charlina Everfield, Office Assistant
December 14, 2023**

- CalGEM-1** This comment references email transmittal of a copy of CalGEM's response letter to the Notice of Completion of a Draft EIR for the proposed Project. No response is necessary.
- CalGEM-2** This comment provides introduction to comments submitted by CalGEM and describes the jurisdictional authority of CalGEM. No response is necessary.
- CalGEM-3** The comment describes the location of three abandoned oil and gas wells on the Project site. The three plugged and abandoned oil wells referenced by the commenter are discussed in the Final EIR, Section 3.4 (*Hazards and Hazardous Materials*) on page 3.4-8. CalGEM's online mapping application, Well Finder, maps the locations of the wells approximately 30 to 62 feet to the northwest and outside of the existing containment wall. There are no active or abandoned oil wells within the Project construction or staging areas.
- CalGEM-4** The comment describes the jurisdictional authority of CalGEM. No response is necessary.
- CalGEM-5** The comment states that if any wells are damaged or discovered during construction or operation activity, the CalGEM must be contacted to obtain requirements and approval to perform remedial operations, if required. As discussed in Response to Comment CalGEM-2, there are no mapped active or abandoned oil wells within the Project construction or staging areas. If any unrecorded wells are discovered during construction activities, then the CalGEM will be contacted for remedial plugging, if required. As such, a special condition will be added to the Harbor Development Permit requiring Ribost to contact CalGEM if any wells are damaged or discovered during construction or operation activity. See Application Summary Report Section 5.2 (*Special Conditions*).

Comments from State Water Resources Control Board Division of Drinking Water (SWRCB)



SWRCB-1

State Water Resources Control Board
Division of Drinking Water

November 6, 2023

Jennifer Blanchard
Environmental Specialist
Port of Long Beach
415 W. Ocean Blvd
Long Beach, CA 90802

Dear Ms. Blanchard:

DDW COMMENTS ON PORT OF LONG BEACH WORLD OIL TANK INSTALLATION PROJECT

The State Water Board, acting by and through its **Division of Drinking Water** (Division) has reviewed the **Port of Long Beach's** (Port) draft Environmental Impact Report (EIR) for the construction and operation of two new 25,000-barrel petroleum storage tanks.

In accordance with the California Code of Regulations (CCR), Title 14, Section 15082(b), each responsible agency shall provide the lead agency with specific detail about the scope and content of the environmental information, related to the responsible agency's area of statutory responsibility, that must be included in the draft EIR. The State review period started on October 25, 2023, and will be open until December 11, 2023. The Division has reviewed the Port's complete project description and draft EIR package. At this time, the Division has identified the following comments and questions during the review process:

1. Please notify the Division if any of the existing and proposed oil and gas facilities are located **within 1,000 feet** from any existing potable water production wells.
2. The Division recommends the following additional agencies to be included in the State Clearinghouse distribution for review of the project: City of Long Beach – Bureau of Environmental Health, City of Long Beach – Planning Bureau, Long Beach Utilities Department, SWRCB Division of Drinking Water, Los Angeles County Department of Regional Planning, and Office of the State Fire Marshal.
3. The Port, served by the Long Beach Utilities Department (LBUD), must comply with cross-connection control requirements per CCR, Title 17, Section 7584,

SWRCB-2

SWRCB-3

SWRCB-4

E. JOAQUIN ESQUIVEL, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR

500 North Central Avenue, Suite 500, Glendale, CA 91203 | www.waterboards.ca.gov

Ms. Jennifer Blanchard

- 2 -

November 6, 2023

Responsibility and Scope of Program. Specifically, the Port must ensure that cross-connection control is established when potable water is utilized in oil and gas facilities.

**SWRCB-4
(con't)**

If you have questions regarding this letter, please contact Stephanie Osorio, P.E. at (818) 551-2009 or me at (818) 551-2022.

Sincerely,



Dmitriy Ginzburg, P.E.
District Engineer
Hollywood District

Cc: California State Clearinghouse
Office of Planning and Research

Christopher J. Garner, General Manager
Long Beach Utilities Department

Wendy Chen, Manager of Engineering
Long Beach Utilities Department

Yan Zhang, Senior Director of Water Quality and Process Long
Beach Utilities Department

Responses to Comments - State Water Resources Control Board Division of Drinking Water (SWRCB)**Dmitry Ginzburg, P.E., District Engineer, Hollywood District****November 6, 2023**

- SWRCB-1** The comment states that SWRCB, Division of Drinking Water reviewed the Draft EIR. The comment also provides a brief summary of the proposed Project, State CEQA Guidelines Section 15082(b), Response to Notice of Preparation, confirms the public review period of the Draft EIR, and acknowledges the California State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) review of the completed project description and Draft EIR package.
- SWRCB-2** The comment requests notification of any existing and proposed oil and gas facilities located within 1,000 feet from any existing potable water production wells. A review of the Department of Water Resources Well Completion Report Map Application and Environmental Data Resources Radius Map Report found no potable production supply wells within 1,000 feet of the Project site (DWR, 2022; EDR, 2020).
- SWRCB-3** SWRCB recommends additional agencies be included to the Port's project review distribution list – The City of Long Beach – Bureau of Environmental Health, City of Long Beach – Planning Bureau, Long Beach Utilities Department, SWRCB DDW, Los Angeles County Department of Regional Planning, and Office of the State Fire Marshal.
- The City of Long Beach – Bureau of Environmental Health, City of Long Beach – Planning Bureau, Long Beach Utilities Department are included on the Port's distribution list for review of the environmental documents for the proposed Project. The Los Angeles County Department of Regional Planning was not included on the Port's distribution list because it does not have jurisdiction over the Port of Long Beach. The Notice of Completion of the Final EIR filed with the Office of Planning and Research State Clearinghouse includes the SWRCB DDW and Office of the State Fire Marshal.
- SWRCB-4** The comment states that the Port must comply with cross connection control requirements per CCR, Title 17, Section 7584, Responsibility and Scope of Program, specifically to ensure that cross-connection control is established when potable water is utilized in oil and gas facilities. The proposed Project does not involve construction of new or connection to existing potable water utilities. Therefore, CCR, Title 17, Section 7584 is not applicable to the proposed Project.

Comments from Earthjustice (EJ)**Email: World Oil Tank Installation Project**

From: Adam Frankel <afrankel@earthjustice.org>

Sent: Tuesday, November 7, 2023 10:28 AM

To: Port of Long Beach Environmental Planning <CEQA@polb.com>

Cc: Oscar Espino-Padron <oespino-padron@earthjustice.org>

Subject: World Oil Tank Installation Project: Request for Public Comment Extension

RE: Request to Provide an Additional 45 days for Public Comment in Response to the Port of Long Beach's Notice of Completion and Availability of Draft Environmental Impact Report for the World Oil Tank Installation Project (SCH # 2020100119)

Dear Director Arms:

Earthjustice respectfully requests that the City of Long Beach Harbor Department (Port of Long Beach or Port) extend the public review and comment period for the World Oil Tank Installation Project, currently scheduled to end on December 11, 2023. We request a 45-day extension of the Public Review Period to **January 23, 2024**.

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 poses multiple, complex environmental issues that would severely affect nearby communities and produce significant environmental impacts related to air and water quality, hazardous waste, and human health. Additionally, these tanks would be located within one half-mile of numerous sensitive receptors, including schools, parks, and residences. Given the complexity of the Project's numerous environmental impacts, an extension of the Public Review Period for this project would ensure meaningful public input in the environmental review process. Furthermore, the current comment deadline falls in the midst of the winter holiday season and will make public participation extremely difficult for impacted community members and local residents, who must be afforded an opportunity to meaningfully engage in this public consultation process.

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 has 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 January 23, 2024.

Sincerely,

Adam Frankel (he/him)
Associate Attorney
Community Partnerships Program
707 Wilshire Blvd, Suite 4300
Los Angeles, California 90017
T: 213.766.1076
F: 213.403.4822

**EJ-1****EJ-2****EJ-3**

Responses to Comments of Earthjustice (EJ)
Adam Frankel, Associate Attorney
November 7, 2023

EJ-1 The commenter requests a 45-day extension to the public review period for the proposed Project. State CEQA Guidelines Section 15105(a) states in relevant part, the public review period for a draft EIR shall not be less than 30 days nor should it be longer than 60 days except under unusual circumstances. The Port provided a 45-day public review and comment period that started on October 25, 2023, and ended on December 11, 2023 (not including holidays), with an additional 4-day extension ending on December 15, 2023. A 45-day extension would exceed the public review period as outlined in the State CEQA Guidelines Section 15105(a) and no usual circumstances exist or were adequately justified.

During the public review and comment period, in addition to the opportunity to submit written comments, two public meetings were held, one virtual meeting on November 8, 2023 and one in-person meeting on November 9, 2023 at the Port Administration Building. Port staff provided a presentation of the proposed Project and an opportunity for the public to provide comments on the Draft EIR at these meetings.

EJ-2 The commenter reiterates the proposed Project plans to construct two 25,000-barrel crude oil tanks to lease out existing tank capacity to other customers. The commenter claims that the Project would likely result in significant environmental impacts to air, water quality, hazardous waste, and human health and acknowledges that the new tanks would be located within a half mile of numerous sensitive receptors, including schools, parks and residences.

As summarized in the EIR Sections 3.1 (*Air Quality and Health Risk*), 3.4 (*Hazards and Hazardous Materials*), and 3.5 (*Hydrology, Water Quality and Sea-Level Rise*), no potentially significant impacts have been identified for the World Oil Tank Installation Project. All impacts were determined to be less than significant because they would not exceed any significant thresholds (see EIR Section ES.9, *Environmental Impacts and Mitigation Measures*, and Table ES-2).

The Initial Study prepared in accordance with CEQA (provided as Appendix B of the Draft EIR), identifies sensitive receptors in the vicinity of the proposed Project, including residences (including senior care facilities), daycares, and hospitals. The nearest residential receptors (911 W. Chester Place, Long Beach) are located approximately 0.5 miles (800 meters) from the area of the proposed new tanks (over 880 meters). The nearest school, Edison Elementary School, is located more than 0.5 miles (over 880 meters) away from the proposed new tanks. The nearest hospital, Dignity Health-St. Mary Medical located at 1050 Linden Avenue in Long Beach is approximately 1.5 miles (2,405 meters) away. The nearest known daycare facility, Childtime of Long Beach at One World Trade Center #199, Long Beach is approximately 0.58 miles, or 1,284 meters from the Project site (Draft EIR, Appendix B, World Oil Initial Study, starting at page 2-12).

As discussed in the Draft EIR, construction and operation of the proposed Project is not anticipated to expose sensitive receptors to substantial concentration levels of toxic air contaminants (TACs), therefore impacts would be less than significant and no mitigation measures are required.

Discussion of TAC emissions associated with construction of the proposed Project is provided in the Draft EIR starting at page 3.1-15 (Impact AQ-4). Draft EIR Table 3.1-9 at page 3.1-16 summarizes the maximum health impacts of TAC associated with construction of the proposed Project.

EJ-3

The commenter claims that due to the complexity of the of the Project's many environmental impacts and the public review period being in the midst of the winter holiday season would make public participation difficult. As such, the commenter again requests an extension to the public comment period for the proposed Project. Please refer to RTC EJ-1.

Comments from Communities for a Better Environment (CBE)**Email: World Oil Tank Installation Project**

From: Jay Parepally <jparepally@cbecal.org>

Sent: Tuesday, November 14, 2023 11:29 AM

To: Port of Long Beach Environmental Planning <CEQA@polb.com>

Cc: Jennifer Ganata <jganata@cbecal.org>

Subject: World Oil Tank Installation Project: Request for Public Comment Deadline Extension

RE: Request to Provide an Additional 45 Days for Public Comment in Response to the Port of Long Beach's Draft Environmental Impact Report for the World Oil Tank Installation Project (SCH # 2020100119)

Dear Director Arms:

Communities for a Better Environment (CBE) respectfully requests that the City of Long Beach Harbor Department and Port of Long Beach (POLB or Port) extend the public review and comment period for the World Oil Tank Installation Project, which is currently scheduled to end on December 11, 2023. We request a 45-day extension of the Public Review Period to **January 23, 2024** (for a comment period of 90 days in total).

CBE-1

The World Oil Tank Installation Project includes plans to construct two 25,000-barrel crude oil tanks at the Port of Long Beach to lease out existing storage tank capacity to other customers. As we have indicated in multiple rounds of comments and appeals in earlier stages of the CEQA process related to the Project, the construction and operation of these tanks poses multiple, complex environmental issues and risks to nearby communities, which already bear a disproportionately high burden of industrial pollution in this region. Despite the Draft Environmental Impact Report's (DEIR) claims that the Project would have less than significant impacts or no impacts at all, the Project would likely result in significant environmental impacts related to air and water quality, hazardous waste, and human health. Additionally, these new tanks would be located within a half of mile of numerous sensitive receptors, including schools, parks, and residences. Given the complexity of the Project's numerous environmental impacts, an extension of the Public Review Period for this project would ensure meaningful public input in the environmental review process.

CBE-2**CBE-3****CBE-4**

CBE makes this written request for an extension to the public comment period to reiterate points I personally raised during the virtual Public Hearing on November 8 about the need for a longer review period that should run to late January 2024. As I observed in last week's virtual hearing, very few community members who reside near the Port were able to share their valid concerns about the proposed Project. Since the current comment deadline falls in the middle of the holiday season, the deadline has already made (and will continue to make) public participation overly difficult for impacted community members and local residents; the public needs to be afforded a genuine opportunity to engage in this consultation process.

CBE-5

As a community-driven environmental justice organization, CBE takes the CEQA public review and comment process very seriously to ensure that environmental protection and human health are prioritized, especially in relation to expanding fossil fuel infrastructure. For all these reasons,

CBE respectfully requests an extension of the public review and comment period for the World Oil Tank Installation Project DEIR until **January 23, 2024**.

Sincerely,

Jay Parepally (he/him/his)
Federal Climate Justice Legal Fellow
Communities for a Better Environment

COMMUNITIES
FOR A BETTER
ENVIRONMENT
established 1978

**CBE-5
(con't)**

Responses to Comments of Communities for a Better Environment (CBE)
Jay Parepally, Federal Climate Justice Legal Fellow
November 14, 2023

- CBE-1** The commenter requests an extension to the public review and comment period. State CEQA Guidelines Section 15105(a) states in relevant part, the public review period for a draft EIR shall not be less than 30 days nor should it be longer than 60 days except under unusual circumstances. The Port provided a 45-day public review and comment period that started on October 25, 2023, and ended on December 11, 2023 (holidays not included), with an additional 4-day extension ending on December 15, 2023.
- CBE-2** The commenter reiterates the proposed Project plans to construct two 25,000-barrel crude oil tanks to lease out existing tank capacity to other customers. No response is necessary.
- CBE-3** The commenter also makes reference to their “multiple rounds of comments and appeals” in earlier stages of the CEQA process related to the Project. Presumably, the commenter is referring to the previous environmental document, the Negative Declaration that had been adopted by the Board of Harbor Commissioners in 2021. The commenter’s previous comments and the Port’s responses to those comments are contained in the Final Negative Declaration available on the Port’s website. As discussed in the Draft EIR Section ES.6 (*Public Involvement*) on page ES-10, in 2021 the BHC adopted a Final IS/ND. The BHC’s determination was appealed to the Long Beach City Council. At the Long Beach City Council’s appeal hearing on January 18, 2022, Ribost agreed to have an EIR prepared by the Port for the proposed Project, and the Final IS/ND was withdrawn.
- The comment claims “the construction and operation of these tanks pose multiple, complex environmental issues and risks to nearby communities, which already bear a disproportionately high burden of industrial pollution in this region. As summarized in the EIR Sections 3.1 (*Air Quality and Health Risk*), 3.2 (*Geology and Soils*), 3.3 (*Greenhouse Gas Emissions*), 3.4 (*Hazards and Hazardous Materials*), and 3.5 (*Hydrology, Water Quality and Sea-Level Rise*), no potentially significant impacts have been identified for the World Oil Tank Installation Project. All impacts were determined to be “Less than Significant” because they would not exceed any Project-specific significant thresholds (see EIR Section ES.9, *Environmental Impacts and Mitigation Measures*, and Table ES-2).
- CBE-4** The commentor claims that the Project would likely result in significant environmental impacts to air, water quality, hazardous waste, and human health and acknowledges that the new tanks would be located within a half mile of numerous sensitive receptors, including schools, parks and residences. The Initial Study prepared in accordance with CEQA (provided as Appendix B of the Draft EIR), identifies sensitive receptors in the vicinity of the proposed Project, including residences (including senior care facilities), daycares, and hospitals. The nearest residential receptors (911 W. Chester Place, Long Beach) are located approximately 0.5 miles (800 meters) from the area of the proposed new tanks (over 880 meters). The nearest school, Edison Elementary School, is located more than 0.5 miles (over 880 meters) away from the proposed new tanks. The nearest hospital, Dignity Health-St. Mary Medical located at 1050

Linden Avenue in Long Beach is approximately 1.5 miles (2,405 meters) away. The nearest known daycare facility, Childtime of Long Beach at One World Trade Center #199, Long Beach is approximately 0.58 miles, or 1,284 meters from the Project site (Draft EIR, Appendix B, World Oil Initial Study, starting at page 2-12).

As discussed in the Draft EIR, construction and operation of the proposed Project is not anticipated to expose sensitive receptors to substantial concentration levels of toxic air contaminants (TACs), therefore impacts would be less than significant and no mitigation measures are required.

Discussion of TAC emissions associated with construction of the proposed Project is provided in the Draft EIR starting at page 3.15 (Impact AQ-4). Draft EIR Table 3.1-9 at page 3.1-16 summarizes the maximum health impacts of TAC associated with construction of the proposed Project.

- CBE-5** CBE again requests an extension to the public comment period to reiterate points raised by Mr. Jay Parepally of CBE at the virtual public hearing on November 8, 2023 for the proposed Project. Please refer to RTC CBE-1.

Comments from Purpose Centered Coaching and Consulting (PCCC)

December 14, 2023

PCCC-1

Subject: Letter of Support for World Ribost Terminal Project

Dear: Long Beach Harbor Commissioners,

On behalf of Purpose Centered Coaching & Consulting (PCCC), I write to express our support for the World Oil Ribost Terminal Project.

PCCC is deeply committed to empowering underserved and under resourced women, supporting them through the power of professional and accessible coaching. This project in collaboration with the Building Trades will create much needed economic opportunities for the Long Beach community including women and their families.

The Ribost Terminal Project EIR outlines less than significant impacts to our environment while creating jobs in Long Beach. PCCC is grateful for World Oil and their unwavering commitment to both business and community.

Thank you for considering our perspective on this important initiative.

Sincerely,

Silissa Uriarte Smith

Silissa Uriarte Smith
Founder & CEO
Purpose Centered Coaching & Consulting

PCCC-2

Purpose Centered Coaching and Consulting

Tax ID# 88-4268423

539 Daisy Ave., Long Beach, CA 90802

562/587-6584: SilissaUriarte@gmail.com

Responses to Comments of Purpose Centered Coaching and Consulting (PCCC)**Silissa Uriarte Smith, Founder & CEO****December 14, 2023**

- PCCC-1** The comment expresses support for the World Oil Tank Installation Project and describes the PCCC as an organization. This comment is noted for the record. The comments are a part of the Final EIR and will be before the decision-makers for their consideration prior to taking any action on the proposed Project.
- PCCC-2** PCCC reiterates that the EIR for the proposed Project outlines less-than-significant impacts and thanks World Oil for their unwavering commitment to both business and community.

Comments from South Bay Association of Chambers of Commerce (SBACC)

December 14, 2023

Honorable Mayor and City Council
City of Long Beach
411 W. Ocean Blvd.
Long Beach, CA 90802

Dear Honorable Mayor and City Council Members,

I am writing on behalf of the South Bay Association of Chambers of Commerce (SBACC) to express our support for the World Oil Tank Installation Project at the Port of Long Beach.

World Oil, a family-owned business with strong roots in Southern California, has been a key player in the collection, transportation, and recycling of used waste oil products. Their operations span across California, Nevada, Arizona, and New Mexico, servicing over 20,000 auto repair and servicing sites. In South Gate, they produce asphalt for paving and roofing, while their Long Beach terminal, the RIBOST Terminal, plays a crucial role in their operations.

The proposed project involves the installation and operation of two new 25,000-barrel storage tanks at the Long Beach terminal located at 1405 Pier C Street. These tanks, which will be integrated into the existing infrastructure, are designed to provide additional capacity for blending and storing marine fuels. This enhancement is particularly significant as it aligns with the cleaner IMO 2020 standards, benefiting Port tenants who rely on these fuels.

We understand that the combined construction and operational emissions of the project are well within the health risk thresholds set by the South Coast Air Quality Management District (SCAQMD). Furthermore, the Final Initial Study/Negative Declaration (IS/ND) indicates that the project will not contribute to significant environmental impacts, negating the need for a Mitigated Negative Declaration or an Environmental Impact Report for this scale of project.

SBACC-1**SBACC-2****SBACC-3****SBACC-4**

The construction phase of these tanks is expected to employ between 70 to 90 local workers, including members of the LA/OC Building Trades, contributing positively to our local economy.

SBACC-5

We respectfully request your approval of item number 26 and its resolution to deny the appeals and uphold the Harbor Commissioners' adoption of the Final IS/ND. This project is not only important for World Oil but also represents a significant step forward for our community in terms of economic and environmental progress.

SBACC-6

Thank you for your consideration of this matter.
Sincerely,



Monica Garcia-Diaz
Board President
South Bay Association of Chambers of Commerce

Responses to Comments - South Bay Association of Chambers of Commerce (SBACC)
Monica Garcia-Diaz, Board President
December 14, 2023

SBACC-1 The comment expresses support for the World Oil Tank Installation Project. No response is required.

SBACC-2 The comment provides SBACC's understanding of the World Oil Corporation, the parent company to Ribost Terminal and World Oil Refining in South Gate. The comment describes that the Ribost Terminal plays a crucial role in World Oil Refining's production of paving/roofing asphalt. As discussed in EIR Section 1.2.2 (*Existing Project Site Conditions and Operations*) on page 1-2, the Ribost Terminal provides crude oil storage capacity for World Oil Refining.

SBACC-3 SBACC describes the proposed Project, stating that the proposed Project "enhancement is particularly significant as it aligns with the cleaner IMO [International Maritime Organization] Standards, benefiting Port tenants who rely on these fuels".

While the Ribost Terminal facility stores and transports fuels via pipelines and trucks used in the vessels involved in shipping operations in the Port, it is important to emphasize that no vessels or water-side activities are associated with the existing or proposed operation of the Ribost Terminal, nor would they be associated with construction of the proposed Project.

SBACC-4 The comment states their understanding that the proposed Project's combined construction and operational emissions would be below the SCAQMD health risk thresholds. The comment refers to the Negative Declaration previously prepared for the proposed Project. As discussed in Draft EIR Section 3.1 (*Air Quality and Health Risk*), impacts associated with emissions from construction and operation of the proposed Project would be less than significant.

SBACC-5 The comment states the total number of workers expected to be employed during construction of the two tanks. As shown in the Draft EIR Table 1-1 (*Construction Schedule and Personnel*) on page 1-9, it is estimated that eight workers per day would be on-site during the various stages of construction.

SBACC-6 The comment refers to the Long Beach City Council appeal hearing for the Final Negative Declaration adopted by the Board of Harbor Commissioners in 2021.

The Board's determination to adopt the Final IS/ND was appealed to the Long Beach City Council. Ahead of the Long Beach City Council's appeal hearing on January 18, 2022, Ribost agreed to have an Environmental Impact Report prepared by the Port for the proposed Project and the Final IS/ND was withdrawn.

Comments from Harbor Association of Industry and Commerce (HAIC)**HAIC-1**

December 16, 2023

Honorable Mayor and City Council
City of Long Beach
411 W. Ocean Blvd.
Long Beach, CA 90802

Dear Honorable Mayor and City Council Members,

On behalf of the Harbor Association of Industry and Commerce, I am writing to express our strong support for the World Oil Tank Installation Project at the Port of Long Beach.

World Oil, a respected family-owned business deeply rooted in Southern California, has been instrumental in responsibly managing used waste oil products from over 20,000 auto service locations across California, Nevada, Arizona, and New Mexico. Their South Gate facility produces essential asphalt materials, while their Long Beach terminal, known as the RIBOST Terminal, is a vital part of their operations.

The project in question involves the installation of two new 25,000-barrel storage tanks at the Long Beach terminal located at 1405 Pier C Street. These tanks are designed to integrate seamlessly with existing utilities and will play a crucial role in enhancing the terminal's capacity for marine fuel blending and storage. This is particularly significant as it supports the adherence to the cleaner IMO 2020 standards, benefiting the port's tenants and the broader maritime community.

HAIC-2

We understand that the project's construction and operational emissions are well within the health risk thresholds established by the South Coast Air Quality Management District (SCAQMD). Additionally, the Final Initial Study/Negative Declaration (IS/ND) has determined that the project will not result in significant environmental impacts, thus negating the need for a more extensive environmental review.

HAIC-3

The construction of these tanks is expected to provide employment for 70 to 90 local workers, including members of the LA/OC Building Trades, thereby contributing positively to our local economy.

HAIC-4

We respectfully urge your approval of item number 26 and the resolution to deny the appeals and uphold the Harbor Commissioners' adoption of the Final IS/ND. This project represents a significant advancement for our community, both economically and environmentally.

HAIC-5

Thank you for considering our perspective on this important matter.
Sincerely,



Henry Rogers

Executive Director

Harbor Association of Industry and Commerce

Responses to Comments from Harbor Association of Industry and Commerce (HAIC)
Henry Rogers, Executive Director
December 16, 2023

- HAIC-1** The comment expresses support for the World Oil Tank Installation Project and expresses its understanding of World Oil Corporation, the parent company to Ribost Terminal on Pier C at the Port of Long Beach.
- HAIC-2** HAIC describes the proposed Project, stating that the “tanks are designed to integrate seamlessly with existing utilities and will play a crucial role in enhancing the terminal’s capacity for marine fueling and storage. This is particularly significant as it supports the adherence to the cleaner IMO [International Maritime Organization] 2020 standards, benefiting the port’s tenants and the broader maritime community.”
- While the Ribost Terminal facility stores and transports fuels via pipelines and trucks used in the vessels involved in shipping operations in the Port, it is important to emphasize that no vessels or water-side activities are associated with the existing or proposed operation of the Ribost Terminal, nor would they be associated with construction of the proposed Project.
- HAIC-3** The commenter states their understanding that the proposed Project’s combined construction and operational emissions would be below the SCAQMD health risk thresholds. The comment refers to the Negative Declaration previously prepared for the proposed Project. As discussed in the Draft EIR Section 3.1 (*Air Quality and Health Risk*), impacts associated with emissions from construction and operation of proposed Project would be less than significant.
- HAIC-4** The comment states the total number of workers expected to be employed during construction of the two tanks. As shown in the Draft EIR Table 1-1 (Construction Schedule and Personnel) on page 1-9, it is estimated that eight workers per day would be on site during the various stages of construction.
- HAIC-5** The comment refers to the Long Beach City Council appeal hearing for the Final Negative Declaration adopted by the Board of Harbor Commissioners in 2021. As discussed in the Draft EIR Section ES.6 (*Public Involvement*) on page ES-10, in 2021 the Board of Harbor Commissioners adopted a Final IS/ND. The BHC’s determination was appealed to the Long Beach City Council. At the Long Beach City Council’s appeal hearing on January 18, 2022, Ribost agreed to have an EIR prepared by the Port for the proposed Project, and the Final IS/ND was withdrawn.

Comments from BizFed (BF)



12/15/2023

Bobby Olvera, President
Long Beach Harbor Commissioners
415 W. Ocean Blvd
Long Beach, CA 90802

Via email

Subject: Agenda Item 26 - World Oil Tank Installation Project

President Olvera and the Long Beach Harbor Commissioners,

We are contacting you on behalf of BizFed, the Los Angeles County Business Federation, an alliance of over 220 business organizations with over 400,000 employers in Los Angeles County, to write in support of the World Oil Tank Installation Project. This project would provide additional storage capacity at their Port facility to increase the efficiency of their terminal operations.

World Oil is principally a recycler of used oils and waste antifreeze. The company collects, transports, and recycles used waste oil products from over 20,000 auto repair and auto servicing sites in CA, NV, AZ and NM. At its facility in South Gate, World Oil makes asphalts for paving and roofing applications. Its facility at the Port has 7 tanks that store feed for the asphalt plant and leases tanks for bunker fuel.

The proposed project will add two smaller tanks to add flexibility and increase the efficiency of its operations. With the addition of the two smaller tanks, the project will be able to provide surge capacity for blending and storage of marine fuels to meet cleaner IMO 2020 standards, which will directly benefit Port tenants who use these fuels. What's more, this Project will have no significant environmental impact, will not cause or contribute to new odors, and all neighbors are approximately 1/2-mile from the Terminal.

As California pushes towards our clean energy goals, it is important that we support industries who help our state become more resilient by utilizing recycled materials and using already existing infrastructure to meet our economy's critical infrastructure demands. We believe adding storage capacity to the World Oil facilities is a reasonable request and is working in the best interest of California policies.

We hope that you will support this project. If you have any questions, please contact sarah.wiltfong@bizfed.org.

Sincerely,

John Musella
BizFed Chair

David Fleming
BizFed Founding Chair

Tracy Hernandez
BizFed Founding CEO

David Englin
BizFed President

BF-1

BF-2

BF-3

BF-4

BF-5

BizFed Association Members

7-11 Franchise Owners Association for SoCal
 Action Apartment Association
 Alhambra Chamber
 American Beverage Association
 Antelope Valley Chamber formerly Lancaster Chamber of Commerce
 Apartment Association of Greater Los Angeles
 Apartment Association of Orange County
 Apartment Association, CA Southern Cities, Inc.
 Arcadia Association of Realtors
 AREAA North Los Angeles SFV SCV
 Armenian American Business Association
 Armenian Trade & Labor Association
 Arts District Los Angeles
 ASCM Inland Empire Chapter
 Asian American Advertising Federation- 3AF
 Associated Builders & Contractors SoCal (ABC SoCal)
 Associated General Contractors
 Association of Independent Commercial Producers
 AV Edge California
 Azusa Chamber
 Bell Chamber
 Beverly Hills Bar Association
 Beverly Hills Chamber
 BioCom
 Black Business Association
 BNIA/SUCCESS
 Bowling Centers of SoCal
 Boyle Heights Chamber of Commerce
 Bridge Compton Org
 Building Industry Association - LA/Ventura Counties
 Building Industry Association of Southern California
 Building Industry Association- Baldyview
 Building Owners & Managers Association of Greater Los Angeles
 Burbank Association of Realtors
 Burbank Chamber of Commerce
 Business and Industry Council for Emergency Planning and Preparedness
 Business Resource Group
 Calabasas Chamber of Commerce
 CalAsian Chamber
 CalChamber
 California Apartment Association- Los Angeles
 California Asphalt Pavement Association
 California Bankers Association
 California Business Properties
 California Business Roundtable
 California Cleaners Association
 California Contract Cities Association
 California Fashion Association
 California Fuels & Convenience Alliance- Formerly California Independent Oil Marketers Association (CIOMA)
 California Gaming Association
 California Grocers Association
 California Hispanic Chamber
 California Hotel & Lodging Association
 California Independent Petroleum Association
 California Life Sciences Association
 California Manufacturers & Technology Association
 California Metals Coalition
 California Natural Gas Producers Association
 California Restaurant Association
 California Retailers Association
 California Self Storage Association
 California Small Business Alliance
 California Society of CPAs - Los Angeles Chapter
 California Trucking Association
 Carson Chamber of Commerce
 Carson Dominguez Employers Alliance
 Central City Association
 Century City Chamber of Commerce
 Chatsworth Porter Ranch Chamber of Commerce
 Citrus Valley Association of Realtors
 Civil Justice Association of California CJAC
 Claremont Chamber of Commerce
 Commerce Business Council formerly Commercial Industrial Council/Chamber of Commerce
 Community Foundation of the Valleys
 Compton Chamber of Commerce
 Compton Community Development Corporation
 Compton Entertainment Chamber of Commerce
 Construction Industry Air Quality Coalition
 Construction Industry Coalition on Water Quality
 Council of Infill Builders
 Crenshaw Chamber of Commerce
 Culver City Chamber of Commerce
 Downey Chamber of Commerce
 Downtown Alhambra Business Association
 Downtown Center Business Improvement District
 Downtown Long Beach Alliance
 DTLA Chamber of Commerce
 El Monte/South El Monte Chamber
 El Segundo Chamber of Commerce
 Employers Group
 Energy Independence Now EIN
 Engineering Contractor's Association
 EXP The Opportunity Engine
 FastLink DTLA
 Filipino American Chamber of Commerce
 Friends of Hollywood Central Park
 FuturePorts
 Gardena Valley Chamber
 Gateway to LA
 Glendale Association of Realtors
 Glendale Chamber
 Glendora Chamber
 Greater Antelope Valley AOR
 Greater Bakersfield Chamber of Commerce
 Greater Coachella Valley Chamber of Commerce
 Greater Downey Association of REALTORS
 Greater Lakewood Chamber of Commerce
 Greater Leimert Park Crenshaw Corridor BID
 Greater Los Angeles African American Chamber
 Greater Los Angeles Association of Realtors
 Greater Los Angeles New Car Dealers Association
 Greater San Fernando Valley Chamber
 Harbor Association of Industry and Commerce
 Harbor Trucking Association
 Historic Core BID of Downtown Los Angeles
 Hollywood Chamber
 Hospital Association of Southern California
 Hotel Association of Los Angeles
 ICBWA- International Cannabis Women Business Association
 Independent Cities Association
 Independent Hospitality Coalition
 Industrial Environmental Association
 Industry Business Council
 Inglewood Board of Realtors
 Inland Empire Economic Partnership
 Irwindale Chamber of Commerce
 Kombucha Brewers International
 La Cañada Flintridge Chamber
 LA County Medical Association
 LA Fashion District BID
 LA South Chamber of Commerce
 Larchmont Boulevard Association
 Latin Business Association
 Latino Food Industry Association
 Latino Restaurant Association
 LAX Coastal Area Chamber
 Licensed Adult Residential Care Association- LARCA
 Long Beach Area Chamber
 Long Beach Economic Partnership
 Long Beach Major Arts Consortium
 Los Angeles Area Chamber
 Los Angeles Economic Development Center
 Los Angeles Gateway Chamber of Commerce
 Los Angeles Latino Chamber
 Los Angeles LGBTQ Chamber of Commerce
 Los Angeles Parking Association
 Los Angeles Regional Food Bank
 Los Angeles World Affairs Council/Town Hall Los Angeles
 MADIA Tech Launch
 Malibu Chamber of Commerce
 Manhattan Beach Chamber of Commerce
 Marketplace Industry Association
 Monrovia Chamber
 Motion Picture Association of America, Inc.
 MoveLA
 MultiCultural Business Alliance
 NATOP Southern California Chapter
 NAREIT
 National Association of Minority Contractors
 National Association of Theatre Owners
 CA/Nevada
 National Association of Women Business Owners
 National Association of Women Business Owners - LA
 National Association of Women Business Owners- California
 National Federation of Independent Business Owners California
 National Hookah
 National Latina Business Women's Association
 Norwegian American Chamber of Commerce
 Orange County Business Council
 Orange County Hispanic Chamber of Commerce
 Pacific Merchant Shipping Association
 Panorama City Chamber of Commerce
 Paramount Chamber of Commerce
 Pasadena Chamber
 Pasadena Foothills Association of Realtors
 PGA
 Pharmaceutical Care Management Association
 PhRMA
 Pico Rivera Chamber of Commerce
 Pomona Chamber
 Rancho Southeast REALTORS
 ReadyNation California
 Recording Industry Association of America
 Regional CAL Black Chamber, SVF
 Regional Hispanic Chambers
 San Dimas Chamber of Commerce
 San Gabriel Valley Economic Partnership
 San Pedro Peninsula Chamber of Commerce
 Santa Clarita Valley Chamber
 Santa Clarita Valley Economic Development Corp.
 Santa Monica Chamber of Commerce
 Secure Water Alliance
 Sherman Oaks Chamber
 South Bay Association of Chambers
 South Bay Association of Realtors
 South Gate Chamber of Commerce
 South Pasadena Chamber of Commerce
 Southern California Contractors Association
 Southern California Golf Association
 Southern California Grantmakers
 Southern California Leadership Council
 Southern California Minority Suppliers Development Council Inc.
 Southern California Water Coalition
 Southland Regional Association of Realtors
 Specialty Equipment Market Association
 Sportfishing Association of California
 Structural Engineers Association of Southern California
 Sunland/Tujunga Chamber
 Sunset Strip Business Improvement District
 Swiss American Chamber of Commerce
 Thai American Chamber of Commerce
 The LA Coalition for the Economy & Jobs
 The Los Angeles Taxpayers Association
 The Two Hundred for Homeownership
 Torrance Area Chamber
 Tri-Counties Association of Realtors
 United Chambers - San Fernando Valley & Region
 United States-Mexico Chamber
 Unmanned Autonomous Vehicle Systems Association
 Urban Business Council
 US Green Building Council
 US Resiliency Council
 Valley Economic Alliance, The
 Valley Industry & Commerce Association
 Venice Chamber of Commerce
 Vermont Slauson Economic Development Corporation
 Veterans in Business
 Vietnamese American Chamber
 Warner Center Association
 West Hollywood Chamber
 West Hollywood Design District
 West Los Angeles Chamber
 West San Gabriel Valley Association of Realtors
 West Valley/Warner Center Chamber
 Westchester BID
 Western Electrical Contractors Association
 Western Manufactured Housing Association
 Western States Petroleum Association
 Westside Council of Chambers
 Westwood Community Council
 Whittier Chamber of Commerce
 Wilmington Chamber
 World Trade Center

Los Angeles County Business Federation / 1150 South Olive Street, Floor 10, Los Angeles, CA 90015 / T: 323.889.4348 / www.bizfed.org

Responses to Comments from BizFed (BF)
John Musella, David Fleming, Tracy Hernandez, and David Englin
December 15, 2023

- BF-1** The subject line in the comment letter refers to Agenda Item 26 of the Board of Harbor Commissioners (BHC) meeting of October 28, 2021, during which the BHC held a public hearing to consider adoption of the Final Initial Study/Negative Declaration (IS/ND) previously prepared for the proposed Project. As discussed in the Draft EIR Section ES.6 (*Public Involvement*) on page ES-10, in 2021 the BHC adopted a Final IS/ND. The BHC's determination was appealed to the Long Beach City Council. At the Long Beach City Council's appeal hearing on January 18, 2022, Ribost agreed to have an EIR prepared by the Port for the proposed Project and the Final IS/ND was withdrawn.
- BF-2** The comment describes the commenter's organization and expresses support for the World Oil Tank Installation Project. No response necessary.
- BF-3** The comment provides its understanding of World Oil's operations and the World Oil Facility. No response is necessary.
- BF-4** BizFed reiterates the proposed Project and explains that the addition of the two new tanks would provide additional capacity for storage of marine fuels. The comment also states the Project would have no significant environmental impact, would not cause or contribute to new odors, and neighbors are approximately ½ mile away.
- BF-5** The comment states the importance of supporting industries who help our state become more resilient by utilizing recycled materials and existing infrastructure. The commenter states its belief that adding storage capacity to the World Oil facilities is reasonable and works in the best interest of California's policies.

Comments from Los Cerritos Wetlands Task Force, Sierra Club (LCWTF)

December 15, 2023

To: Matthew Arms, Director of Environmental Planning, Port of Long Beach

From: The Los Cerritos Wetlands Task Force, Sierra Club

Re: Comments on the Draft Environmental Impact Report for the World Oil Tank Installation Project (SCH No. # 2020100119)

World Oil Terminals (Ribost Terminal LLC), proposes to add two new 25,000 BBLS petroleum storage tanks to its current seven tanks (500,000 BBLS) at Pier C 1405 Pier C Street. The Port of Long Beach already has the capacity to store 3,582,000 BBLS of liquid fossil fuels. This Project is an expansion of infrastructure that will prolong dependence on fossil fuel and harm local overburdened communities. The Port must reduce, not expand, fossil fuel storage to meet its Green Port goals. The Green Port Air quality impacts, which only consider transportation, must be revised to include emissions from dry and wet storage of fossil fuels.

The DEIR's language, scope, and conclusions are BIASED and INADEQUATE.

The World Oil Tank Installation Project DEIR does not change the project description, asks, or conclusions of the Mitigated Negative Declaration. Like the MND, it is being met with criticism from environmental justice organizations due to its narrow Project Objectives and failure to adequately address the cumulative impacts of the Project on the environment and nearby at-risk communities.

WE DEMAND that a NO PROJECT ALTERNATIVE BE PRIORITIZED in the Final EIR for the following reasons:

1. The DEIR's alternatives analysis is flawed and fails to properly consider reasonable alternatives to the proposed Project. The problem with the EIR process is that Project Alternatives (other than a No Project) must support the Project Objectives. LCWTF opposes the Project Objectives which are to increase the efficiency of World Oil Tank's operations and to make some of its existing fuel storage tanks available for lease by other entities. This must be addressed before any further action is taken on this Project.

2. The DEIR's Project Objectives prioritize economic benefits to World Oil and the Port of Long Beach without proper consideration for the environment, health, and public safety. There is no public benefit to increasing the efficiency and profitability of a private for-profit fossil fuel entity. This is unacceptable and must be addressed before any further action is taken on this Project.

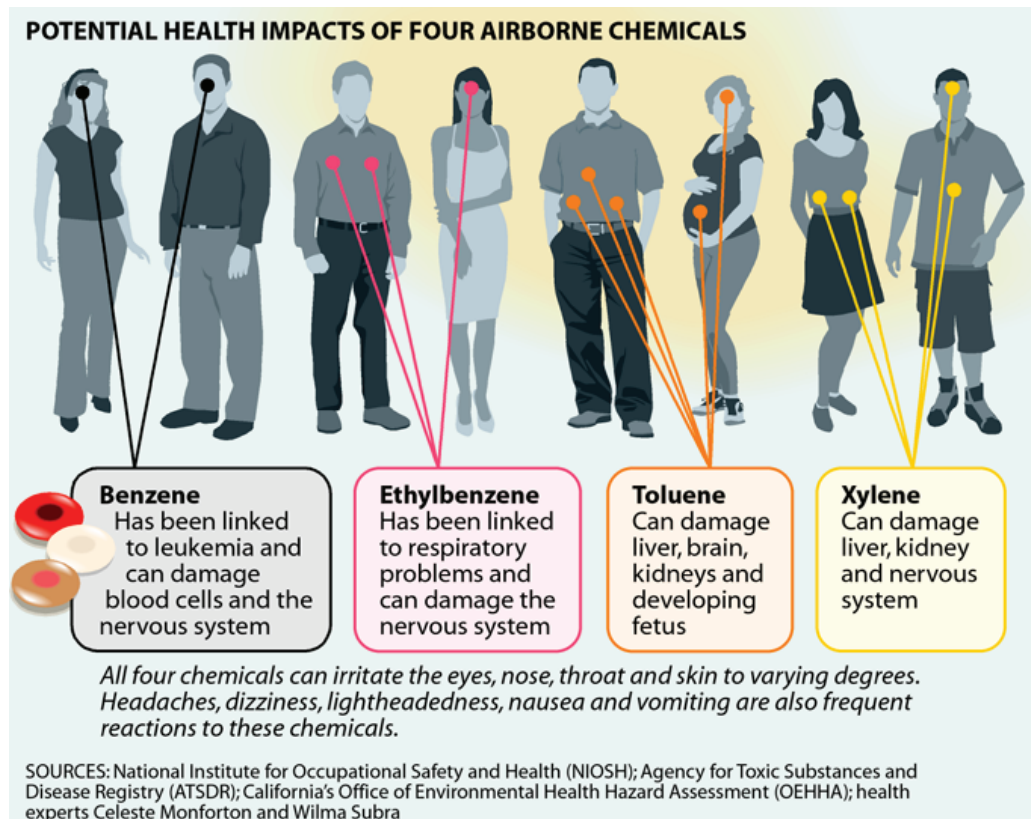
3. The DEIR's Project Objectives are improperly biased in favor of the County's and World Oil's proposed plan. The DEIR's narrow construction of project objectives virtually guarantees that any feasible or reasonable alternatives to the proposed Project must be rejected. This is unacceptable and must be addressed before any further action is taken on this Project.

4. The DEIR fails to adequately evaluate and mitigate disaster risks and operational hazards. The DEIR insufficiently addresses the significant environmental risks and impacts associated with earthquakes,

LCWTF-1**LCWTF-2****LCWTF-3****LCWTF-4****LCWTF-5****LCWTF-6**

tsunamis, and storm flooding. A spill of only one gallon of oil can contaminate a million gallons of water. Nor does the DEIR fully address pollution from ongoing operations, including the release of fugitive emissions. Fugitive emissions from oil and gas activities may be attributed to the following primary types of sources: fugitive equipment leaks, process venting; evaporation losses; disposal of waste gas streams (e.g., by venting or flaring), accidents, and equipment failures. Fugitive emissions from tanks include methane, carbon dioxide, nitrous oxide, and lead.

**LCWTF-6
(con't)**



5. The DEIR's analysis of the Project's cumulative impacts on greenhouse gas emissions is insufficient and does not properly consider the significance thresholds for environmental impacts. The DEIR's cumulative impact "analysis" of greenhouse gas emissions fails to adequately consider the Project's impact on global climate change. While methane (CH₄) is the predominant type of greenhouse gas emitted as a fugitive emission in the oil and gas sector, noteworthy fugitive emissions of carbon dioxide (CO₂) and, to a much lesser extent, nitrous oxide (N₂O), may also occur. This must be addressed before any further action is taken on this Project.

LCWTF-7

6. The DEIR fails to adequately address the cumulative impacts of the Project on the environment and nearby communities. The Project will disproportionately burden communities (predominantly low income people of color), in Wilmington and Long Beach, which already suffer from extremely high levels of pollution. The DEIR also ignores the impact of the proposed Project on those who work in the Port and in nearby communities.

LCWTF-8

The description of the Project Location in the DEIR as “Pier C, northeast portion of harbor district” omits the relevant information that the project site is within 3200 ft of two public schools, 2 parks, 1 sports field, and 1 hospital. Studies have shown that living and working within 3200 ft of oil wells and other fossil fuel operations can result in cancer, respiratory illnesses, heart problems, and post-natal impacts including low-birth weight. The exposure of multiple sensitive receptors to emissions from additional fossil fuel storage, transport, and consumption are not acknowledged.

Additionally, the proximity of existing fossil fuel storage in the Port to neighboring communities in Long Beach and Wilmington must also be taken into consideration and discussed in relation to the Project. The cumulative impacts of storing fossil fuels in the Port to sensitive receptors must be acknowledged and mitigated before the Port can consider this Project or any other expansion of fossil fuel storage capacity.



Port of Long Beach Fossil Fuel Storage Capacity

Source: Port Operations Dashboard:

<https://polb.com/business/port-operations-and-facilities/#liquid-bulk-tenants/vopak-pier-s> Note: I am still researching additional storage facilities not listed here, AC

Dry Bulk Tenants

Koch Carbon LLC, Pier F Berth 211

Petroleum coke, prilled sulfur

6.7 acre storage area, no storage capacity listed.

Metro Ports, Pier G, Berths G212-G214

Petroleum coke, coal, potash, sodium sulfate, soda ash, concentrates, and prilled sulfur. Storage capacity 540,000 tons

Liquid Bulk Tenants

Chemoil Marine, Pier F, Berth F 209, Pier G, Berth G211A, 1004 Pier F Ave. Berth F209 and G211A Petroleum products and bunker fuel.

Storage capacity 445,000 BBLS.

Marathon Petroleum

Pier B Berths B76-B80

Petroleum products: i.e., gasoline, blending stocks, MTBE, diesel, naphtha jet fuel, fuel oils, carbon black, crude oil

Storage capacity: 1,800,000 BBLS.

Pier B Berths B84-B87, Pier B Berth 84

Crude oil, petroleum products, bunker fuel.

Storage capacity: 245,000 BBLS

Petro-Diamond

Pier B, Berths B82-B83

Gasoline, ethanol, gasoline blend stocks, diesel, biodiesel, Storage capacity: 590,000 BBLS.

World Oil Terminals (Ribost Terminal LLC),

Pier C 1405 Pier C Street

Petroleum

Storage capacity: 502,000 BBLS

Proposed addition of two 25,000-bbl petroleum storage tanks

Port's Total storage capacity (approximate)

Dry: 540,000 tons plus Koch Carbon's amount (not listed), Wet: 3,582,000 BBLS.

**LCWTF-8
(con't)**



In conclusion, the Los Cerritos Wetlands Task Force demands that the Port of Long Beach commit to transparency, accountability, and environmental and public health protection. The Port's attention to the above comments on the World Oil Tank Installation Project DEIR will contribute to responsible decision-making and community well-being.

Respectfully, Ann Cantrell and Anna Christensen, Co-chairs, Los Cerritos Wetlands Task Force, Sierra Club

LCWTF-9

**Responses to Comments from Los Cerritos Wetlands Task Force, Sierra Club (LCWTF)
Ann Cantrell and Anna Christensen, Co-Chairs
December 15, 2023**

LCWTF-1 The comment acknowledges the Project proposes to add two new 25, 00 BBLs petroleum storage tanks to its current development at 1405 Pier C Street. The comment claims the proposed expansion of infrastructure will prolong the dependence on fossil fuel and harm local overburdened communities. The comment states that the Port must reduce, not expand, fossil fuel storage to meet its Green Port goals. The comment states that the Green Port [Policy] Air quality impacts [to reduce air emissions from Port activities] must be revised to include emissions from dry and wet storage of fossil fuels. Revising the Green Port Policy is not part of the proposed Project, and thus, is outside the scope of the EIR.

LCWTF-2 The comment asserts that the Draft EIR's language, scope, and conclusions are biased and inadequate and that the Project objectives are too narrow. However, the comment does not elaborate on these statements and does not explain why the Project objectives are "narrow." The Project objectives were largely determined by the Applicant's goals and intended purpose of the Project.

The comment asserts the Draft EIR did not change the project description, asks or conclusions of the Mitigated Negative Declaration. The Draft EIR includes clarifications in the project description in response to comments received on the Mitigated Negative Declaration. Additionally, several issue areas, including Air Quality, Geology and Soils, Hazards and Hazardous Materials, and Hydrology, Water Quality and Sea-Level Rise were carried forward for in-depth analysis. EIR Section ES.9 (*Environmental Impacts and Mitigation Measures*) provides a summary of each impact's significance conclusion. All impacts in the EIR were found to be less than significant.

The comment also states that the Draft EIR failed to adequately address cumulative impacts to nearby at-risk communities. Please refer to EIR Section 3.1.1.3 (*Sensitive Receptors*) on page 3.1-5, which identifies the nearest sensitive receptors including residents, school, hospital, and childcare center. Cumulative impacts were evaluated and discussed for each environmental resource area in EIR Sections 3.1.6, 3.2.6, 3.3.6, 3.4.6, and 3.5.7; none of the Project's impacts were identified as cumulatively considerable as defined by State CEQA Guidelines Section 15130.

LCWTF-3 The comment requests that a No Project Alternative be prioritized in the Final EIR because the Draft EIR's alternatives analysis is flawed and fails to properly consider reasonable alternatives, as under the EIR process the alternatives must support the Project objectives. The commenter opposes the Project objectives and requests that this be addressed before taking further action on the Project. On January 30, 2023, the Port released a Notice of Preparation and an Initial Study seeking input on the scope and content of the EIR. In addition, the Port held two public scoping meetings, one on-line virtual meeting on February 8, 2023 and one in-person meeting on February 15, 2023. No comments opposing the Project objectives nor proposing any alternatives to the project were received during this time. See Table ES-1 beginning at page ES-11 for a list of comments received during the Project's public scoping process. Per State CEQA Guidelines Section 15126.6, an EIR shall describe a range of reasonable alternatives to the project which would feasibly attain most of the basic

objectives of the project but avoid or substantially lessen any significant effects of the project. EIR Section 5 (*Alternatives Comparison*) evaluates a range of reasonable alternatives to the Project, consistent with the requirements of State CEQA Guidelines Section 15126.6. As such, the alternatives analysis is adequate. See also Response to Comment LCWTF-4.

LCWTF-4 The comment requests that a No Project Alternative be prioritized in the Final EIR and asserts that the Project objectives prioritize economic benefits to World Oil and the Port of Long Beach without proper consideration for the environment, health, and public safety. Per State CEQA Guidelines Section 15124(b), a statement of objectives sought by a proposed project shall include the underlying purpose of the project and may discuss project benefits. Project objectives are not required to solely benefit the public. The alternatives analysis and environmentally superior alternative discussion considers the fundamental objectives of the Project.

LCWTF-5 The comment asserts that the Project objectives are biased in favor of the proposed Project and guarantee that any feasible or reasonable alternatives must be rejected. Per CEQA Guidelines Section 15124(b), a statement of objectives sought by a proposed project shall include the underlying purpose of the project and may discuss project benefits. As such, the Project objectives are appropriately identified and discussed in the Draft EIR. As described in EIR Section 1.6.2 (*Alternatives Considered but Not Carried Forward for Detailed Analysis*) at page 1-14, a reasonable range of alternatives were identified for the Project site, as well as one alternative that would construct the proposed Project offsite. These were eliminated from further analysis due to infeasibility and inability to meet the basic Project objectives. As described in EIR Section 5.3 (*Environmentally Superior Alternative*) at page 5-9, the Single Tank Alternative, constructing a single 25,000 bbl tank, was carried forward for further analysis as it would reduce potential impacts essentially by half. While the Single Tank Alternative was determined to be environmentally superior to the Proposed Project, it does not provide for enough of an efficiency improvement for Ribost to conduct business and severely limits opportunities to lease tanks. It should be noted that there are no significant impacts associated with the construction and operation of the proposed Project even if incrementally higher than the Single Tank Alternative.

LCWTF-6 The comment asserts that the Draft EIR fails to adequately evaluate and mitigate disaster risks and operational hazards including impacts associated with earthquakes, tsunamis, storm flooding, and related oil spills. While CEQA requires the evaluation of a project's impact to the environment, CEQA does not require an evaluation of the effects of the environment on a project. Impacts related to earthquake, tsunamis, storm flooding, and potential oil spills were evaluated and discussed in EIR Sections 3.5 (*Hydrology, Water Quality and Sea-level Rise*) and Section 3.4 (*Hazards and Hazardous Materials*), and all impacts were determined to be less than significant.

Draft EIR Section 3.2 (*Geology and Soils*) Impact GEO-1 at page 3.2-15, states that the proposed Project is not located within a mapped Alquist-Priolo Earthquake Fault Zone, and no active faults cross the Project site. No habitable structures would be constructed under the proposed Project, and therefore, the Project would not result in an increase in the seismic hazard to people. Although the Project is located in a seismically active region, the Project would incorporate a ground improvement system, such as Drill Displacement Column™ or Rammed Aggregate Piers®, which

would reduce the effects of static and seismic settlements. Compliance with the International Building Code, California Building Code, and municipal code provisions would ensure impacts from ground shaking would be less than significant.

As stated in EIR Section 3.5 (*Hydrology, Water Quality and Sea-Level Rise*), the proposed tanks would be constructed and installed within an 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 and operation of the new tanks would not change the level of protection that the containment wall provides. Furthermore, the existing containment wall, designed to withstand a 100-year storm surge event (approximately 7.61 feet), would protect against temporary inundation of up to an additional 4 feet. An inundation of 4.3 feet (based on a medium-high risk sea-level rise projection for the year 2080 based on the life-span of Project assets) may overtop the containment wall in its lowest areas in the future (2080 – 56 years in the future). Existing air-driven pumps would be used to divert stormwater over the containment wall during a flood event into existing sumps that would drain to the on-site wastewater treatment plant.

Additionally, in the event of an emergency, Ribost would comply with risk reduction requirements through implementation of existing emergency contingency plans, which include precautions to minimize potential hazards and actions to take. See EIR Section 3.4.1.2 (*Hazards and Hazardous Materials Setting*) for the full list of Ribost's existing emergency contingency plans. In the event of a spill or leak of hazardous materials, compliance with the existing Stormwater Pollution Prevention Plan, Soil Management Plan, Spill, Prevention, Control, and Countermeasure Plan, and Oil Spill Contingency and Facility Response Plan would reduce impacts to a less-than-significant level (Impacts HAZ-1 and HAZ-3).

The comment asserts that the DEIR does not “fully address pollution from ongoing operations, including releases of fugitive emissions . . .” EIR Section 3.1.1 (*Environmental Setting*) describes the CEQA baseline conditions related to air quality and health risk; therefore, only anticipated impacts from the proposed Project and alternatives are analyzed in the Draft EIR. Health risks related to diesel particulate matter, volatile organic compounds, and other emissions from the Project are discussed in Section 3.1 (*Air Quality and Health Risk*).

LCWTF-7 The comment asserts that the analysis of the Project's cumulative impacts on greenhouse gas (GHG) emissions is insufficient and does not properly consider the significance thresholds for environmental impacts. The comment also states that this analysis fails to adequately consider the Project's impact on global climate change, as methane (CH₄), carbon dioxide (CO₂), and nitrous oxide (N₂O) are GHGs emitted in the oil and gas sector.

Section 3.3.1.1 (*GHG Emissions and Effects*) discusses CH₄, CO₂, and N₂O and how each GHG's global warming potential is reported as carbon dioxide equivalent (CO₂e). Impact GHG-1 evaluates the Project's construction and operational emissions in metric tons (MT) of CO₂e per year. Therefore, the Draft EIR considers the Project's impact on global climate change. Draft EIR Section 3.3 (*Greenhouse Gas Emissions*) 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 SCAQMD's GHG threshold for industrial facilities of 10,000 MT of CO₂e per year is an indicator of a potentially

significant impact to the environment, and this threshold would not be exceeded, as described in Impact GHG-1 and GHG-2 at page 3.3-4 through 3.3-6. The analysis discloses trace amounts of fugitive methane could escape during Project operations, but amounts would be negligible. The analysis notes that the proposed Project would be used to transfer partially processed crude oil, that contain little to no methane that could escape as fugitive because methane is normally lost during the extraction and production of the crude oil at the well-site. Although GHG impacts on global climate change are inherently cumulative, the incremental contribution of the Project's GHG emissions to the effects of climate change would be limited, and the level of quantified emissions would not exceed SCAQMD's GHG significance threshold. The analysis for Impact GHG-3 discusses the Project's consistency with the State's long-term climate goals and strategies and provides information on how those goals and strategies address the Project's incremental contribution. Therefore, the GHG impacts would not be cumulatively considerable per State CEQA Guidelines Section 15064.4.

LCWTF-8 The comment asserts that the Draft EIR fails to adequately address the cumulative impacts of the Project on the environment and nearby communities. Cumulative impacts were evaluated and discussed for each environmental resource area in EIR Section 3.1.6 (*Air Quality and Health Risk*) at page 3.1-30, Section 3.2.6 (Geology and Soils) at page 3.2-24, Section 3.3.6 (*Greenhouse Gas Emissions*) at page 3.3-10, Section 3.4.6 (*Hazards and Hazardous Materials*) at page 3.4-23, and Section 3.5.7 (*Hydrology, Water Quality and Sea-Level Rise*) at page 3.5-22; none of the Project's impacts were identified as cumulatively considerable as defined by State CEQA Guidelines Section 15130. Additionally, Section 3.1 (*Air Quality and Health Risk*) analyzes impacts affecting minority, low-income populations, and sensitive receptors, and the Project's potential to conflict with applicable air quality regulations and strategies, which include those aiming to reduce GHGs and improve local and regional air quality. The Draft EIR analyzes potential impacts to the nearest sensitive receptor located approximately 0.5 mile (800 meters or 2,624 ft) from the Project area. Impacts were found to be less than significant.

LCWTF-9 The comment requests that the Port commit to transparency, accountability, and environmental and public health protection and states that the above comments will contribute to responsible decision-making and community well-being. As described in California Public Resources Code Section 21002.1(a), the purpose of an EIR is to identify significant environmental effects of a project, project alternatives, and the means to mitigate or avoid those significant effects. Regarding transparency, Section ES.6 (*Public Involvement*) at page ES-10 discusses how the Port solicited public input through the public review and scoping processes. Additionally, all comments provided during the scoping period have been considered in the EIR analyses.

Comments from Center for Biological Diversity, et al.

December 15, 2023

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

Re: Comments on the Draft Environmental Impact Report for the World Oil Tank Installation Project (SCH No. # 2020100119)

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

Dear Mr. Arms:

The undersigned organizations submit these comments on the Draft Environmental Impact Report (DEIR) prepared for the World Oil Tank Installation Project (Project). The Port of Long Beach (Port or POLB), as the lead agency for the Project, must correct the significant deficiencies in the DEIR by responding to comments and making critical revisions to the DEIR. In its current form, the DEIR fails to protect the environment and ultimately public health and safety from this harmful expansion of operations at the Ribost/World Oil Terminal.

The undersigned organizations have, for years, been robust participants in the environmental review process for this Project. In 2020, the Port issued a Draft Initial Study and Negative Declaration (2020 IS/ND), on which many of our organizations provided detailed comments.¹ In 2021, members of our coalition again voiced deep concerns with the Project and its environmental review process, authoring letters to both the Board of Harbor Commissioners and the Long Beach City Council.² Finally, earlier this year, Earthjustice submitted comments on the Port's revised Initial Study, which was released in January 2023.³ Unfortunately, many of the core deficiencies in the Project's environmental review process remain unaddressed. As such, we are incorporating our prior comments by reference, which we have attached below as appendices.

Given the Project's various environmental impacts, safety hazards, and the severe existing pollution burden in the surrounding communities, thorough environmental review is critical. The Project aims to increase the storage of crude oil at the Port by 50,000 barrels (bbl), adding two 25,000 bbl storage tanks to an existing tank farm, which already includes seven oil storage tanks

¹ Appendix [A], Earthjustice, Communities for a Better Environment, East Yard Communities for Environmental Justice, Center for Biological Diversity, & Coalition for Clean Air, Comments on the Draft Initial Study and Negative Declaration for the World Oil Tank Installation Project (SCH#2020100119) (Nov. 20, 2020).

² Appendix [B], Earthjustice, Center for Community Action and Environmental Justice, San Pedro & Peninsula Homeowners Coalition, & Sierra Club–Angeles Chapter, Comment on World Oil Tank Installation Project for Public Hearing (Oct. 7, 2021); Appendix [B], Appeal of Long Beach Board of Harbor Commissioners' Approval of World Oil Tank Installation Project (HD-21-537) (Nov. 11, 2021).

³ Appendix [C], Earthjustice, Comments on the Initial Study for the World Oil Tank Installation Project (Ribost Terminal, LLC (World Oil Terminals); Application No. 19-066) (Feb. 24, 2023).

CBD-1**CBD-2****CBD-3**

CBD-3
(con't)

with a total capacity of 502,000 bbl.⁴ Although the DEIR denies that the Project would have any significant environmental impacts, this comment outlines why this expansion would severely affect air quality, human health and safety, hazardous materials, disaster preparedness, and cumulative impacts, among other environmental harms. Importantly, the Project is sited close to residential neighborhoods, an elementary school, and a hospital, and thus will negatively affect the health of thousands of families living in the surrounding areas.⁵ Due to the area's severe existing environmental burdens—caused by freight activity, heavy freeway traffic, port and rail operations, oil and gas production, gas-fired power generation, and crude oil refineries—the surrounding communities of Wilmington, Carson, and West Long Beach have been formally designated by the South Coast Air Quality Management District (SCAQMD) and the California Air Resources Board (CARB) as a priority for air quality improvements and emissions reductions.⁶

Adequate environmental review is critical, particularly because the Project presents serious health and safety risks to surrounding communities, along with significant environmental impacts for the region at large. The DEIR cannot gloss over the long-term pollution increases and climate impacts from the Project. The Project would exacerbate air pollution in an area that continues to suffer from some of the worst air quality in the nation and hosts the third largest oil field in the continental United States.⁷ Further, it would artificially prolong the use of fossil fuels in California, in direct contrast to the state's dual objectives of transitioning to a fully renewable energy sector and reducing greenhouse gas emissions by 85 percent below 1990 levels by no later than 2045.⁸ As such, the Port must revise the DEIR to provide the public and decisionmakers with the necessary information and analysis to allow them to fully understand the consequences of this Project.

The fundamental goal of the California Environmental Quality Act (CEQA) is the protection of the environment and, as such, the law should be “interpreted . . . to afford the fullest possible protection to the environment.”⁹ CEQA also aims to inform the public and decisionmakers about the potential significant environmental impacts arising from a proposed project.¹⁰ However, as currently drafted, the DEIR fails to afford the greatest possible protection to the environment and fails as an informational document. Throughout the document, the DEIR misinforms the public

CBD-4

⁴ World Oil Tank Installation Project, Draft Environmental Impact Report, State Clearinghouse No. 2020100119 (*hereinafter*, DEIR) at 1-1 (Oct. 2023).

⁵ DEIR at 3.1-5.

⁶ Cal. Air Res. Bd., Wilmington, Carson, and West Long Beach (selection year 2018) (last visited Dec. 14, 2023), <https://ww2.arb.ca.gov/our-work/programs/community-air-protection-program/communities/wilmington-carson-west-long-beach>.

⁷ Am. Lung Ass'n, Ozone Pollution Trends, <https://www.lung.org/research/sota/key-findings/ozone-pollution>; Long Beach Energy Resources, Historical Oil Operations - Wilmington Oil Field <https://longbeach.gov/energyresources/about-us/oil/history> (last visited Dec. 14, 2023).

⁸ *California Releases Report Charting Path to 100 Percent Clean Electricity*, Cal. Energy Comm'n. (Mar. 15, 2021), <https://www.energy.ca.gov/news/2021-03/california-releases-report-charting-path-100-percent-clean-electricity>; 2022 Scoping Plan Executive Summary, Cal. Air Res. Bd. 9 (Dec. 2022), <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp-es.pdf>.

⁹ *Protecting Our Water & Env't Res. v. Cnty. of Stanislaus*, 472 P.3d 459, 468 (2020) (citations omitted); Cal. Pub. Res. Code § 21000 et seq.

¹⁰ Cal. Code Regs., tit. 14 (*hereinafter*, CEQA Guidelines), § 15002(a)(1).

and decisionmakers about the scope and purpose of the Project, fails to provide sufficient information and analysis, and makes legal and factual errors, including:

**CBD-4
(con't)**

- **The Project Description is vague and misleading.** The Project Description does not accurately describe the full scope of the Project, nor does it adequately disclose project objectives or analyze alternatives.
- **The DEIR fails to adequately disclose or analyze the Project's impacts related to the disposal of hazardous materials.** The DEIR does not disclose clearly, or at all, where or how hazardous waste from the Project will be transported for treatment and disposal.
- **The DEIR fails to adequately evaluate and mitigate disaster risks.** In particular, the DEIR insufficiently analyzes the significant environmental risks and impacts associated with earthquakes, tsunamis, and storm flooding.
- **The DEIR fails to accurately disclose or evaluate the Project's cumulative impacts.** Despite the Project's presence in a severely pollution-burdened community, largely due to the presence of Port-related industrial activity and sprawling fossil fuel infrastructure, the DEIR pays little attention to the Project's contribution to significant, cumulative environmental impacts.
- **The Project runs directly counter to statewide, regional, and local strategies designed to protect communities' health and reduce greenhouse gas emissions.** The Project is at odds with the policies and overall goals of the South Coast Air Quality Management Plan, the San Pedro Bay Ports Clean Air Action Plan, the A.B. 617 Community Emissions Reductions Plan, the 2022 California Scoping Plan, and the Port's Green Port Policy.

CBD-5

CBD-6

CBD-7

CBD-8

CBD-9

In addition to our prior comments, we have attached copies of the sources referenced in the footnotes as appendices. We appreciate the opportunity to comment on this DEIR.

CBD-10

I. The Project Description Is Fundamentally Flawed and the Project's Objectives Are Artificially Narrow.

CBD-11

The DEIR repeatedly mischaracterizes the scope and goals of the Project. CEQA requires an EIR to include an accurate, stable, and finite project description that includes all components of a project.¹¹ An EIR must also disclose and analyze any "indirect environmental impact that may be caused by the project."¹² CEQA further requires an EIR to include a statement of project objectives that describes the underlying purpose of the project without narrowing the project objectives to preclude a meaningful analysis of alternatives.¹³

The DEIR, in its current state, fails on all counts. It provides a project description that does not recognize the direct downstream consequences of significantly increasing storage capacity and throughput at the existing tank farm. While the new tanks alone will permit a significant increase in crude oil and heavy marine fuel throughput per month at the tank farm, the Project also

¹¹ *Cnty. of Inyo v. City of Los Angeles*, 71 Cal. App. 3d 185, 199 (1977).

¹² *City of Long Beach v. City of Los Angeles*, 19 Cal. App. 5th 465, 478 (2018).

¹³ CEQA Guidelines § 15124(b); *N. Coast Rivers All. v. Kawamura*, 243 Cal. App. 4th 647, 666-67 (2015).

explicitly contemplates leasing out two existing but “underutilized” oil storage tanks to new lessees, yet fails to carry out any analysis of the environmental impacts that will result from re-leasing these two additional tanks.¹⁴ It further sketches a deeply flawed alternatives analysis and statement of project objectives.

**CBD-11
(con’t)**

a. The project description does not adequately describe the full scope of the Project.

CEQA requires lead agencies to provide an accurate project description when preparing an EIR.¹⁵ Here, the DEIR describes the Project as a minor construction endeavor that would improve the efficiency of Port operations and “realign storage capacity needs.”¹⁶ This disingenuous project description fails to include the Project’s: (1) likely expansion of operations at existing storage tanks, and (2) downstream impacts related to the expansion of capacity and throughput at the tank farm. As a consequence, the DEIR omits critical components of the Project, ultimately understating the scope of the Project and leaving the public guessing as to its ultimate impacts.¹⁷

CBD-12

As an initial matter, the DEIR limits its project description to the construction and operation of the two proposed storage tanks. While these impacts are significant on their own—and, as discussed *infra*, inadequately analyzed—the DEIR also fails to recognize or evaluate the downstream impacts resulting from the increased throughput of petroleum products at the existing tank farm that will be facilitated by the construction of the two new tanks. Not only does the Project include construction of an additional 50,000 bbl of storage capacity, it would also make available for lease a pair of large storage tanks that the DEIR describes as being currently “underutilized.” This likely means that the total amount of petroleum products stored on-site will increase by more than 50,000 bbl, as the Project intends to address the existing tanks’ purported underutilization by “realigning storage capacity.” Yet the DEIR makes no effort to consider or disclose the extent to which throughput and storage volume will increase at these tanks, nor does it recognize the significant environmental harms associated with these expansions in operations. As such, the public is left without any information regarding the extent and potential range of impacts relating to the increased usage of the existing oil storage tanks.

Moreover, the project description fails to include *any* consideration of the downstream impacts created by the Project’s proposal to significantly increase storage and throughput capacity at the tank farm. SCAQMD Permits to Construct issued in 2021 allowed a total additional throughput of 150,000 bbl at the existing tank farm.¹⁸ As the Project has not since been modified in any meaningful way, this assumed throughput should be used to assess downstream impacts. As noted above, this does not include increases in throughput related to the increased utilization of the existing tanks. CEQA requires that environmental review of a project include its reasonably foreseeable indirect impacts on the environment. Where, as here, a project would indirectly

¹⁴ DEIR at 1-1.

¹⁵ CEQA Guidelines § 15378.

¹⁶ DEIR at ES-2.

¹⁷ *Santiago Cnty. Water Dist. v. Cnty. of Orange*, 118 Cal. App. 3d 818, 829 (1981).

¹⁸ S. Coast Air Quality Mgmt. Dist., Engineering and Permitting Division, Application Evaluation and Calculations, Permit to Construct Evaluation, 8/5/2019; and S. Coast Air Quality Mgmt. Dist., Permit to Construct, Ribost Terminal LLC, DBA World Oil Terminals, Granted 1/2/2020.

generate significant greenhouse gas emissions, hazardous criteria pollutants, and other harmful environmental impacts, those impacts must be disclosed and analyzed in the DEIR.¹⁹

**CBD-12
(con't)**

The Port tries to disclaim responsibility for this analysis by arguing that the “future destination(s) and use(s) of the petroleum products” to be stored at the two pre-existing tanks are too speculative for the DEIR to analyze.²⁰ This claim rings hollow. The DEIR makes clear that stored oil product will be transmitted via existing pipeline, which currently delivers to the Marathon Petroleum Carson Refinery or to either of two Glencore Marine Terminals.²¹ The DEIR states elsewhere that the site’s crude oil product may also be used for an “asphalt blending” operation at the World Oil refinery in South Gate.²² Thus, the universe of potential end-uses for crude products stored at the Project site at the very least includes these destinations, and the associated impacts can be analyzed.

Even if the Project would not lead to an increase in production at World Oil’s South Gate refinery, the Project will free up new capacity for marine fuel storage at existing tanks and, as a result, make possible expanded operations and fossil fuel consumption at the Port. A cursory read of the DEIR makes clear that this is the entire point of the Project: to free up two larger, currently under-utilized tanks for lease while still providing storage capacity for World Oil’s South Gate refinery.²³ Thus, these increases in total throughput of fossil fuel products—and any associated increase in their refinement and combustion—must be incorporated into the project description and analyzed as Project-related impacts.

The DEIR’s claim that the existing tanks will not exceed their permitted throughput limits also holds little weight, as the tank farm’s *actual* throughput and throughput capacity will increase if the Project is approved. The mere fact that the existing tanks will not exceed their permitted throughput capacity does not absolve the Port of its responsibility to analyze actual, foreseeable effects from the Project.²⁴

b. The Project objectives are artificially narrow, precluding a meaningful analysis of the Project alternatives.

CBD-13

Under CEQA, an agency must identify a set of project objectives that the project sets out to accomplish. These objectives must be designed to “help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and [] aid the decision makers in preparing findings or a statement of overriding considerations, if necessary.”²⁵ An agency may not adopt artificially

¹⁹ CEQA Guidelines, App’x G §§ VIII. Greenhouse Gas Emissions, III. Air Quality.

²⁰ DEIR at 1-2.

²¹ DEIR at ES-2, ES-3.

²² DEIR at 1-2.

²³ DEIR at 2-39.

²⁴ See, e.g., *Cmtys. for a Better Env’t v. S. Coast Air Quality Mgmt. Dist.*, 48 Cal. 4th 310, 321-322 (2010) (finding, in relation to the use of a boiler’s maximum permitted operational throughput as a baseline, that a “long line of Court of Appeal decisions holds, in similar terms, that the impacts of a proposed project are ordinarily to be compared to the *actual* environmental conditions existing at the time of CEQA analysis, rather than to allowable conditions defined by a plan or regulatory framework.”) (emphasis added).

²⁵ CEQA Guidelines § 15124(b).

narrow project objectives that would preclude genuine consideration of reasonable alternatives to arrive at a desired conclusion.²⁶ However, the DEIR here does just that. It adopts a set of three superficial objectives, including to: (1) increase efficiency of terminal operations; (2) realign storage capacity needs; and (3) make more existing tanks available for lease by customers.”²⁷

This trio of objectives is fundamentally flawed. In a prior decision, a California appellate court rejected a similar set of objectives that focused solely on maximizing production capacity at existing facilities, even when paired with other objectives designed to incorporate sustainable building and design practices, on the basis that those objectives were so narrowly defined as to reject any alternatives other than the proposed project.²⁸ Here, the DEIR dismisses almost all alternatives out of hand, including several—such as the reduced size tanks alternative and the tank optimization alternative—for limiting Ribost’s ability to lease pre-existing tanks to customers.²⁹ Due to the DEIR’s narrow construction of the Project’s objectives, it whittles away any viable alternatives for further analysis with the exception of the single tank alternative, which the DEIR ultimately claims “does not fully meet Project objectives compared to leasing two tanks.”³⁰ This claim is particularly telling: under the DEIR’s formulation, even an alternative that would meet storage capacity needs for the World Oil Refinery in South Gate and allow the lease of one existing tank to a new customer would fail to meet the objectives that the DEIR sets out. This statement makes clear that the principal objective of the Project “is simply pursuing the proposed project,” and is therefore artificially and impermissibly narrow.³¹ The DEIR’s clear commitment to leasing out two of its preexisting storage tanks as part of a larger expansion of operations is especially disconcerting, given that (1) the DEIR has failed to identify any need or demand for increased storage and throughput of crude or refined oil at the terminal; and (2) the Project itself is in clear contravention of multiple state, local, and regional plans, as discussed *infra* Section V.

In a 2020 comment letter on the prior IS/ND for this Project, many of the undersigned groups voiced their concerns that SCAQMD issued its permit prior to the Port completing and adopting the IS/ND, in violation of CEQA’s requirement that responsible agencies abstain from issuing permits until after the lead agency had completed and adopted its final environmental review documents.³² As we noted in that letter, this procedural failure undermines CEQA’s basic purpose to “[p]revent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives [].”³³ The “policy of environmental review of feasible alternatives . . . makes practical sense *only* if that review occurs *before* an agency approves a

²⁶ *We Advocate Thorough Env’tl Rev. v. Cnty. of Siskiyou (WATER)*, 78 Cal. App. 5th 683, 692 (2022) (finding the county’s DEIR employed an “artificially narrow approach for describing the project objectives...ensur[ing] that the results of its alternatives analysis would be a foregone conclusion.”)

²⁷ DEIR at 1-5.

²⁸ *WATER* at 692.

²⁹ DEIR at 1-14, 1-15.

³⁰ DEIR at 5-1.

³¹ *WATER* at 692.

³² App’x B, 2020 Coalition Letter, at 2-3.

³³ *Id.*; CEQA Guidelines § 15002(a)(3).

project.”³⁴ To the extent that this procedural defect has carried over into the DEIR’s articulation of the Project’s objectives and alternatives analysis, the DEIR must be revised to broaden the Project’s objectives and alternatives analysis to allow for consideration of a reasonable range of Project alternatives, including a more robust analysis of the No Project Alternative.

**CBD-13
(con’t)**

Currently, the DEIR adopts a perfunctory No Project Alternative analysis that does not adequately allow a comparison of the environmental impacts of the Project with the environmental benefits of not approving it, as required by CEQA.³⁵ While it briefly references the DEIR’s environmental setting and impacts analysis, it fails to consider the indirect environmental and public health benefits of *not* expanding fossil fuel infrastructure and operations at the Port, in line with existing state and local plans. Further, the DEIR’s artificially narrow project objectives creep into its discussion of the No Project Alternative. The DEIR summarily dismisses the No Project Alternative for not allowing the lease of the existing tanks: “No additional flexibility in operations would be achieved and no additional tanks would be available to lease to customers.”³⁶ The DEIR’s insistence on maximizing throughput and capacity at the tank farm prevents the Port from properly evaluating the significant environmental benefits and feasibility of the No Project Alternative against a set of well-reasoned project objectives.³⁷

II. The DEIR Fails to Adequately Disclose or Mitigate the Project’s Hazardous Materials Impacts.

CBD-14

The negative health and environmental impacts of petroleum sludge waste are well-documented.³⁸ A 2021 comment letter from a coalition of environmental justice and health organizations observed that the 2021 Initial Study/Negative Declaration (2021 IS/ND) prepared for the Project failed to adequately address this significant impact.³⁹ The DEIR similarly fails to address this important concern. Instead, the DEIR asserts—without evidence—that the Project’s hazardous materials impacts will be less-than-significant.⁴⁰ However, the DEIR fails to adequately disclose the health and environmental impacts related to sludge waste disposal and, moreover, fails to discuss the existing treatment load at the Vernon TSDF facility or any other TSDFs within the region. Without this critical information, the DEIR’s assertion that the Project’s hazardous waste impacts will be less-than-significant is baseless. Provided that the Project will produce an estimated 1,500 bbl of sludge waste every 10 years—a significant sum—the DEIR is required to provide further disclosure and analysis of this potentially significant environmental impact.

³⁴ *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).

³⁵ CEQA Guidelines § 15126.6(c)(1).

³⁶ DEIR at 1-16.

³⁷ CEQA Guidelines § 15004(b)(1).

³⁸ *See, e.g., Mehdi Farzadkia et al. The effects of Fenton process on the removal of petroleum hydrocarbons from oily sludge in Shiraz oil refinery, Iran*, 12:31 J. Env’t Health Sci & Eng’g 1 (2014) (“Disposal of the oily sludge into the environment is a threat for people as well as the environment.”), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3896717/>.

³⁹ App’x B, Comment on World Oil Tank Installation Project for Public Hearing on October 28, 2021 (Oct. 27, 2021), p. 4.

⁴⁰ DEIR at 3.4-16.

CEQA requires a detailed analysis of a Project's environmental impacts involving hazards and hazardous materials.⁴¹ The DEIR fails to adequately disclose where or how hazardous waste from the Project will be transported for treatment and disposal. The DEIR merely states: "The combined sludge tank bottom quantities for the new tanks are estimated to be approximately 1,500-bbl every 10 years, which would be disposed of at a permitted TSDF [treatment, storage, and disposal facility]."⁴² However, it fails to specify which TSDFs the waste will be transported to and whether these facilities have adequate capacity to receive the Project's future sludge waste.

CBD-14
(con't)

III. The DEIR Fails to Adequately Evaluate Flooding, Tsunami, and Climate Risk.

The undersigned organizations have repeatedly explained that the Port must do more to disclose and mitigate the Project's disaster risks, particularly given the Project's location and its susceptibility to climate change risks like sea level rise. In 2020 and 2021, we noted that the IS/ND failed to show how the proposed infrastructure would be sufficiently protected against flooding and storms and cited Coastal Commission comments noting the same concern.⁴³ We specifically criticized the lack of evidence that the Project could avoid adverse impacts with higher sea level rise and storm surges. The IS/ND noted that the World Oil terminal's containment wall was designed to contain 90,000 barrels.⁴⁴ However, the terminal's *existing* capacity is 502,000 barrels, and this Project would add an *additional* 50,000 barrels to that capacity. The IS/ND therefore failed to consider whether severe damage to multiple storage tanks could overwhelm the existing containment wall and what the impacts of such a disaster would be.

CBD-15

While the DEIR clarifies that the containment wall is designed to hold the largest tank's capacity (90,000 barrels) *plus* a 100-year storm event,⁴⁵ this revision does not address our comment that the Project does not adequately account for potential flooding and sea-level rise-related-impacts. The DEIR does not even disclose what the actual capacity of the containment wall is (i.e., how many tanks could fail at one time during a storm and have product contained by the wall), let alone ensure that the wall will be sufficient in the event of a large storm or tsunami. The DEIR offers no explanation as to why the containment wall would need to hold the capacity of just one tank (90,000 barrels), particularly since we have submitted evidence that malfunctions at one tank can easily spread to others in a disaster scenario. For example, a 2019 explosion and fire at the NuStar facility in Contra Costa County was luckily contained to two tanks, but could have spread to additional tanks.⁴⁶

Furthermore, the DEIR states that "An inundation of 4.3 feet of sea level rise, compounded with a 100-year storm, may overtop the containment wall in its lowest places in the future (2080; 56

⁴¹ CEQA Guidelines, App'x G, § IX. Hazards and Hazardous Materials.

⁴² DEIR at 3.4-18.

⁴³ 2021 IS/ND at 8-3, comment CCC-2 ("the IS/ND does not address the potential for flooding impacts to be exacerbated by sea level rise in the future. . . . the project should be assessed using the best available science for a medium-high/extreme sea level rise scenario.").

⁴⁴ 2021 IS/ND at 5-9.

⁴⁵ DEIR at 3.2-1.

⁴⁶ App'x A, Nov. 20, 2020 comments, p. 22.

years in the future),” but characterizes the risk as less-than-significant because “existing air-driven pumps described above would be used to divert stormwater over the containment wall during a flood event into existing sumps that would drain to the on-site WWTP (see Figure 1-3), in the case of isolated overtopping related to sea-level rise or storm surge.”⁴⁷ This explanation is inadequate. There is no explanation for how the pumps will work; if they are intended to send water trapped within the containment wall to the storm sewer system and wastewater treatment plant, the water cannot contain any products resulting from a tank failure. There is no explanation as to how the operator will mitigate the risk of a tank failure during a storm event in 2080 with projected sea level rise, or of multiple tank failures at one time even without sea level rise. The DEIR must be revised to adequately disclose and address these potentially significant impacts.

**CBD-15
(con't)**

IV. The DEIR’s Cumulative Impacts Analysis Is Deeply Flawed and Is Not Supported By Substantial Evidence.

CBD-16

Under CEQA, an EIR must consider a proposed project’s cumulative impacts, which are defined as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.”⁴⁸ Cumulative impacts are “created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts.”⁴⁹ In evaluating a project’s cumulative impacts, the agency must consider “reasonable, feasible options for mitigating or avoiding the project’s contribution to any significant cumulative effects.”⁵⁰

The DEIR consistently minimizes or dismisses the Project’s cumulative impacts by pointing to the severe existing environmental conditions in the surrounding communities. The DEIR’s reasoning is directly counter to the fundamental purposes of CEQA. The presence of preexisting environmental impacts weighs in favor of a robust cumulative impacts discussion. Indeed, the California Court of Appeal has explicitly recognized that “the greater the existing environmental problems are, the lower the threshold should be for treating a project’s contribution to cumulative impacts as significant.”⁵¹ The California Supreme Court has also observed that “when a proposed project risks exacerbating those environmental hazards or conditions that *already exist*, an agency must analyze the potential impact of such hazards on future residents or users.”⁵²

As noted above, the Project proposes a massive storage tank buildout that would create 50,000 barrels of additional storage capacity in a region that is already overburdened with the most petroleum refineries and related infrastructure on the West Coast.⁵³ In fact, the Project would add

⁴⁷ DEIR at 3.5-20.

⁴⁸ CEQA Guidelines § 15355.

⁴⁹ CEQA Guidelines § 15130(a)(1).

⁵⁰ CEQA Guidelines § 15130(b)(5).

⁵¹ *Cmtys. for a Better Env’t. v. Cal. Res. Agency*, 103 Cal. App. 4th 98, 120 (2002) (partially overruled on other grounds).

⁵² *Cal. Bldg. Indus. Ass’n v. Bay Area Air Quality Mgmt. Dist.*, 62 Cal. 4th 369, 377 (2015) (emphasis added).

⁵³ See U.S. Energy Info. Admin., Number and Capacity of Operable Petroleum Refineries by PAD District and State as of January 1, 2022, <https://www.eia.gov/petroleum/refinerycapacity/table1.pdf> [archived at

to the over 1,100 large stationary storage tanks currently in use at petroleum facilities across the region that, combined, can store over 3 billion gallons of toxic materials that pollute our air and damage our climate.⁵⁴ The DEIR must be revised to properly consider the Project's cumulative impacts, including its incremental contributions to existing environmental conditions. Specifically, the DEIR's radius for cumulative impacts analysis should be expanded to include the entire area designated by the Community Emissions Reductions Plan (CERP) established pursuant to A.B. 617 for the surrounding communities of Wilmington, West Long Beach, and Carson.

CBD-16
(con't)

a. Environmental Justice

The DEIR identifies numerous nearby sensitive receptors, including residences located within 0.5 miles of the proposed Project and an elementary school that is a little more than half a mile away.⁵⁵ In analyzing the Project's cumulative impacts, the DEIR must specifically analyze the Project's cumulative contribution to health impacts on existing nearby sensitive receptors. Notably, according to the California Office of Environmental Health Hazard Assessment's CalEnviroScreen 4.0 (CES) tool—which ranks census tracts based on cumulative pollution exposures, socio-economic indicators, and health burdens—communities near the Port rank among the most vulnerable and over-polluted in the state. Specifically, CES data for the census tracts nearest to the Port of Long Beach and the Ribost/World Oil Terminal report extremely high levels of pollution, which adversely affect the environment as well as the health of people who live and work in the surrounding communities of Wilmington, West Long Beach, and Carson. CES percentile scores reflect pollution burdens and population characteristic scores, with the highest percentiles identifying the most environmentally overburdened communities.⁵⁶

CBD-17

<https://perma.cc/D6E5-Y97Y>]; Cal. Air Res. Bd., Refineries, <https://ww2.arb.ca.gov/resources/documents/california-refineries> [archived at <https://perma.cc/UP4H-DEFF>]; Cal. Energy Comm'n, California Oil Refinery History, <https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/californias-oil-refineries/california-oil> [archived at <https://perma.cc/3H5W-RS8C>].

⁵⁴ See S. Coast Air Quality Mgmt. Dist., Proposed Amended Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities: Working Group Meeting 2 at 18 (July 15, 2021), http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1178/par1178-wgm2_final.pdf?sfvrsn=12 [archived at <https://perma.cc/7TS6-4W5X>].

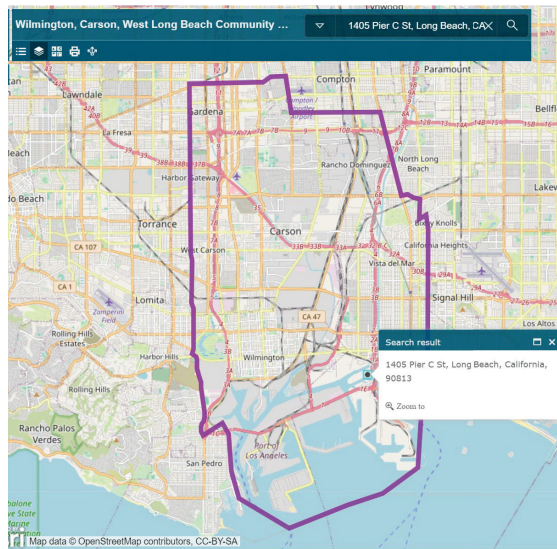
⁵⁵ DEIR at 3.1-5.

⁵⁶ See CalEnviroScreen 4.0 Report (Oct. 2021),

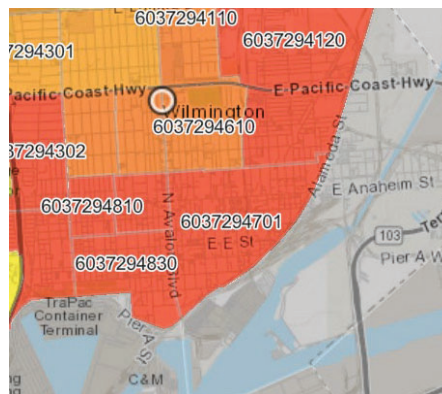
<https://oehha.ca.gov/media/downloads/calenviroscreen/report/calenviroscreen40reportf2021.pdf>.

*Map of Wilmington, Carson, West Long Beach Boundaries
(Project site is located at 1405 Pier C St., Long Beach, CA 90813)⁵⁷*

**CBD-17
(con't)**



Wilmington⁵⁸

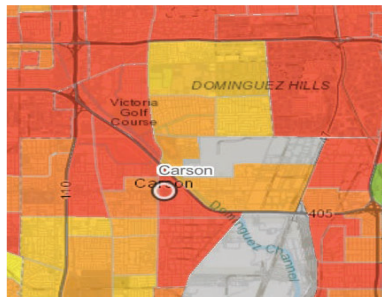


Census tracts in Wilmington present CES scores ranging between the 76th and 99th percentiles.⁵⁹

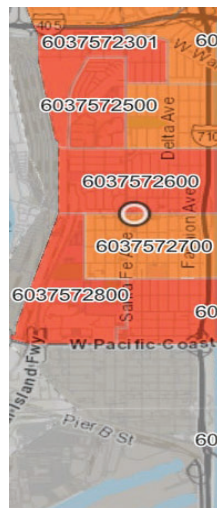
⁵⁷ S. Coast Air Quality Mgmt. Dist., Community Boundary Map, <https://arcgis.com/arcgis/Pf0440> (last accessed Dec. 12, 2023).

⁵⁸ CalEnviroScreen 4.0 Results, https://experience.arcgis.com/experience/11d2f52282a54ceebcac7428e6184203/page/CalEnviroScreen-4_0/ (last visited Dec. 8, 2023).

⁵⁹ Census Tracts 6037294301 (Score: 76) and 6037294701 (Score: 99), CalEnviroScreen 4.0 Results, https://experience.arcgis.com/experience/11d2f52282a54ceebcac7428e6184203/page/CalEnviroScreen-4_0/ (last visited Dec. 8, 2023).

Carson⁶⁰

*Census tracts in Carson present CES scores ranging between the 67th and 94th percentiles.*⁶¹

West Long Beach⁶²

*Census tracts in West Long Beach present CES scores ranging between the 89th and 99th percentiles.*⁶³

⁶⁰ CalEnviroScreen 4.0 Results, https://experience.arcgis.com/experience/11d2f52282a54ccebca7428e6184203/page/CalEnviroScreen-4_0/ (last visited Dec. 8, 2023).

⁶¹ Census Tracts 6037543703 (Score: 67) and 6037544001 (Score: 94), CalEnviroScreen 4.0 Results, https://experience.arcgis.com/experience/11d2f52282a54ccebca7428e6184203/page/CalEnviroScreen-4_0/ (last visited Dec. 8, 2023).

⁶² CalEnviroScreen 4.0 Results, https://experience.arcgis.com/experience/11d2f52282a54ccebca7428e6184203/page/CalEnviroScreen-4_0/ (last visited Dec. 8, 2023).

⁶³ Census Tracts 6037572700 (Score: 89) and 6037572301 (Score: 99), CalEnviroScreen 4.0 Results, https://experience.arcgis.com/experience/11d2f52282a54ccebca7428e6184203/page/CalEnviroScreen-4_0/ (last visited Dec. 8, 2023).

b. Air Quality

The DEIR uses a one-mile radius for its analysis of the Project's cumulative air quality impacts.⁶⁴ It states that the Project's contribution to regional criteria-pollutant emissions is not significant because neither the Project's construction nor its operations would exceed SCAQMD significance thresholds; further, it states that localized air quality impacts are not cumulatively significant because Project emissions do not exceed SCAQMD localized significance thresholds (LSTs).⁶⁵

These assertions are invalid for several reasons. Notably, where an EIR limits the scope of the area affected by identified cumulative impacts, the agency must provide a "reasonable explanation for the geographic limitation used," and the selected area "cannot be so narrowly defined that it necessarily eliminates a portion of the affected environmental setting."⁶⁶ As the DEIR admits, crude oil product from the proposed Project will be used at one of several locations: the Marathon Refinery in Carson, the Glencore Marine Terminals in Long Beach and Carson, or the World Oil Refinery in South Gate.

As explained above, the radius used for the cumulative impacts analysis should be expanded to include the entire CERP area in order to account for the severe existing environmental impacts in the immediately surrounding communities. Thus, the cumulative impacts analysis should have considered the Project's impacts *combined with* the impacts from these related project sites, as well as any other related past, present, and future projects within this expanded radius.

Further, the DEIR must account for recent scientific studies that revealed dangerous underestimations of fugitive emissions from oil storage tanks. For instance, a 2017 SCAQMD-funded FluxSense study found that measured emissions of cancer-causing benzene were 34 times higher on average than estimated emissions.⁶⁷ Similarly, A 2022 CARB-funded FluxSense study recorded field measurements of toxic air contaminants near oil and gas facilities in the South Coast Air Basin and the San Joaquin Valley.⁶⁸ The study found that a crude oil tank farm located next to a refinery in Kern County—similar to the proposed Project—released harmful emissions of benzene and methane.⁶⁹ The DEIR's bare assertion that the Project's cumulative air quality impacts are less-than-significant fails to consider this substantial evidence which shows that the air quality and related health impacts from oil storage tanks are often far greater than hypothetically estimated, particularly as they relate to fugitive emissions.

⁶⁴ DEIR at 3.1-30.

⁶⁵ DEIR at 3.1-31.

⁶⁶ CEQA Guidelines § 15130(b)(3); *Bakersfield Citizens for Loc. Control v. City of Bakersfield*, 124 Cal. App. 4th 1184, 1216 (2004).

⁶⁷ App'x A, Comments of Julia May § II.A at 6; Johan Mellqvist, et al., FluxSense Inc., Emission Measurements of VOCs, NO2 and SO2 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>.

⁶⁸ Johan Mellqvist et al., FluxSense Inc., Toxic Air Contaminant and Greenhouse Gas Measurements near Oil and Gas Operations and Proximate Communities (2022), https://ww2.arb.ca.gov/sites/default/files/2022-09/CARB_contract_18ISD023_FinalReport_ADA.pdf.

⁶⁹ *Id.* at 18.

c. Noxious Odors

CBD-19

CEQA requires EIRs to consider emissions of offensive odors.⁷⁰ The DEIR asserts, without evidence, that odors generated by the Project would disperse before reaching the nearest sensitive receptors—located in a housing community just 800 meters from the proposed site—and will not affect a substantial number of people.⁷¹ It also states that emissions of odor-causing chemicals, such as hydrogen sulfide, will reach just half of significance threshold levels.⁷² The residents of impacted communities have long voiced their concerns about offensive odors coming from the Port and its sprawling industrial operations.⁷³ The DEIR must be revised to disclose and analyze these impacts.

V. The Project Runs Counter to State, Regional, and Local Strategies Designed to Promote Public Health and Reduce Harmful Air and Greenhouse Gas Emissions.

CBD-20

CEQA requires a discussion of “any inconsistencies between the proposed project and applicable general plans, specific plans, and regional plans.”⁷⁴ The DEIR misleadingly asserts that the Project will not conflict with the South Coast Air Quality Management Plan (SCAQMP), the San Pedro Bay Ports Clean Air Action Plan (CAAP), or the Community Emissions Reductions Plan (CERP) established pursuant to A.B. 617 for the neighboring communities of Wilmington, West Long Beach, and Carson.⁷⁵ It also claims that the Project will comply with the 2022 California Air Resources Board Scoping Plan and the Port of Long Beach Green Port Policy.⁷⁶ The DEIR’s conclusory observations are not supported by substantial evidence and do not provide sufficient analysis of the Project’s impact on implementation of the aforementioned plans.

First, the Project would not align with the Port of Long Beach’s Green Port Policy. In particular, the Project conflicts with the Port’s commitment to “protect the community from harmful environmental impacts of Port operations,” “promote sustainability,” and “[e]mploy best available technology to avoid or reduce environmental impacts.”⁷⁷ The Project will facilitate the storage of hazardous materials near neighborhoods and sensitive receptors, including schools. The DEIR merely asserts that the Project will comply with the Green Ports Policy during

⁷⁰ CEQA Guidelines § 15064(d)(1).

⁷¹ DEIR at 3.1-17.

⁷² DEIR at 3.1-23.

⁷³ See Mekhalo Medina, Residents in Belmont Shore concerned over mysterious smell, NBC Los Angeles (July 17, 2023), <https://www.nbclosangeles.com/news/local/residents-in-belmont-shore-concerned-over-mysterious-smell/3189449/>; see also Pablo Unzueta, In the shadows of industry: LA County’s port communities, CalMatters (Feb. 1, 2022), <https://calmatters.org/environment/2022/02/environmental-justice-photo-essay-la-county-port-communities/>.

⁷⁴ CEQA Guidelines § 15125(d).

⁷⁵ DEIR at 3.1-13 to 3.1-18.

⁷⁶ DEIR at 3.3-7.

⁷⁷ Port of Long Beach, Environment: The Green Port, <https://polb.com/environment> [archived at <https://perma.cc/CJ6T-HR2D>].

“construction activities.”⁷⁸ However, it fails to acknowledge that the Project’s long-term operational activities will conflict with the goals of the Green Ports Policy.

Second, the Project would conflict with implementation of the SCAQMD’s 2022 Air Quality Management Plan (AQMP).⁷⁹ The AQMP relies on electrification and the deployment of zero-emissions technology to achieve air quality standards in the region. That, in turn, requires a phaseout of the continued expansion of fossil fuel infrastructure, such as this Project, which would undermine emissions reductions secured through the deployment of these technologies. The DEIR asserts that the Project will comply with the AQMP because it will comply with construction and operational permits issued by SCAQMD.⁸⁰ This analysis fails to address the Project’s conflict with the AQMP’s broader goals of improving air quality throughout the region by requiring the phaseout of dangerous fossil fuel infrastructure.

Third, the Project conflicts with the CERP established in 2019 for the neighboring communities of Wilmington, West Long Beach, and Carson. The CERP specifically directed SCAQMD to develop amendments to its Rule 1178 with the intent of further reducing volatile organic compound (VOC) emissions from “storage tanks at petroleum facilities.”⁸¹ As a result, Rule 1178 was amended in September 2023 to introduce more stringent VOC emissions reduction requirements.⁸² In response, the DEIR asserts that the Project would not conflict with the CERP because the proposed storage tanks are not part of a “subject facility” that must adhere to the requirements of SCAQMD Rule 1178.⁸³ This assertion is profoundly misleading. The DEIR claims that the Project site is not a “subject facility” because its storage tanks are not located at a refinery. However, the DEIR acknowledges that the crude oil products stored at the Project site will be directly “transmitted” via pipeline to either the Marathon Petroleum Refinery in Carson or the Glencore Marine Terminals in Long Beach and Carson.⁸⁴ The DEIR states elsewhere that the site’s crude oil product may also be used for the “asphalt blending” operation at the World Oil refinery in South Gate.⁸⁵ The Project—although not physically sited at a refinery—is directly connected to one and should be subject to the same regulatory requirements that aim to reduce harmful emissions from oil storage tanks.

⁷⁸ The DEIR states that “Compliance with the City of Long Beach Construction and Demolition Recycling Program and implementation of air quality Best Management Practices (BMPs) for construction activities through the Harbor Development Permit would ensure conformance with the Green Port Policy.” DEIR at 3.3-7.

⁷⁹ S. Coast Air Quality Mgmt. Dist., 2022 Air Quality Management Plan (Dec. 2022) <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/final-2022-aqmp/final-2022-aqmp.pdf?sfvrsn=16> [archived at <https://perma.cc/2XEK-AQS9>].

⁸⁰ DEIR at 3.1-18.

⁸¹ S. Coast Air Quality Mgmt. Dist., AB 617 Community Emissions Reduction Plan for Wilmington, Carson, West Long Beach 5b-10 (Sept. 2019), <https://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/wilmington/cerp/final-cerp-wcwlb.pdf?sfvrsn=8>.

⁸² S. Coast Air Quality Mgmt. Dist., Rule 1178 - Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities (Sept. 1, 2023), <https://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1178.pdf>.

⁸³ DEIR at 3.1-9.

⁸⁴ DEIR at 1-4.

⁸⁵ DEIR at 1-2.

Finally, the Project would conflict with the California Air Resources Board's 2022 Scoping Plan to reduce GHG emissions.⁸⁶ Specifically, the Project would undermine statewide efforts to significantly reduce demand for liquid petroleum by 94 percent and fossil fuel use by 86 percent by 2045.⁸⁷ The Project would undercut those efforts by expanding fossil fuel infrastructure at a time when there should be a moratorium on continued expansions. The Project would allow for the storage of petroleum and facilitate World Oil's production of marine diesel fuel. The DEIR misleadingly asserts that the Project would comply with the Scoping Plan because its requirements are "[n]ot directly applicable" to the Project's operations.⁸⁸ The DEIR fails to explain how the Project aligns with the State's broader objectives to reduce GHG emissions.

**CBD-20
(con't)**

For the reasons outlined above, the Port must revise and recirculate the DEIR to address serious substantive and procedural deficiencies with the environmental review prescribed for the Project. In its current form, the DEIR fails as an informational document and is misleading to the public and decision makers regarding the significance and full extent of environmental impacts and other hazards this Project would create on already overburdened communities living near the Port.

CBD-21

Respectfully submitted,

CENTER FOR BIOLOGICAL DIVERSITY
COALITION FOR CLEAN AIR
COMMUNITIES FOR A BETTER ENVIRONMENT
EARTHJUSTICE
EAST YARD COMMUNITIES FOR ENVIRONMENTAL JUSTICE
LONG BEACH ENVIRONMENTAL ALLIANCE
SIERRA CLUB

⁸⁶ Cal. Air Res. Bd., 2022 Scoping Plan for Achieving Carbon Neutrality (Nov. 16, 2022) <https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf> [archived at <https://perma.cc/7M4A-8CAM>].

⁸⁷ *Id.* at 2.

⁸⁸ DEIR at 3.3-7.

CBD-22

Appendix A

Coalition Comments on 2020 IS/ND
Technical Comments of Julia May, Senior Scientist, CBE
World Oil Tank Installation Project
11/20/2020



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.

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.¹ The communities surrounding the Port experience disproportionate

¹ 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.² The welfare of these communities has historically been deprioritized in development projects at both ports.³ 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.⁴ 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.

CBD-23
(con't)

I. THE IS/ND VIOLATES CEQA'S TIMING, CONSULTATION, AND NOTIFICATION REQUIREMENTS

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.⁵

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."⁶ 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.⁷ 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.⁸ Indeed, the "policy of

CBD-24

² *Id.*

³ *Id.*

⁴ *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").

⁵ *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova*, 40 Cal. 4th 412, 435 (2007), *as modified* (Apr. 18, 2007).

⁶ 414 Cal. Code Regs. § 15004(a) [hereinafter CEQA Guidelines] (emphasis added).

⁷ 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).

⁸ 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.”⁹

The SCAQMD issued permits to construct for the Project’s tanks on January 2, 2020.¹⁰ The Port, however, did not release the IS/ND for the Project for public review until October 7, 2020.¹¹ 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.”¹² CEQA review cannot take the form of “*post hoc* rationalizations to support action already taken.”¹³ 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.”¹⁴ The SCAQMD should have then followed with its approval of permits to construct.¹⁵

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.¹⁶ 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).”¹⁷

CEQA review involves consideration of numerous potential impacts beyond air quality, and mitigation of those impacts may require project design changes not

⁹ *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).

¹⁰ 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”).

¹¹ IS/ND at 3.

¹² *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).

¹³ *Save Tara v. City of W. Hollywood*, 45 Cal. 4th 116, 130 (2008), *as modified* (Dec. 10, 2008).

¹⁴ CEQA Guidelines § 15004(b).

¹⁵ 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.”).

¹⁶ *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).

¹⁷ 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.¹⁸ 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.

CBD-24
(con't)

B. The IS/ND Fails to Establish whether the Port Consulted with all Responsible and Trustee Agencies Prior to Producing the IS/ND.

CBD-25

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.¹⁹ 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."²⁰ 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."²¹

SCAQMD is a "responsible agency" for this Project under CEQA, because it has "approval power over the project."²² The IS/ND provides no indication that the Port consulted with SCAQMD prior to determining a negative declaration is appropriate for the Project.²³ 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.²⁴ 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."²⁵ The California Department of Fish and Wildlife

¹⁸ 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.").

¹⁹ Cal. Pub. Res. Code § 21080.3(a).

²⁰ CEQA Guidelines § 15063(g).

²¹ *Id.*

²² CEQA Guidelines § 15381.

²³ *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).

²⁴ CEQA Guidelines § 15063(g).

²⁵ CEQA Guidelines § 15386.

(“CDFW,” formerly the Department of Fish and Game), is specifically listed as one such trustee agency in CEQA Guidelines.²⁶ CDFW is a trustee agency “with regard to the fish and wildlife or the state.”²⁷ 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.”²⁸ 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.”²⁹ 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.³⁰ The IS/ND indicates potential Project impacts on birds, providing several measures to “prevent taking active bird nests during the nesting season.”³¹

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.”³² 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.³³ Specifically, CEQA Guidelines require the Port consult with CDFW and receive its recommendations before issuing a negative declaration or preparing an EIR.³⁴

²⁶ CEQA Guidelines § 15386(a).

²⁷ *Id.*

²⁸ IS/ND at 4-16.

²⁹ *Id.* at 4-30, 4-31.

³⁰ *Id.* at 4-34.

³¹ *Id.* at 5-5.

³² *Gentry v. City of Murrieta*, 36 Cal. App. 4th 1359, 1387 (1995), *as modified on denial of reh'g* (Aug. 17, 1995).

³³ IS/ND at 4-30, 4-31, 5-5.

³⁴ 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.”³⁵ 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.

CBD-26

II. THE IS/ND FAILS TO ANALYZE PROPERLY THE PROJECT’S AIR QUALITY IMPACTS

CBD-27

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,³⁶ 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.³⁷ Excluding a partially shut-down refinery, the *average* VOC emissions were 8.6 times greater than estimated using the U.S. EPA TANKS model.³⁸ 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.”³⁹ Further, based on the greatest

³⁵ 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.”).

³⁶ IS/ND at 4-9.

³⁷ Johan Mellqvist, et al., FluxSense Inc., Emission Measurements of VOCs, NO₂ and SO₂ 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”).

³⁸ *Id.*

³⁹ Appendix A, Section II.D.

CBD-27
(con't)

underestimation observed in the FluxSense study, the Project's "VOC emissions would be 116.4 lbs/day (9.7 x 12)."⁴⁰ 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.⁴¹

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."⁴² 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."⁴³ The proposed Project would also use floating roof tanks.⁴⁴

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.⁴⁵ 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."⁴⁶ 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.⁴⁷

B. The Analysis of Localized VOC Impacts is Flawed and Incomplete.

CBD-28

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."⁴⁸ On the basis of that threshold, the Port concluded that "operation emissions would not expose sensitive receptors to substantial pollutant concentrations."⁴⁹

The Port's analysis of localized VOC risks is flawed for several reasons. First, a general, daily emissions threshold cannot substitute a localized emissions

⁴⁰ *Id.*

⁴¹ Appendix A, Section II.A.

⁴² Appendix E at 3.

⁴³ Appendix A, Section II.C.iv.

⁴⁴ IS/ND at 4-7.

⁴⁵ Appendix A, Section II.

⁴⁶ Appendix A at 3.

⁴⁷ CEQA Guidelines § 15091(b).

⁴⁸ IS/ND at 4-12.

⁴⁹ *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.⁵⁰ 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.⁵¹ 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.

CBD-28
(con't)

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 ("H₂S") emissions from the Project's tanks, which have potentially significant environmental impacts.⁵² While the odor of H₂S is "extremely strong and foul," it can also cause adverse health effects, including headaches, nausea, vomiting, and eye irritation.⁵³ SCAQMD has specifically identified H₂S emissions as causing substantial impacts in the Port area.⁵⁴ The IS/ND failed to provide any analysis of these impacts, despite key studies showing cumulative impacts of H₂S in communities near refineries and other facilities.⁵⁵ By ignoring the potential impacts of H₂S emissions, the IS/ND fails to meet CEQA's requirement to provide a "comprehensive cumulative impacts evaluation."⁵⁶

CBD-29

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."⁵⁷ 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."⁵⁸ Furthermore, the IS/ND

CBD-30

⁵⁰ IS/ND at 4-43.

⁵¹ 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.").

⁵² Appendix A, Section III.

⁵³ CARB, *Hydrogen Sulfide & Health*, <https://tinyurl.com/y4nlq8lh>.

⁵⁴ Appendix A, Section III.

⁵⁵ *Id.*

⁵⁶ *Bakersfield Citizens for Local Control v. City of Bakersfield*, 124 Cal. App. 4th 1184, 1214 (2004).

⁵⁷ IS/ND at 2-8.

⁵⁸ *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."⁵⁹ 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.

**CBD-30
(con't)**

E. The IS/ND Fails to Consider that Exposure to Air Pollution Increases Vulnerability to COVID-19.

CBD-31

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_{2.5}") was linked to an 8% greater chance of dying from COVID-19.⁶⁰

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."⁶¹

Additionally, a study in England found that higher levels of ozone, nitrogen oxide, and nitrogen dioxide are significantly associated with COVID-19 deaths.⁶² 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

⁵⁹ 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>.

⁶⁰ 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>.

⁶¹ Yaron Ogen, *Assessing Nitrogen Dioxide (NO₂) 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>.

⁶² 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.⁶³ 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.⁶⁴

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.

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.⁶⁵ 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.”⁶⁶ 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.”⁶⁷ 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

**CBD-31
(con't)**

CBD-32

⁶³ 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>.

⁶⁴ 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>.

⁶⁵ IS/ND at 2-4.

⁶⁶ *Id.* at 4-26.

⁶⁷ *Id.*

require approximately 40 linear feet of pipeline to connect them to existing pipelines at the terminal.⁶⁸ Such pipelines are typically cleaned using a “pig,” a physical device that facilitates transferring and separating products across pipelines.⁶⁹ Cleaning pipelines with a “pig” can cause significant air emissions, especially of VOCs.⁷⁰ 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.

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.”⁷¹ Treating wastewater from a crude oil storage tank is a process that emits VOCs.⁷² 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.⁷³ 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.”⁷⁴ CEQA stresses the importance of cumulative impacts in recognition that “the full environmental impact of a proposed project cannot be gauged in a vacuum.”⁷⁵ Failure to properly address cumulative impacts would “effectively defeat CEQA’s mandate to review the actual effect of the projects upon the environment.”⁷⁶

⁶⁸ IS/ND at 2-6.

⁶⁹ Phyllis Fox, Report on Bakersfield Crude Terminal Permits to Operate (Dec. 24, 2014) at 9-10 (hereinafter “Appendix F”).

⁷⁰ *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.”).

⁷¹ IS/ND at 4-30.

⁷² Appendix F at 9-10.

⁷³ CEQA Guidelines § 15064(h).

⁷⁴ CEQA Guidelines § 15355(b).

⁷⁵ *Bakersfield Citizens for Local Control v. City of Bakersfield*, 124 Cal. App. 4th 1184, 1215 (2004).

⁷⁶ *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."⁷⁷ 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."⁷⁸ 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.⁷⁹ 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.⁸⁰

The Port also claims that the Project's cumulative impacts are insignificant due to the Project's "highly developed industrial surroundings."⁸¹ 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."⁸² 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.⁸³ CEQA Guidelines, however, explicitly envision that impacts may be "*individually limited*, but cumulatively considerable."⁸⁴ 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."⁸⁵ 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.⁸⁶

⁷⁷ IS/ND at 4-65.

⁷⁸ *Id.* at 2-9.

⁷⁹ *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.).

⁸⁰ *Id.* at 4-65.

⁸¹ *Id.*

⁸² CEQA Guidelines § 15355(b).

⁸³ IS/ND at 4-65.

⁸⁴ CEQA Guidelines § 15064(h)(1) (emphasis added).

⁸⁵ *Bakersfield Citizens for Local Control v. City of Bakersfield*, 124 Cal. App. 4th 1184, 1214 (2004).

⁸⁶ *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.⁸⁷ Whether projects are "closely related" depends on the similarity of the projects' function and type of impact.⁸⁸ The World Oil Terminal presently "contains seven existing petroleum tanks... [with] a total storage capacity of 502,000 bbl."⁸⁹ Four of those tanks are "leased to Marathon Petroleum and Glencore."⁹⁰ 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."⁹¹ These vendors are Marathon Petroleum and Glencore – the entities already leasing storage at the World Oil Terminal.⁹² Viewing the terminal as a whole, the Port claims "the two new tanks would blend in with the existing seven tanks on-site."⁹³ The Port also describes operation of the Project's tanks as "similar to existing operations."⁹⁴ 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.⁹⁵

The IS/ND fails to consider adequately the "incremental impact of the project when added to" the closely related operations at World Oil Terminal.⁹⁶ 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.⁹⁷ 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

⁸⁷ CEQA Guidelines § 15355(b).

⁸⁸ *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.).

⁸⁹ IS/ND at 1.

⁹⁰ *Id.* at 2-3.

⁹¹ *Id.* at 2-8.

⁹² *Id.* at 2-8.

⁹³ *Id.* at 4-2.

⁹⁴ *Id.* at 4-60.

⁹⁵ CEQA Guidelines § 15355(b).

⁹⁶ *Id.*

⁹⁷ 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.⁹⁸ As noted in [Section III.A](#), CEQA Guidelines explicitly conceive that impacts may be “individually limited, but cumulatively considerable.”⁹⁹ 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.”¹⁰⁰

**CBD-34
(con’t)**

C. The IS/ND Fails to Consider Cumulative Impacts of Closely Related Refining Operations in the Region.

CBD-35

The Port is required to consider the Project’s cumulative impacts in the context of closely related projects, including “reasonably foreseeable probable future projects.”¹⁰¹ 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.¹⁰² The new tanks are also planned to “provide crude oil to the World Oil Refinery in South Gate.”¹⁰³ 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.¹⁰⁴ Therefore, the refining activities specifically facilitated by the Project must be considered in the Port’s cumulative impacts analysis.

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.¹⁰⁵ 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.¹⁰⁶

⁹⁸ IS/ND at 4-65.

⁹⁹ CEQA Guidelines § 15064(h)(1).

¹⁰⁰ CEQA Guidelines § 15091(b).

¹⁰¹ CEQA Guidelines § 15355(b).

¹⁰² IS/ND at 2-1, 2-8.

¹⁰³ *Id.* at 2-1.

¹⁰⁴ CEQA Guidelines § 15355(b).

¹⁰⁵ 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>.

¹⁰⁶ *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.”¹⁰⁷

**CBD-35
(con’t)**

D. The IS/ND Fails to Consider the Cumulative Impacts from Hundreds of Other Similar Storage Tanks Projects Recently Approved in the Region.

CBD-36

The adjacent Ports of Los Angeles and Long Beach “are the single-largest fixed sources of pollution in the Greater Los Angeles region.”¹⁰⁸ The ports are located in the community of Wilmington, Carson, and West Long Beach (collectively referred to as “WCWLB”).¹⁰⁹ 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.¹¹⁰ The Committee also “identified the Ports [of Los Angeles and Long Beach] as an air quality priority.”¹¹¹ 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.¹¹² Over half of these storage tanks are for petrochemicals, and 86 tanks are specifically for crude oil storage.¹¹³ 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.¹¹⁴

¹⁰⁷ CEQA Guidelines § 15064(h)(1).

¹⁰⁸ Appendix I at 9.

¹⁰⁹ 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>.

¹¹⁰ *Id.* at 5b-3.

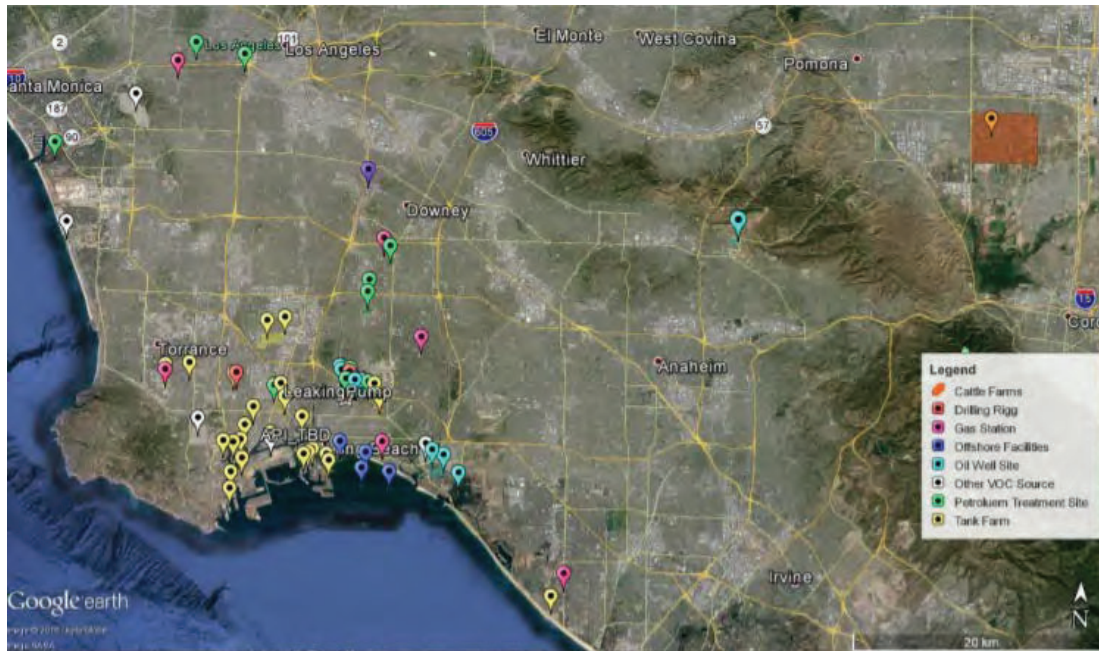
¹¹¹ *Id.* at 5c-1.

¹¹² Earthjustice, Spreadsheet Summary of SCAQMD-approved Storage Tanks (hereinafter “Appendix G”).

¹¹³ *Id.*

¹¹⁴ CEQA Guidelines § 15355(b).

Figure A: Concentration of Storage Tanks around the Los Angeles/Long Beach Port Complex in the Los Angeles Basin¹¹⁵



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(con't)

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.¹¹⁶ 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.¹¹⁷ 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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¹¹⁵ Appendix E at 30.

¹¹⁶ IS/ND at 4-65.

¹¹⁷ *Id.*

either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.”¹¹⁸ CEQA defines “project” “extremely broadly.”¹¹⁹ This broad interpretation aims to “maximize protection of the environment.”¹²⁰ A “curtailed or distorted project description may stultify the objectives of the reporting process.”¹²¹ 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.”¹²² 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.]”¹²³ Rather, it is sufficient that applicant “intend[s]” a future action and that action is described in CEQA review documents.¹²⁴

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.”¹²⁵ 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.¹²⁶ 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.¹²⁷ 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.¹²⁸

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

¹¹⁸ CEQA Guidelines § 15378(a); see also *id.* at § 15003(h); Pub.Res. Code § 21065.

¹¹⁹ 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).

¹²⁰ *McQueen v. Board of Directors*, 202 Cal.App.3d 1136, 1143 (1988).

¹²¹ *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).

¹²² *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.).

¹²³ *Id.* at 397 (Emphasis in original.).

¹²⁴ *Id.*

¹²⁵ IS/ND at 1-1.

¹²⁶ *Id.* at 2-4.

¹²⁷ *Id.* at 2-8.

¹²⁸ *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.”¹²⁹ The IS/ND does not fully address impacts from “anticipated increase” in *fuel oil* throughput.¹³⁰ 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.¹³¹ This increase in throughput would cause loading rack truck trips to “increase 10 percent during proposed project operations.”¹³² 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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(con’t)**

Moreover, the IS/ND repeatedly asserts without evidence that the Project would not “allow greater actual *crude oil* throughput.”¹³³ 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.”¹³⁴ 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.¹³⁵ 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.”¹³⁶ 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.

CBD-38

¹²⁹ IS/ND at 2-1, 2-8.

¹³⁰ *Id.* at 4-19.

¹³¹ *Id.* at 2-1, 4-9.

¹³² *Id.* at 2-8.

¹³³ *Id.* at 4-26.

¹³⁴ *Id.*

¹³⁵ Appendix B at 1; Appendix C at 1.

¹³⁶ 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.

CBD-39

CEQA requires the Port to assess the Project's impacts under a broad enough scope "in order to maximize protection of the environment."¹³⁷ 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.¹³⁸ 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.¹³⁹ 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.¹⁴⁰ 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.

V. THE IS/ND ANALYSIS OF GREENHOUSE GAS EMISSIONS IS INADEQUATE AND INCOMPLETE

CBD-40

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."¹⁴¹ 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.

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.¹⁴² The

¹³⁷ *McQueen v. Board of Directors*, 202 Cal.App.3d 1136, 1143 (1988).

¹³⁸ IS/ND at 1-1, 4-19.

¹³⁹ 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>.

¹⁴⁰ *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).

¹⁴¹ IS/ND at 4-28.

¹⁴² 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.¹⁴³ At the global level, 1.5°C pathways require global CO₂ emissions to be cut by half by 2030 and to reach near zero by 2050,¹⁴⁴ 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.¹⁴⁵

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 2030.¹⁴⁶ Executive Order S-3-05 calls for the State to reduce emissions levels by 80 percent below 1990 levels by 2050.¹⁴⁷ Executive Order B-55-18 calls for the State to achieve carbon neutrality by 2045.¹⁴⁸ The IS-ND fails to contextualize the impact of the Project within the State regulatory landscape.

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/>.

¹⁴³ 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/>.

¹⁴⁴ 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.

¹⁴⁵ United Nations Environment Programme, *Emissions Gap Report 2019*, XV, XX, 26 (2019), <https://www.unenvironment.org/resources/emissions-gap-report-2019>.

¹⁴⁶ 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.

¹⁴⁷ Cal. Exec. Order No. S-3-05 (June 1, 2005), <https://www.library.ca.gov/Content/pdf/GovernmentPublications/executive-order-proclamation/5129-5130.pdf>.

¹⁴⁸ 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>.

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.¹⁴⁹ 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*.¹⁵⁰ 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.¹⁵¹ 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.¹⁵² 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.¹⁵³ 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.¹⁵⁴ The Port has failed to meaningfully

¹⁴⁹ 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 or 2°C* (2019), <http://productiongap.org/2019report/>.

¹⁵⁰ 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/>.

¹⁵¹ *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>.

¹⁵² 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>.

¹⁵³ IS/ND at 4-26.

¹⁵⁴ *Id.*

contextualize the Project’s operating emissions within the larger landscape of California’s GHG emissions reductions targets, in violation of CEQA.¹⁵⁵ 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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(con’t)**

B. The IS/ND Improperly Relies on SCAQMD’s Outdated Interim GHG Threshold for Significance.

CBD-41

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.”¹⁵⁶ When determining the significance of GHG emissions, “[t]he agency’s analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes.”¹⁵⁷

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.”¹⁵⁸ SCAQMD’s CEQA GHG Significance Thresholds is outdated: the threshold was determined in 2008—over a decade ago.¹⁵⁹ 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.¹⁶⁰ 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

¹⁵⁵ 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.)

¹⁵⁶ CEQA Guidelines § 15064(b)(2).

¹⁵⁷ CEQA Guidelines § 15064.4(b).

¹⁵⁸ CEQA Guidelines § 15064.4(b)(1).

¹⁵⁹ 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).

¹⁶⁰ Cal Pub Resources Code § 21082.1(c); see also CEQA Guidelines § 15074(b).

project might have a significant impact on the environment.”¹⁶¹ Here, the Port impermissibly accepted at face value that operating GHG emissions that fall under SCAQMD’s significance thresholds will have no impact,¹⁶² despite substantial evidence to the contrary.¹⁶³ 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.”¹⁶⁴ Since 2008, California has adopted numerous GHG emissions reductions targets.¹⁶⁵ 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.”¹⁶⁶ The Port has failed to do so here.

**CBD-41
(con’t)**

VI. THE IS/ND IMPROPERLY UNDERESTIMATES EARTHQUAKE AND TSUNAMI RISK

CBD-42

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.”¹⁶⁷ However, the Port asserts that “the final project design *would be reviewed*” in order to implement recommendations from a geotechnical investigation.¹⁶⁸ However, future implementation of unspecified geotechnical recommendations does not constitute “substantial evidence in the record.”¹⁶⁹ The IS/ND cannot rely upon a *future* geotechnical evaluation to presently conclude that no significant environmental impact may occur.¹⁷⁰

¹⁶¹ *John R. Lawson Rock & Oil, Inc. v. State Air Res. Bd.*, 20 Cal. App. 5th 77, 110 (2018).

¹⁶² IS/ND at 4-27.

¹⁶³ *See supra* pp.19-21.

¹⁶⁴ *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).

¹⁶⁵ *See supra* p.20.

¹⁶⁶ 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>.

¹⁶⁷ IS/ND at 4-22.

¹⁶⁸ *Id.* (emphasis added).

¹⁶⁹ CEQA Guidelines § 15091(b).

¹⁷⁰ 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.¹⁷¹ 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."¹⁷² 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.¹⁷³

CBD-42
(con't)

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.¹⁷⁴ 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."¹⁷⁵ 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.¹⁷⁶ Recent expert studies find that the risk that tsunamis pose "considerably more danger to the ports . . . than previously thought."¹⁷⁷ 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

CBD-44

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."¹⁷⁸ 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.¹⁷⁹ 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."¹⁸⁰ CEQA requires its provisions "to be read so as

¹⁷¹ Appendix A, Section V.B.

¹⁷² *Id.*

¹⁷³ *Id.*

¹⁷⁴ Appendix A, Section V.A.

¹⁷⁵ IS/ND at 4-36.

¹⁷⁶ Appendix A, Section V.A.

¹⁷⁷ *Id.*

¹⁷⁸ CEQA Guidelines § 15064(f)(1); *No Oil, Inc. v. City of Los Angeles*, 13 Cal.3d 68, 75 (1974).

¹⁷⁹ CEQA Guidelines § 15064(a)(1) (emphasis added).

¹⁸⁰ *Id.*

to afford the fullest possible protection to the environment within the reasonable scope of the statutory language.”¹⁸¹ 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.”¹⁸² Any doubts are resolved in favor of environmental review.”¹⁸³

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

¹⁸¹ *No Oil, Inc. v. City of Los Angeles*, 13 Cal.3d 68, 83 (1974).

¹⁸² CEQA Guidelines § 15064(g) (emphasis added).

¹⁸³ *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, NO₂ and SO₂ 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)

I. Introduction and Summary

I reviewed the Draft Negative Declaration / Application Summary Report for the World Oil Tank Installation Project, Port of Long Beach,¹ [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).²

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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.³ I concluded there are deficiencies in the Negative Declaration, requiring detailed environmental analysis. In summary, I concluded:

CBD-46

- **The Negative Declaration makes unsupported conclusions**, fails to include basic information necessary for public review, and leaves mitigation for later.

CBD-47

- **The Project has clear potential to cause significantly increased hazards, air and water pollution, and cumulative impacts.**

CBD-48

- **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:
 - **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

¹ 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>

² 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

³ 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.

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(con't)

- **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.

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- **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.
 - **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

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providing any assumption about H₂S concentration at all, but still assuming no impacts. There are no permit conditions set to limit H₂S concentrations in the storage tanks to low level assumptions. High concentrations would be allowed and must be assumed. High H₂S content in Project tanks can be emitted to the air during the Project life, with the potential for significant impacts.

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(con't)

- **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 H₂S 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 H₂S causes handling problems, and the ability of H₂S 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 H₂S 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.
- **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,***

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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).

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(con't)**

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.

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.

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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.⁴ 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.⁵ **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
All LA Refineries Average	6.2 times	34 times

(Also note that the study did not include the Wilmington half of the Tesoro refinery.)

⁴ [Emission Measurements of VOCs, NO2 and SO2 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

⁵ 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 2013,⁶ 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), SO₂, and NO₂ 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**

⁶ 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, SO₂, and NO₂ 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):⁷

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.”**⁴⁰ 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”:⁸

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)

⁷ 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/sierraclubigpmethanoltitlevpetition2017.pdf>

⁸ 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:⁹

“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.*

⁹ 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.**¹⁰

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 (9.7×12). 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 $1.85\text{E}-7$ (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 ($0.185 \text{ per million} \times 5.4 = 1 \text{ per million}$). 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

¹⁰ *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>

¹¹ 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.

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(con't)

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).¹² 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)

III. Crude tank H₂S Project impacts are missing and potentially significant

CBD-55

A. The ND leaves out key H₂S data, is inconsistent, makes unsupported conclusions, and repeats an error identified by AQMD in another storage tank permitting process

► **The Negative Declaration never mentioned one of the most impactful chemicals present in crude oil - hydrogen sulfide (H₂S). 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 H₂S 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 H₂S impacts described below. Furthermore, this Project has no permit limit on percentage of H₂S allowed to be present within the crude oil.

► **The ND repeats but makes worse a history of underestimation and missing analysis on H₂S 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 H₂S concentrations in crude oil could be present at 9 times higher than previously assumed for new Tesoro crude oil storage tanks¹³ (now owned by Marathon). In the absence of crude oil data from Tesoro, AQMD assumed H₂S levels

¹² 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>]

¹³ 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 H₂S.¹⁴ The World Oil Tank Project ND is repeating this error in a more extreme form – not even identifying H₂S 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 H₂S 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 H₂S, 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.”**¹⁵

H₂S 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. H₂S can cause headaches, nausea, eye inflammation, and more.¹⁶ 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)).¹⁷ The OSHA data illustrates the seriousness of exposure to high levels of H₂S, 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.”¹⁸ This recent OEHHA report also found “individuals living in close proximity to oil refineries may be at risk of chronic exposure to hydrogen sulfide.”¹⁹ Although the OEHHA report

¹⁴ The Tesoro LARIC project crude oil tank H₂S 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 H₂S in crude oil. Thus, the data used during the preparation of the May 2017 Final EIR did not provide concentration data for H₂S as a potential TAC in crude oil. For this reason, the May 2017 Final EIR describes the concentration of H₂S 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 H₂S concentrations for some crude oils (up to 45 ppm).”] Available at: <http://162.80.26.25/docs/default-source/ceqa/documents/permit-projects/2019/oct2019addendومتomay2017finaleirfortesorolaric.pdf?sfvrsn=6>

¹⁵ 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

¹⁶ 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.>

¹⁷ 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

¹⁸ At page A-16

¹⁹ 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 H₂S corrosion, accidents and releases.**

OEHHA detected H₂S 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.”*²⁰ (emphasis added) Oil industry literature also identified H₂S 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 H₂S 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 H₂S 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.**”*²¹ Fittings on floating roofs tanks also deteriorate with time. This would increase emissions into the space above, where H₂S can concentrate.

► **Oil Industry literature found H₂S 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 H₂S. Heavy oils, **including crude oil, residual fuel and gas oil, tend to have large concentrations of H₂S.** This becomes a concern if these products are to be stored for an extended time or transported.”*²² (emphasis added) This article also found that in tank farms, there is very little time to correct such H₂S 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 H₂S-related problems. These could impact operations (personnel safety issues) or profitability (product transport/transfer issues) in a time critical manner. . .*

²⁰ 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

²¹ *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

²² Baker Hughes, p. 3, Available at: <https://www.worldoil.com/uploadedFiles/Media/SULFIX-H2S-White-Paper.pdf>

Additional issues caused by H2S contamination include corrosion problems, odor concerns and product degradation."²³

The Baker Hughes report and other articles found levels of H2S 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 H2S in the crude liquid at concentrations of 15-25 ppm could reach much higher concentration in the headspace (up to 600 ppm measured H2S). This is due to agitation, higher temperatures, or increasing the liquid in the tank so that the vapor phase is compressed and concentrated: *"H2S is a gas at typical storage temperatures and equilibrates between liquid and vapor phases. Distressed cargoes containing high H2S levels can easily generate percent levels (parts per hundred) of H2S 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 H2S 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 H2S hazards in crude oil storage tanks. It found H2S *"... is also a corrosive, making it more likely that oil storage tanks where hydrogen sulfide is present will leak."*²⁴ 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-H2S 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).²⁵

- **Mitigation measures could reduce H2S 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).²⁶ 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).²⁷ In addition to reducing ROG (aka VOCs), this measure would capture, remove vapors, and combust H2S

²³ Baker Hughes p. 12

²⁴ 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>

²⁵ 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>

²⁶ 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

²⁷ 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, 30th page of pdf.

vapors. This mitigation could reduce H₂S 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 H₂S scavengers to remove H₂S, because of the dangers of H₂S levels in crude oils, which it finds are increasing on average.²⁸ Further, an article in Chemical Engineering Online, *Removing H₂S from Crude Petroleum On-Site*, identified a system used at extraction sites to remove H₂S before transport to refineries, which strips H₂S using an inert gas.²⁹ Another mitigation option could be agreements for World Oil to contract with crude suppliers to require that H₂S be removed upstream, before shipping to the terminal.

► **The Ports area required years of AQMD investigation and resources before identification of the source of ongoing odors, including H₂S 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.³⁰

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.³¹

“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 Natri, 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 H₂S (one of the most odorous sulfur compounds), and hydrocarbons.³²

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

²⁸ Baker Hughes, *Hydrogen Sulfide Management Mitigation options in petroleum refining, storage and transportation*, <https://www.worldoil.com/uploadedFiles/Media/SULFIX-H2S-White-Paper.pdf>

²⁹ May 1, 2018, <https://www.chemengonline.com/removing-h2s-crude-petroleum-site/>

³⁰ ‘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.>

³¹ 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>

³² 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).

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*³³ – 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”.³⁴

It specifically found such tsunamis can trigger waves and currents exceeding 8 knots (≈ 4 m/s) in the Ports of LA and Long Beach, and concludes that “**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.**” (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

³³ 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

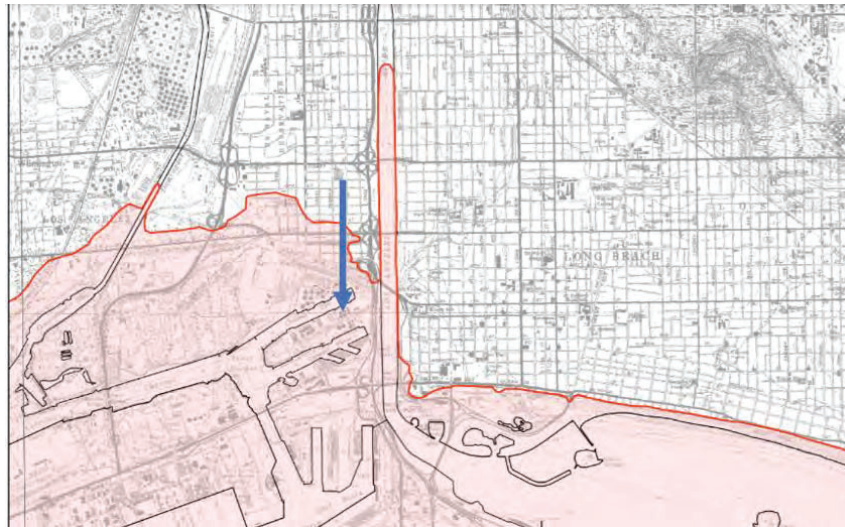
³⁴ “Of these 322 scenarios [investigated], tsunamis from 11 source regions in Alaska, Chile, Philippines, Manus, New Zealand, and Vanuatu are identified as having the potential to generate a tsunami significant to the ports of Los Angeles and Long Beach, so these are investigated in detail.” at pp. ix-x

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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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).³⁵



B. Earthquake risk is high at the Project location, which adds significant new hazards

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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)

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.

³⁵ 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

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 6.7,³⁶ 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.”*³⁷ 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,

³⁶ 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

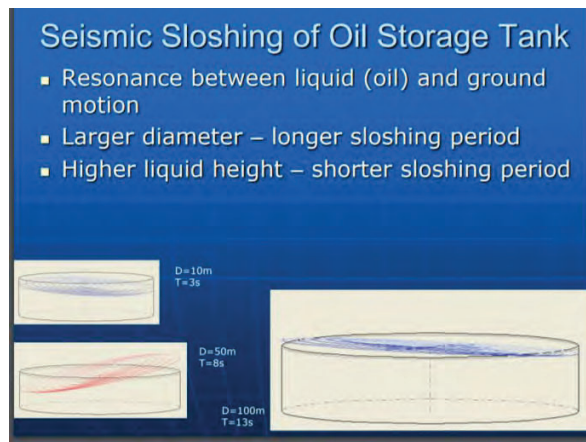
³⁷ Science Alert, Nature, *Scientist Says The San Andreas Fault Is “Locked, Loaded, And Ready to Roll”*, Fiona Macdonald, 5 May 2016, <https://www.sciencealert.com/the-san-andreas-fault-is-locked-loaded-and-ready-to-roll-say-scientists>

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).**

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, 8.1³⁸ on the Richter scale), and others. The study slides in English are shown at right and below.³⁹



³⁸ Geotimes, 9/26/2003, American Geological Institute, <http://www.geotimes.org/sept03/WebExtra092603japan.html>

³⁹ *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/cre/scast/Shared%20Documents/Meeting%20Minutes%20and%20Presentations/StorageTankConf2008NISHISloshing.pdf>


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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

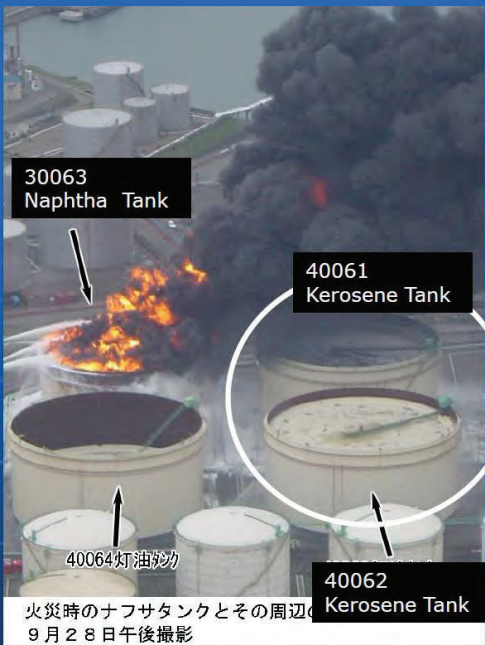



Floating roof of the #100654 crude oil tank sank completely in the end (2003/9/30, four days after the earthquake)

Fractured welding

Buckled pontoon (P40&P41) of the #100654 crude oil tank (2nd mode dominant, sloshing height 1.4m)

Sinking of the floating roof of the 40,000 k l kerosene tanks




30063 Naphtha Tank

40061 Kerosene Tank

40062 Kerosene Tank

40064 Kerosene Tank

Two floating roofs sank. (2003/9/30 16:43)



Fractured welding part between the outer rim and the lower deck of the pontoon (Bottom view)

火災時のナフサタンクとその周辺
9月28日午後撮影
(2003/9/28 14:26)

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*

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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)

The NuStar tanks burned for seven hours,⁴⁰ 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.⁴¹ Likewise the earthquake was identified as a *potential* cause of the NuStar explosion.⁴² (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.⁴³ 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



⁴⁰ 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# Video download also available on this webpage.

⁴¹ 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>

⁴² 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>

⁴³ KPIX 5, Shelter in Place for People Near NuStar Facility by Crockett & Rodeo, 10/15/2019, available at: <https://www.youtube.com/watch?v=VZNTLNellzQ&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.⁴⁴) 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.⁴⁵

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 map⁴⁶ 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.⁴⁷



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(con't)**

⁴⁴ 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>

⁴⁵ 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>

⁴⁶ [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.

⁴⁷ 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

CBD-57
(con't)

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.⁴⁸
- 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 -		
10/15/2019 16:27	38.055207, -122.231406	.105mg/m3 Total	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

⁴⁸ At time 1:33 of the CCC County hearing, 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.⁴⁹

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

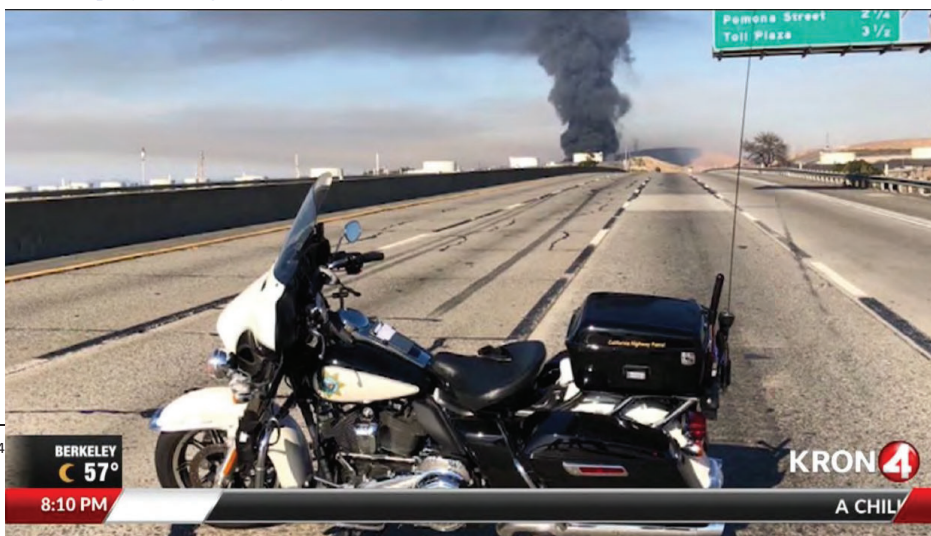
CBD-57
(con't)



<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](#)



<https://www.kron4.com/news/i-80-shutdown-traffic-impacts-from-refinery-fire-in-crockett/>

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 2019.⁵⁰ 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:⁵¹

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.

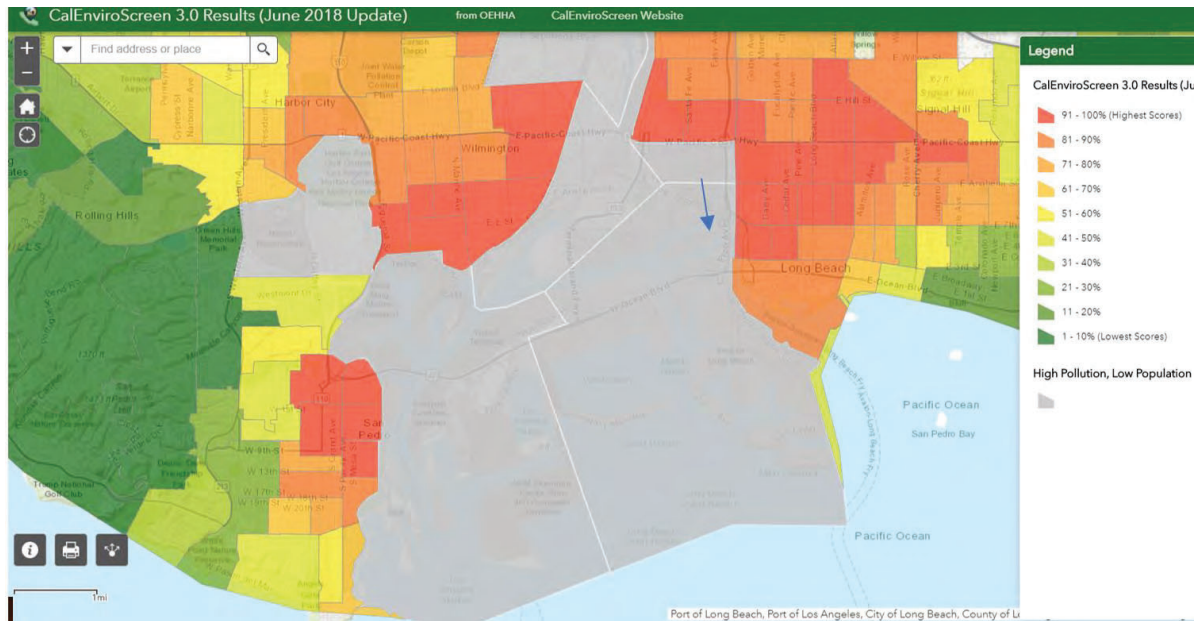
(emphasis added)

⁵⁰ Available at: https://documents.coastal.ca.gov/assets/env-justice/CCC_EJ_Policy_FINAL.pdf

⁵¹ <https://oehha.ca.gov/calenviroscreen/about-calenviroscreen>

**CBD-58
(con't)**

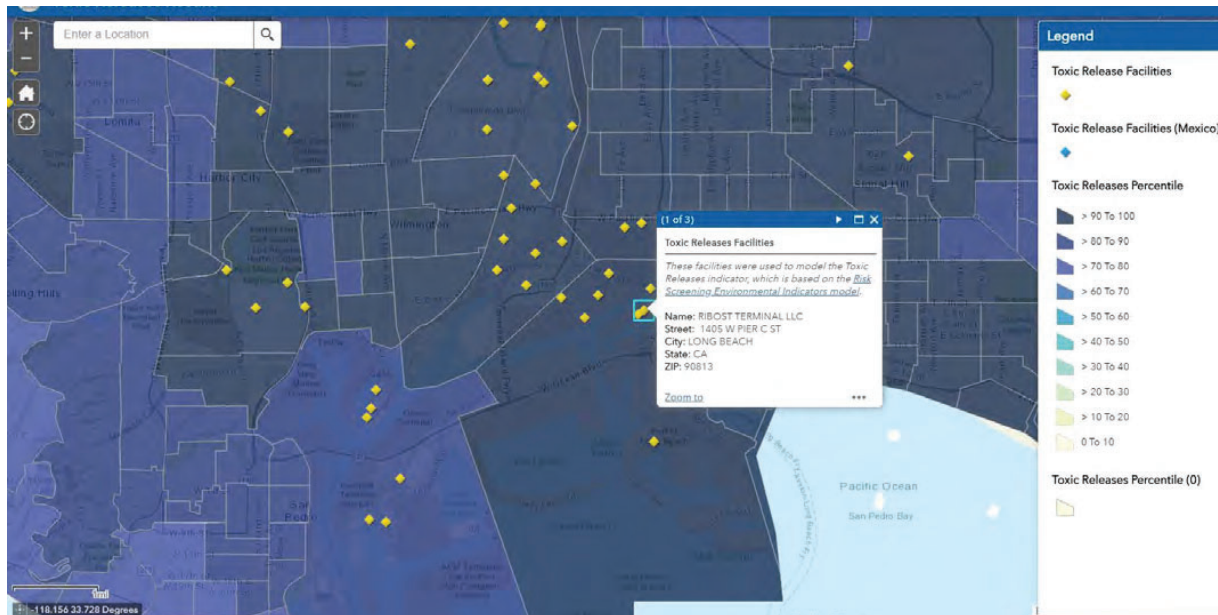
The CalEnviroScreen maps below show that residential areas around the ports where World Oil is located are among the highest scored pollution burdens in the state (over 91% highest impact scores in the red and orange zones).⁵² No areas near the ports show green (the healthiest, least impacted areas, 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.



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).

⁵² 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=4560cfbce7c745c299b2d0cbb07044f5>

CBD-58
(con't)



The South Coast Air Quality Management District also has an Environmental Justice Policy,⁵³ 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.⁵⁴

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)

⁵³ <http://www.aqmd.gov/nav/about/initiatives/community-efforts/environmental-justice#:~:text=The%20purpose%20of%20South%20Coast,of%20air%20within%20their%20communities.>

⁵⁴ 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-wcwlbf.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.

**CBD-58
(con't)**

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.

CBD-59

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.

CBD-60

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.

CBD-61

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.⁵⁵

CBD-61
(con't)

- **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, tsunamis, 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.⁵⁶ 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.

CBD-62

CBD-63

CBD-64

⁵⁵ 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)

⁵⁶ 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.

CBD-65

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.

CBD-66

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.⁵⁷ (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:⁵⁸

. . . 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**

⁵⁷ 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/>

⁵⁸ 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)

CBD-66
(con't)

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."*⁵⁹ 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 WCWLW area, below.⁶⁰

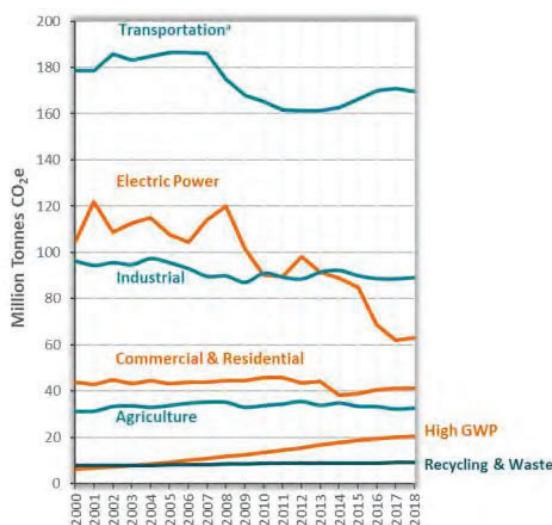


Figure 3. Trends in California GHG Emissions. This figure shows changes in emissions by Scoping Plan sector between 2000 and 2018. Emissions are organized by the categories in the AB 32 Scoping Plan.

The top GHG emitters in the AQMD Air Basin are almost entirely in the WCWLW 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.

⁵⁹ The 2017-2018 Budget, Cap and Trade, California LAO, <https://lao.ca.gov/Publications/Report/3553>

⁶⁰ 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/

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

CBD-66
(con't)

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):⁶¹

- **VOCs** – “The largest contribution to VOC emissions are from **petroleum production and marketing**, due to presence of several petroleum refineries in this community.” *
- **PM_{2.5}** – Fine particulate matter comes mostly from **industrial and petrochemical** process fuel combustion. (PM_{2.5} causes premature deaths for vulnerable people.)
- **NO_x** – **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.

⁶¹ SCAQMD air emissions inventory for the WCWLB [Community Emission Reduction Plan](#), Sept. 2019, WCWLB CERP, VOCs: (p. 3b-6), PM_{2.5} (p. 3b-3), NO_x (p. 3b-2)

CBD-67

**CBD-67
(con't)**

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.

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.⁶² 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

CBD-68

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.

⁶² Port of Long Beach, screen capture, 11/17/2020. <https://www.polb.com/documents/#ceqa-nepa>

Appendix B

Coalition Comments on World Oil Tank Installation Project for Public
Hearing to Board of Harbor Commissioners & Long Beach City Council
World Oil Tank Installation Project
10/28/2021 & 11/11/2021

CBD-69

**EARTHJUSTICE
CENTER FOR COMMUNITY ACTION AND ENVIRONMENTAL JUSTICE
SAN PEDRO & PENINSULA HOMEOWNERS COALITION
SIERRA CLUB – ANGELES CHAPTER**

October 27, 2021

VIA: ELECTRONIC MAIL ONLY
(bhc@polb.com)

Board of Harbor Commissioners
Port of Long Beach
4801 Airport Plaza Dr.
Long Beach, CA 90815

**RE: Comment on World Oil Tank Installation Project for Public Hearing on
October 28, 2021**

Dear Board of Harbor Commissioners:

The undersigned organizations write to express their strong opposition to the adoption of the Final Initial Study/Negative Declaration (“IS/ND”) prepared by the Port of Long Beach (“Port”) for the World Oil Tank Installation Project (“Project”). This Project would involve the construction of two 25,000-barrel crude oil storage tanks at the World Oil Terminal. The Port’s IS/ND for this Project fails to provide adequate review of the Project’s impacts as required by the California Environmental Quality Act (“CEQA”). Communities and sensitive receptors near the World Oil Terminal bear disproportionate exposure to pollutants and cumulative health impacts from fossil fuel infrastructure. Inadequate CEQA review of this Project would deprive these communities and the general public of their right to know the impacts this additional fossil fuel infrastructure would have on their health and on the environment. Moreover, deficient environmental review undermines the ability of Commissioners to engage in informed decision making in approving this Project. For these reasons, the Commission should not approve this project until its impacts have been fully examined in an Environmental Impact Report (“EIR”).

The Port’s IS/ND remains inadequate in several crucial ways:

- **The Port failed to properly consult with the required agencies, including the California Coastal Commission (“CCC”) and California Department of Fish and Wildlife (“CDFW”).** In particular, the CCC submitted comments on

**CBD-69
(con’t)**

CBD-70

October 26 noting the IS/ND failed to show sufficient protection against flooding and storms, especially in the context of rising sea levels and climate change. As indicated by CCC's comments, these concerns have not been adequately addressed in the Final IS/ND. Given the fifty-year lifespan of these tanks and the increasing danger posed by storms and flooding at the Port, this Project should not be approved until the Port fully consults with CCC and addresses the agency's concerns. Moreover, CEQA also requires an EIR to be prepared where experts disagree on the significance of potential impacts of a Project.¹

CBD-70
(con't)

- **The IS/ND defines this Project in an improperly narrow way, preventing meaningful examination of the Project's cumulative impacts.** This Project would increase the World Oil Terminal's already-substantial oil storage capacity by 50,000 barrels, increasing the number of tanks at the site from seven to nine. However, the IS/ND did not examine the Project's impacts in the context of this existing infrastructure, leaving the public to speculate about the significance of the total emissions from the World Oil Terminal. This piecemealed approach to permitting storage tanks at the terminal contravenes the requirements and purpose of CEQA.²
- **The IS/ND fails to investigate and adequately disclose existing conditions to properly understand the significance of this Project's impacts on nearby communities.** In particular, the Project would add to the cumulative burden created by the sixty-seven new storage tanks approved for construction in the region in the past ten years.³ The public and Commissioners lack the necessary information to understand the cumulative impacts on the environment of these closely related facilities.
- **The IS/ND does not examine the environmental impacts of new uses the Project would facilitate in the region.** The Project includes World Oil leasing two existing storage tanks for use by the Marathon and Glencore refineries.

CBD-71**CBD-72****CBD-73**

¹ 14 Cal. Code Regs. § 15064(g) ("If 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.").

² *Laurel Heights Improvement Assn. v. Regents of Univ. of California*, 47 Cal. 3d 376, 393 (1988).

³ See Appendix G of Comments from Earthjustice et al. submitted to the Port of Long Beach on November 20, 2020; SCAQMD, Working Group Meeting 2 for Proposed Amendment to Rule 1178 (July 15, 2021), http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1178/par1178-wgm2_final.pdf?sfvrsn=12 (Discussing numerous impacts of existing storage tanks).

The construction of the Project's tanks would facilitate these new leases, which cannot be meaningfully separated from the environmental impacts of the new storage tanks.

CBD-73
(con't)

- **The IS/ND summarily dismisses recent scientific studies that revealed dangerous underestimations of fugitive emissions from oil storage tanks.** In particular, the SCAQMD-funded FluxSense study found that measured emissions of cancer-causing benzene were 34 times higher *on average* than estimated emissions.⁴ Julia May, Senior Scientist at Communities for a Better Environment, provided expert comments to the Port, explaining how this and other studies show the Project may have significant impacts on the environment.⁵ The Port's rejection of this analysis is insufficient to defend this IS/ND, as CEQA requires an EIR to be prepared where experts disagree on the significance of a project's impacts.⁶
- **The IS/ND asserts that direct health impacts from ground-level ozone near the Project would be "negligible," but stated it lacks methods or procedures to address those impacts.**⁷ Instead of addressing those direct health impacts, the Port compared the Project's volatile organic compound ("VOC") emissions to VOC emissions for the entire county of Los Angeles to conclude the Project's impacts were "negligible." Given that VOC emissions are a pressing problem for *nearby* impacted communities, the Port's comparison to emissions across Los Angeles County is irrelevant and inadequate.
- **The IS/ND ignores rule amendments underway at South Coast Air Quality Management District ("SCAQMD"), which the IS/ND wrongly cites as adequate VOC control measures.** Given the serious discrepancies between reported VOC emissions from storage tanks and actual emissions, SCAQMD is actively engaged in rulemaking to update existing regulatory requirements. For instance, SCAQMD is set to complete its rule amendments

CBD-74

CBD-75

CBD-76

⁴ Johan Mellqvist, et al., FluxSense Inc., Emission Measurements of VOCs, NO₂ and SO₂ 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>.

⁵ See Appendix A, Section II.A. of Comments from Earthjustice et al. submitted to the Port of Long Beach on November 20, 2020.

⁶ 14 Cal. Code Regs. § 15064(g).

⁷ Port of Long Beach, Final Negative Declaration/Application Summary Report World Oil Tank Installation Project at 8-94.

for Rule 1178 (Storage Tanks at Petroleum Facilities) in March 2022.⁸ In the interest of using the best available science and control measures to protect impacted communities when planning, constructing, and operating storage tanks, the Port should hold this Project in abeyance until that crucial rulemaking has concluded.

CBD-76
(con't)

- **The IS/ND uses an improper baseline to analyze the Project's impacts, which does not consider existing conditions.** The IS/ND states the new storage tanks would not enable greater oil throughput at the terminal beyond limits under existing permits. However, the Port has not shown whether the Project would result in actual increases in oil throughput above *current levels*, which is the baseline for comparison required by CEQA.⁹
- **The IS/ND dismisses the risks this Project poses in the event of fire or earthquakes in the area.** The IS/ND notes that the terminal's containment wall is designed to contain 90,000 barrels, but this Project would add 50,000 barrels of storage to the terminal's existing 502,000-barrel capacity. The IS/ND does not properly consider that damage to several tanks could overwhelm existing containment wall capacity, resulting in significant environmental impacts. The IS/ND fails to examine whether a secondary containment system is necessary given the increasing storage capacity at the site.
- **The IS/ND notes the Project would create 50,000 barrels of hazardous tank sludge over its lifetime.** The Port dismisses this impact as insignificant because the ten-year cleaning would use only 4.5 percent of the capacity at a hazardous waste facility in Vernon. However, the IS/ND does not discuss the existing treatment load at the Vernon facility or other options in the region, which might require additional vehicle miles traveled and increase the risk to communities and the environment. Given the other storage tanks permitted in the region, the IS/ND has not shown that existing capacity at the Vernon facility is sufficient to treat tank sludge generated by this Project.

CBD-77**CBD-78****CBD-79**

⁸ SCAQMD, Rule and Control Measure Forecast 2021-2022 Master Calendar (October 1, 2021), <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-oct1-013.pdf?sfvrsn=2>. (See Rule 1178. Also note Rule 1173, estimated for completion in the 4th Quarter of 2022.).

⁹ *Communities for a Better Env't v. S. Coast Air Quality Mgmt. Dist.*, 48 Cal. 4th 310, 321 (2010).

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This Project contravenes the Port's Green Port Policy. The Policy's guiding principles include the protection of the community, promotion of sustainability, and leadership in environmental stewardship. The Port states its focus is to "stave off climate change,"¹⁰ yet this IS/ND claims that construction of 50,000 barrels of crude oil storage does not justify environmental analysis beyond an Initial Study. We urge the Commission to demonstrate its leadership and commitment to sustainability by requiring the Port to produce a full EIR for this Project to adequately consider the significant impacts from this Project and appropriate mitigation measures.

CBD-80

Sincerely,

Kartik Raj
Oscar Espino-Padron
Adrian Martinez
EARTHJUSTICE

Faraz Rizvi
CENTER FOR COMMUNITY ACTION AND
ENVIRONMENTAL JUSTICE

Peter M. Warren
SAN PEDRO & PENINSULA HOMEOWNERS
COALITION

Morgan Goodwin
SIERRA CLUB – ANGELES CHAPTER

¹⁰ Port of Long Beach, The Green Port Through the Years, <https://polb.com/port-info/green-port/>.

EARTHJUSTICE
COALITION FOR CLEAN AIR
EAST YARD COMMUNITIES FOR ENVIRONMENTAL JUSTICE
CENTER FOR COMMUNITY ACTION AND ENVIRONMENTAL JUSTICE
COMMUNITIES FOR A BETTER ENVIRONMENT
CENTER FOR BIOLOGICAL DIVERSITY
SIERRA CLUB – ANGELES CHAPTER

VIA: ELECTRONIC MAIL ONLY

November 11, 2021

Honorable Members of the City Council
c/o Monique De La Garza, City Clerk
City of Long Beach, California
333 West Ocean Blvd., Lobby Level
Long Beach, CA 90802
(562) 570-6101
cityclerk@longbeach.gov

RE: Appeal of Long Beach Board of Harbor Commissioners' Approval of World Oil Tank Installation Project (HD-21-537)

Dear Members of the Long Beach City Council:

The undersigned organizations (“the Coalition”) write to appeal the approval of the World Oil Tank Installation Project (“Project”) by the Port of Long Beach Board of Harbor Commissioners (“Commission”).¹ On October 28, 2021, the Commission approved this Project based on the Initial Study/Negative Declaration (“IS/ND”)—a cursory review of potential environmental and public health impacts from small projects—prepared by the Port of Long Beach (“Port”) under the California Environmental Quality Act (“CEQA”). The Coalition submitted comments, including expert analysis, supporting the need for a full environmental impact report (“EIR”) and outlining serious problems with the Port’s review of potential environmental impacts in the IS/ND:²

- The IS/ND failed to account for crucial studies showing that cancer-causing volatile organic compound (“VOC”) emissions from oil storage tanks are dangerously underestimated.
- The IS/ND examined the Project’s impacts in a vacuum, without considering the existing impacts from the World Oil terminal, connected refineries, and other storage tanks in the region.

¹ This appeal is authorized by Long Beach, California, Municipal Code § 21.21.507.

² APPX_000001-000005, Coalition’s Oct. 27, 2021, Public Comments; APPX_000381-000405, Coalition’s Nov. 20, 2020, Public Comments. (Cites to “APPX” refer to the Bates-stamped Appendices filed concurrently with this appeal.)

CBD-81

- The California Coastal Commission (“CCC”) found the IS/ND failed to account for the impacts of climate change on storm and flooding risks, and the Port did not properly consult with CCC to resolve these problems.
- The IS/ND failed to properly address expert comments on risks of serious disasters, including earthquakes, fires, and tsunamis that threaten Port infrastructure and surrounding communities.
- The Project would produce thousands of barrels of hazardous sludge, but the IS/ND did not disclose whether the disposal facility in the region had capacity to process the additional waste or examine alternative sites.

**CBD-81
(con’t)**

The Project would involve the construction of two large, 25,000-barrel crude oil storage tanks at the Port, and risks harming overburdened communities already facing severe pollution from fossil fuel infrastructure. The IS/ND’s review of this Project understates or ignores serious risks, depriving community members of transparency into potential impacts and denying the Commission necessary information. Proper environmental review under CEQA is crucial to ensure that affected communities and decisionmakers are adequately informed about a project’s impacts.

We respectfully ask the City Council to require the Port to correct its flawed environmental review by producing an EIR that considers alternatives and mitigation measures for the Project. We also request that the City Council require that the Project not be considered for approval until crucial rulemaking on storage tank emissions from the South Coast Air Management District (“SCAQMD”) is finalized in March 2022.

I. Project Background: Proposed Infrastructure That Would Exacerbate Urgent Environmental and Public Health Problems.

CBD-82

The Project applicant, Ribost Terminal LLC (d.b.a. “World Oil”), proposes to construct **two large, 25,000-barrel crude oil storage tanks** at the Port’s World Oil Terminal, adding storage capacity to the terminal’s already-substantial storage capacity of 502,000 barrels. The terminal currently has seven large petroleum storage tanks, which send and receive petroleum products to and from multiple nearby refineries through pipelines and by truck.

World Oil and the Port’s representation of this Project was fundamentally misleading to the public and the Commission. At the public hearing before the Commission, World Oil portrayed itself merely as a recycling operation that “does not manufacture any finished fuels.”³ World Oil also referred to its South Gate refinery as an “asphalt plant,” obfuscating that its refinery in South Gate produces

³ Port of Long Beach Board of Harbor Commissioners, Regular Meeting of October 28, 2021, at 33:14-34:51, https://polb.granicus.com/player/clip/7429?view_id=77&redirect=true; APPX_000020.

highly polluting marine diesel fuel and various other distillates.⁴ The Port's emphasis on World Oil's recycling operations deflected from the Project's explicit intention to allow the lease of two "larger existing tanks" to oil refineries in Carson and Long Beach run by Marathon Petroleum and Glencore.⁵ The IS/ND did not specify which tanks will be leased, but **the Project will allow between 86,000 to 188,000 barrels of additional storage capacity to become available for use by the Marathon and Glencore oil refineries.**⁶

As illustrated in Figure A below, the Project would be sited near residential areas and schools that already bear an extreme and disproportionate burden of pollution from the Port complex.⁷ The Project would have a variety of harmful environmental impacts, including increased emissions of cancer-causing air pollutants, increased risks of major disasters, and would create many thousands of barrels of hazardous sludge being transported through communities.⁸

Figure A: Google Maps Image Showing Proximity of Project Site to Schools



⁴ Port of Long Beach Board of Harbor Commissioners, *supra* note 3, at 33:12-33:22; APPX_000104; APPX_000221.

⁵ APPX_000025; APPX_000029.

⁶ APPX_000024 (The smallest existing tanks at the refinery each have a capacity of "approximately 43,000 [barrels].").

⁷ APPX_000381 *citing* 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>.

⁸ APPX_000046; APPX_000057; APPX_000064; APPX_000072.

On November 20, 2020, the Coalition provided written comments to the Port highlighting problems with the IS/ND's analysis. Subsequently, on October 27, 2021, the Coalition provided comments to the Commission underlining the continuing problems with the IS/ND that the Port's response to comments failed to adequately address.⁹ Several Coalition representatives and community members also provided oral comments during the Commission's October 28, 2021, public hearing on the Project. Despite these efforts, the Commission followed Port staff's recommendations and approved the IS/ND.

CBD-82
(con't)

II. The Port's Analysis Failed to Properly Examine the Project's Various Environmental Impacts

CBD-83

a. The IS/ND Ignored Crucial Science on Storage Tank Emissions, and SCAQMD's Pending Regulatory Updates to Control Storage Tank Emissions that Apply to the Project.

The Project's storage tanks would emit fugitive VOCs, including cancer-causing benzene, as part of their everyday operation. Under the Port's estimates, the Project would release **over 200,000 pounds of VOCs** over its operational lifetime of at least fifty years.¹⁰ These emissions would threaten "sensitive receptors" particularly vulnerable to air pollution, including children in several elementary schools located approximately half a mile from the Project.¹¹

Recent studies sponsored by SCAQMD (the "FluxSense study") showed that VOC emissions at storage tanks are severely underestimated.¹² The study found that actual VOC emissions were *8.6 times greater* on average than estimations based on a common emission model.¹³ The study also found that actual emissions of cancer-causing benzene, a type of VOC, were *34 times higher* than estimated.¹⁴ Expert comments provided by Julia May, Senior Scientist at Communities for a Better Environment, showed the results of the FluxSense study indicated this Project's VOC emissions may be well above the significance threshold set by SCAQMD.¹⁵

⁹ The coalition that submitted comments to the Harbor Commission on October 27, 2021, consisted of Earthjustice, Center for Community Action and Environmental Justice, the San Pedro & Peninsula Homeowners Coalition, and the Sierra Club Angeles Chapter.

¹⁰ APPX_000030 ("Tank life is estimated to be greater than 50 years."); APPX_000044, tbl.4.3-2 (The Port estimated Project VOC emissions to be 10.959 pounds per day.).

¹¹ APPX_000066.

¹² APPX_000386 *citing* Johan Mellqvist, et al., FluxSense Inc., Emission Measurements of VOCs, NO2 and SO2 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>.

¹³ APPX_000413.

¹⁴ APPX_000413.

¹⁵ APPX_000417.

Julia May's comments also described numerous other studies discussing how VOC emissions from oil storage tanks are often egregiously underestimated.¹⁶

The Port failed to provide an adequate response to these expert comments that show a severe risk of underestimating harmful VOC emissions. Instead, the Port copied a comment from 2020 by SCAQMD regarding the FluxSense study, referencing existing rules relating to the control of VOCs from storage tanks.¹⁷ The Port failed to disclose, however, that SCAQMD has recognized that its current regime for controlling storage tank VOC emissions is inadequate. The agency is currently undergoing a rulemaking to update its storage tank emissions rule (Rule 1178) by March 2022.¹⁸ Furthermore, the Port provided no response to multiple other studies discussed in detail in the Coalition's technical comments, which reveal the grave risks of underestimating VOC emissions from oil storage tanks.¹⁹

The IS/ND's failure to address these risks is made more disturbing by the Project's proximity to nearby elementary schools and communities already overburdened by VOC pollution. The Port assumes the general significance threshold for VOCs is a suitable tool to conclude that *localized* VOC impacts would be "less than significant."²⁰ The IS/ND provided a cancer-risk analysis but failed to address the severe underestimation of cancer-causing VOCs found in the scientific studies discussed above. Thus, the conclusion that the Project's 200,000 pounds of lifetime VOC emissions *could not* have any significant impact on nearby communities is based on flawed analysis and incomplete information.

Given the severe risk that VOC emissions pose to nearby communities and sensitive receptors, the Project should use a conservative approach that assumes the worst-case scenario that VOC emissions might be higher than expected and consider appropriate mitigation measures under an EIR. Moreover, the Port should consider the updated scientific understanding reflected in SCAQMD's Rule 1178 updates for the construction, operation, and maintenance of storage tanks. Consequently, the City Council should require this Project to be held in abeyance until that critical rulemaking is concluded in March 2022. This approach will enable the Port to properly understand and mitigate the impacts of these emissions, rather than analyzing the Project with models that fail to reflect the best available science.

¹⁶ APPX_000414-000418.

¹⁷ APPX_000213-000215.

¹⁸ APPX_000003-000004 *citing* SCAQMD, Rule and Control Measure Forecast 2021-2022 Master Calendar (Oct. 1, 2021), <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-oct1-013.pdf?sfvrsn=2>. (See Rule 1178. Also note Rule 1173, estimated for completion in the 4th Quarter of 2022.).

¹⁹ APPX_000418.

²⁰ APPX_000046.

b. The Port's Analysis Ignored Key Cumulative Impacts of Emissions at the World Oil Terminal, Connected Refineries, and Nearby Storage Tanks.

The IS/ND did not analyze the Project's contributions to existing infrastructure to properly assess cumulative impacts as required by CEQA. Cumulative impacts analysis is crucial under CEQA because "the full environmental impact of a proposed project cannot be gauged in a vacuum."²¹ However, the Port did just that by examining the Project's impacts in isolation from closely related facilities that add to the cumulative impact ultimately felt by nearby communities.

First, the Port ignored the impacts of the existing infrastructure at the World Oil Terminal. The Project would increase the World Oil Terminal's storage capacity by 50,000 barrels and would increase the number of terminal tanks from seven to nine. Yet, the IS/ND did not examine the Project's impacts in the context of this existing infrastructure, leaving the public to speculate about the significance of the *total* emissions from the World Oil Terminal.

Second, the Port ignored impacts from the closely related refinery operations facilitated by the Project. The World Oil Terminal serves nearby refineries through pipeline connections and an average of seven hundred truck trips per month.²² The Project is planned to allow World Oil to lease greater amounts of storage capacity to serve the Marathon and Glencore refineries in Carson and Long Beach.²³ CEQA requires the Port to provide a "comprehensive cumulative impacts evaluation," but the Port failed to examine the impacts of refining activities the Project would enable.²⁴

Finally, the Port failed to examine how this Project would add to the cumulative impacts from multiple nearby storage tanks, including those that have been recently approved. In the past ten years alone, thirty-one new storage tanks have been approved for construction in the region.²⁵ Currently, there are over 1,100 storage tanks in the region.²⁶ Without any investigation into the impacts of those tanks, the public and the Commission were left without the necessary information to understand how the Project would add to the cumulative impacts already caused

²¹ *Bakersfield Citizens for Local Control v. City of Bakersfield*, 124 Cal. App. 4th 1184, 1214–15 (2004).

²² APPX_000029.

²³ APPX_000029.

²⁴ *Bakersfield Citizens for Local Control v. City of Bakersfield*, 124 Cal. App. 4th 1184, 1214 (2004).

²⁵ APPX_000220; APPX_000500-000527.

²⁶ APPX_000002 *citing* SCAQMD, Working Group Meeting 2 for Proposed Amendment to Rule 1178, at 18 (July 15, 2021), http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1178/par1178-wgm2_final.pdf?sfvrsn=12.

by these closely related facilities. Table B below demonstrates the magnitude of existing storage tank infrastructure this Project would be adding to at a time when we need to drastically reduce our dependence on petroleum.²⁷

Table B: SCAQMD Breakdown of Stationary Tanks by Size

Tank Size Category (gal)	# Tanks	Total Gallons Stored	Average Tank Capacity (gal)
≤50,000	70	3 million	43,000
>50,000 to 150,000	43	4 million	93,000
>150,000 to 1 million	217	100 million	460,000
>1 million	778	3 billion	3.9 million

Rather than consult with and obtain data from SCAQMD on storage tanks and related emissions throughout the region, the Port responded to Coalition comments by improperly shifting the burden onto the public to investigate the cumulative impacts of existing storage tank infrastructure, noting that the Coalition did not “identify tank sizes . . . [or] provide the number of retired storage tanks for this same period.”²⁸ As the lead agency responsible for reviewing this Project, the Port must properly investigate the Project’s contributions to cumulative impacts in the context of closely related infrastructure.²⁹ The Port cannot ignore important information showing potential cumulative impacts by simply dismissing the analysis of public comments. Moreover, the Port presents misleading information to assert that cumulative storage tank emissions are not increasing. The Port compares 2010 emissions to 2020 emissions to assert that emissions from Los Angeles County’s *entire* “petroleum refining and marketing sector have declined.”³⁰ This data and analysis do not show emissions changes from storage tanks and does not account for the impacts the COVID-19 global pandemic had on data for emissions in 2020.

c. The Port did not Adequately Consult with the California Coastal Commission, Leaving Unresolved Questions on Storm and Flood Risks.

The Port failed to adequately consult with the necessary agencies as required by CEQA.³¹ The California Coastal Commission (“CCC”) provided comments to the Port on November 20, 2020, noting concerns that the IS/ND failed to show the project would “withstand” storm events and flooding “exacerbated by sea level

²⁷ *Id.*

²⁸ APPX_000220.

²⁹ 14 Cal. Code Regs. § 15355(b).

³⁰ APPX_000220.

³¹ Cal. Pub. Res. Code § 21080.3(a).

rise.”³² On October 26, 2021,³³ CCC submitted additional comments criticizing the Port’s analysis:³⁴

There is **no evidence provided in the IS/ND** that suggests the project is located and designed in a way that will avoid adverse impacts on the environment and port-adjacent communities under conditions where sea and groundwater levels are higher and storm events are more frequent and severe.

CCC found that the Port’s analysis failed to sufficiently account for the dangers posed by flooding and storms because it “did not take climate change into consideration.”³⁵ These comments note a persistent and unresolved problem with the Port’s analysis demonstrating a failure to properly consult with CCC. In fact, CCC stated its comments were “preliminary in nature” and that “[m]ore specific comments may be appropriate as the project develops.”³⁶ These statements make clear that the Port did not fully consult with CCC in developing the IS/ND. Further consultation with CCC is necessary serve the public’s interest in providing a complete environmental review of the Project.

Furthermore, CEQA requires an EIR to be prepared for a project where “there is disagreement among expert opinion supported by facts” on the significance of a project’s impacts.³⁷ As CCC has expertise in storm and flooding risks on coastal facilities, the City Council should require the Port to fully consult with CCC and prepare an EIR that addresses the storm and flooding risks noted above.

d. The Port did not Properly Address Risks of Disasters from Earthquakes, Fires, and Tsunamis.

The Project creates increased risks of severe disasters that are not adequately addressed in the IS/ND. The Coalition provided expert scientific comments showing the Project’s tanks would face significant risks from earthquakes and tsunamis, which could cause severe damage through oil spills and fires.³⁸

The IS/ND’s analysis of earthquake risks was seriously flawed by understating the risks of oil spills. The IS/ND notes that the World Oil terminal’s containment wall was designed to contain 90,000 barrels.³⁹ However, the terminal’s *existing* capacity is 502,000 barrels, and this Project would add 50,000 barrels to that capacity. The

³² APPX_000124.

³³ APPX_000124; APPX_000568-000569.

³⁴ APPX_000568.

³⁵ APPX_000568.

³⁶ APPX_000569.

³⁷ 14 Cal. Code Regs. § 15064(g).

³⁸ APPX_000422-000432.

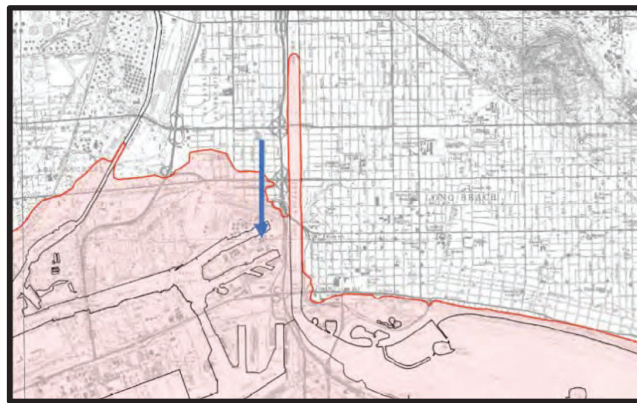
³⁹ APPX_000110.

IS/ND fails to consider whether damage to several tanks could overwhelm the existing containment wall, and what the environmental impacts of such a disaster would be. The IS/ND does not consider whether further mitigation, such as a secondary containment system, would be necessary to provide sufficient protection to Port waters and nearby communities.

The Coalition provided detailed comments showing that oil storage tank fires pose a substantial risk to nearby facilities and residents.⁴⁰ These comments described how fires at oil storage tanks, such as the NuStar Energy fire in San Francisco, have spread black smoke and dangerous particulate matter for many miles.⁴¹ However, the IS/ND failed to examine what impacts a fire at the Project site would have on surrounding communities. The Port asserted without evidence that “[a]ny fire would be isolated at the Port,” apparently ignoring that well-documented storage tank fires have impacted residents many miles away.⁴²

Coalition comments also highlighted studies from the National Oceanic and Atmospheric Administration showing tsunamis “pose considerably more danger to the ports of Los Angeles and Long Beach than previously thought.”⁴³ The Coalition also shared Figure C below, a map from the California Department of Conservation showing the Project site is well within the Long Beach Tsunami Inundation Area.⁴⁴

Figure C: California Dept. of Conservation, Los Angeles County
Tsunami Inundation Maps, Long Beach Quadrangle



The Port dismissed these concerns by noting the presence of a containment wall at the World Oil terminal.⁴⁵ However, as noted above, CCC stated the IS/ND did not

⁴⁰ APPX_000426-000432.

⁴¹ APPX_000428-000432.

⁴² APPX_000223; APPX_000428-000432.

⁴³ APPX_000423.

⁴⁴ APPX_000424.

⁴⁵ APPX_000224.

properly consider the effects of climate change and sea level rise on disaster risks. The Port's unresolved disagreement with those experts leaves the public to wonder what actual disaster risks this Project would pose and requires the preparation of an EIR.

**CBD-86
(con't)**

e. The Port Failed to Adequately Examine the Risk Posed by Thousands of Barrels of Hazardous Sludge that the Project Would Produce.

CBD-87

The Project would produce at least 15,000 barrels of hazardous tank sludge over its operational lifetime of fifty years or greater, with the sludge being removed from tanks every ten years.⁴⁶ The Port dismissed the Coalition's concerns that this substantial amount of hazardous waste may have significant environmental impacts.⁴⁷ The Port noted that the sludge produced would use only 4.5 percent of the treatment capacity at the waste facility located in Vernon.⁴⁸ However, the IS/ND failed to disclose the current treatment load at the Vernon facility. Nor did the IS/ND describe how the waste would be handled if the Vernon facility had insufficient capacity to accept thousands of barrels of additional waste. The communities that would be impacted by improper treatment or disposal of hazardous tank sludge deserve greater transparency and assurance that the treatment of hazardous sludge has been carefully examined.

The Port's IS/ND failed to address substantial evidence provided by the Coalition and other commenters that the Project would have significant environmental impacts. CEQA requires the Port to prepare a full EIR when there is *any* "fair argument" that the Project *may* have significant environmental impacts, including localized and cumulative impacts.⁴⁹ This Project would produce over 200,000 pounds of lifetime VOC emissions in a region already overburdened by such pollutants. The Project would produce at least 15,000 barrels of hazardous sludge and would significantly expand capacity to facilitate nearby oil refinery operations. The record before the City Council demonstrates far more than a "fair argument" that this Project would have sufficient environmental impacts justifying a more careful and comprehensive analysis.

CBD-88

Even if the Port disagreed that there may be a significant environmental impact from the Project, CEQA requires the preparation of an EIR. Under CEQA, the Port "shall" prepare an EIR where there is "disagreement among expert opinion supported by facts" on the significance of the Project's environmental impacts.⁵⁰ The

⁴⁶ APPX_000064.

⁴⁷ APPX_000392.

⁴⁸ APPX_000219.

⁴⁹ 14 Cal. Code Regs. § 15064(f)(1); *No Oil, Inc. v. City of Los Angeles*, 13 Cal.3d 68, 75 (1974).

⁵⁰ 14 Cal. Code Regs. § 15064(g).

expert comments provided by the Coalition and CCC demonstrate a disagreement with the Port's scientific analysis, which requires the Port to produce an EIR. The City Council should ensure that CEQA be applied in a manner that provides "the fullest possible protection to the environment" — it requires that the Port be directed to produce a full EIR to meet its obligations of transparency and accountability to decisionmakers and impacted communities.⁵¹

Respectfully submitted,

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ENVIRONMENTAL JUSTICE

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SIERRA CLUB – ANGELES CHAPTER

*Contributed to the research and/or factual portions of this document and did not provide legal services or analysis.

⁵¹ *No Oil, Inc. v. City of Los Angeles*, 13 Cal.3d 68, 83 (1974).

Appendix C

Earthjustice Comments on Jan. 2023 Initial Study
World Oil Tank Installation Project
Feb. 24, 2023

CBD-89



February 24, 2023

VIA ELECTRONIC MAIL ONLY

Matthew Arms
Director of Environmental Planning
Port of Long Beach
415 W. Ocean Blvd.
Long Beach, CA 90802
Email: ceqa@polb.com

**Re: Comments on the Initial Study for the World Oil Tank Installation Project
(Ribost Terminal, LLC (World Oil Terminals); Application No. 19-066)**

Dear Mr. Arms:

We appreciate the Port of Long Beach's decision to require detailed environmental review under an Environmental Impact Report (EIR) for the World Oil Tank Installation Project (hereinafter "Oil Tanks Project"), given the significant foreseeable impacts this fossil fuel infrastructure project would have on surrounding communities and the environment. Undoubtedly, the Oil Tanks Project would add to the cumulative burdens that fossil fuel infrastructure and other polluting operations currently place on surrounding communities.¹

World Oil proposes a massive storage tank buildout that would create 50,000 barrels of additional storage capacity in a region that is already overburdened with the most petroleum refineries and related infrastructure on the West Coast.² In fact, the Oil Tanks Project would add to the over 1,100 large stationary storage tanks currently in use at petroleum facilities across the region that, combined, can store over 3 billion gallons of toxic materials that pollute our air and damage our climate.³

For these reasons, the EIR must gather and disclose critical information about the real human health and environmental impacts from approving the Oil Tanks Project. There are at least three areas where the Initial Study underestimates or dismisses potential environmental impacts that

¹ Office of Health Hazard Assessment, *CalEnviroScreen 4.0* (October 2021) <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40> [archived at <https://perma.cc/4V6M-BVPZ>].

² See U.S. Energy Information Administration, Number and Capacity of Operable Petroleum Refineries by PAD District and State as of January 1, 2022, <https://www.eia.gov/petroleum/refinerycapacity/table1.pdf> [archived at <https://perma.cc/D6E5-Y97Y>]; California Air Res. Bd., *Refineries*, <https://ww2.arb.ca.gov/resources/documents/california-refineries> [archived at <https://perma.cc/UP4H-DEFF>]; See California Energy Commission, *California Oil Refinery History*, <https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/californias-oil-refineries/california-oil> [archived at <https://perma.cc/3H5W-RS8C>].

³ See South Coast Air Quality Mgmt. Dist., Proposed Amended Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities: Working Group Meeting 2 at 18 (July 15, 2021), http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1178/par1178-wgm2_final.pdf?sfvrsn=12 [archived at <https://perma.cc/7TS6-4W5X>].

require a detailed examination in the EIR. In particular, the Port must properly disclose to the public and decisionmakers how approving the Oil Tanks Project will harm air quality and climate and undermine the Port’s environmental commitments.

**CBD-89
(con’t)**

First, the Oil Tanks Project would not align with the Port of Long Beach’s Green Port Policy. In particular, the Oil Tanks Project conflicts with the Port’s commitment to “protect the community from harmful environmental impacts of Port operations,” “promote sustainability,” and “[e]mploy best available technology to avoid or reduce environmental impacts.”⁴ The Oil Tanks Project will facilitate the storage of hazardous materials near neighborhoods and sensitive receptors, including schools. The EIR must detail how the Oil Tanks Project would advance the Port’s objectives.

CBD-90

Second, the Oil Tanks Project would conflict with implementing the South Coast AQMD’s recently approved 2022 Air Quality Management Plan (AQMP).⁵ The AQMP relies on electrification and the deployment of zero-emissions technology to achieve air quality standards in the region. That, in turn, requires a pause out of the continued expansion of fossil fuel infrastructure, such as this project, that would undermine reductions secured through the deployment of these technologies. The Oil Tanks Project is incompatible with the AQMP. The EIR must address this conflict.

CBD-91

Finally, the Oil Tanks Project would conflict with the California State Air Resources Board’s recently approved 2022 Scoping Plan to reduce GHG emissions.⁶ Specifically, the Oil Tanks Project would undermine statewide efforts to significantly reduce demand for liquid petroleum and fossil fuel use by 2040.⁷ The Oil Tanks Project would undercut those efforts by expanding fossil fuel infrastructure at a time when there should be a moratorium on continued expansions. The Oil Tanks Project would allow for the storage of petroleum and facilitate World Oil’s production of marine diesel fuel. The EIR must detail how the Oil Tanks Project would align with the State’s objectives.

CBD-92

⁴ Port of Long Beach, *Environment*, <https://polb.com/environment> [archived at <https://perma.cc/CJ6T-HR2D>].

⁵ South Coast Air Quality Mgmt. Dist., 2022 Air Quality Management Plan (Dec. 2022) <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/final-2022-aqmp/final-2022-aqmp.pdf?sfvrsn=16> [archived at <https://perma.cc/2XEK-AQS9>].

⁶ California Air Res. Bd., 2022 Scoping Plan for Achieving Carbon Neutrality (Nov. 16, 2022) <https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf> [archived at <https://perma.cc/7M4A-8CAM>].

⁷ *Id.* at 2, 73.

The Port must not rush through this environmental review process but should instead take the time to fully evaluate, disclose, and mitigate the Oil Tanks Project's environmental and health impacts. We appreciate your consideration of these concerns and urge the Port to address these topics in more detail as part of the EIR.

Respectfully submitted,

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CBD-93

Appendix D

Sources Cited in Footnotes
World Oil Tank Installation Project
Dec. 15, 2023

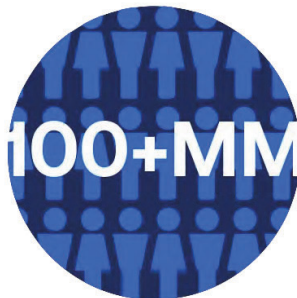
CBD-94

Ozone Pollution Trends



< [Key Findings](#)

Exposure to unhealthy levels of ozone air pollution makes breathing difficult for more Americans all across the country than any other single pollutant. In the years 2019, 2020 and 2021, some 103 million people lived in the 124 counties that earned an F for ozone. More than 30% of the nation's population, including 23.6 million children, 15.4 million people age 65 or older, and millions in other groups at high risk of health harm, are exposed to high levels of ozone on enough days to earn the air they breathe a failing grade.



**More than 100 million
Americans live in counties
with F grades for ozone
smog.**

Although ozone air pollution remains a serious threat to public health, the trend in this year's "State of the Air" report is continuing in a positive direction. The number of people living in counties with a failing grade for ozone declined by more than 19 million this year. Thirty-nine counties in 23 states dropped off the "F" list, including 8 states that left the list completely, some for the first time in the history of the report. At the same time, the number of counties that got an "A" increased by

ACCESSIBILITY ♥

Ambient ozone levels are influenced by a complex interaction of factors that can vary from year to year. Some fluctuation is to be expected and does not necessarily represent lasting change. However, at least some of the significant improvement in ozone levels in this year's report can be attributed to the fact that the Clean Air Act has been working. Controls placed on emissions have increasingly resulted in the replacement of more polluting engines, fuels, and processes nationwide. The transition of the economy away from the coal, the dirtiest fossil fuel, has unquestionably had an impact, especially in parts of the eastern United States. It is also possible that pandemic-related changes in activity patterns in 2020 and 2021, such as increased telework, have made a difference, but that is still being studied and characterized.



124 counties — fewer than ever in the history of the State of the Air — got and F for ozone smog.

The list of 25 cities with the worst ozone pollution in “State of the Air” 2023 and their order of ranking remained relatively stable compared with last year’s report. Only two cities improved enough to move off the list: Chico, California and Detroit, Michigan. They were replaced by Colorado Springs, Colorado and Hartford, Connecticut.

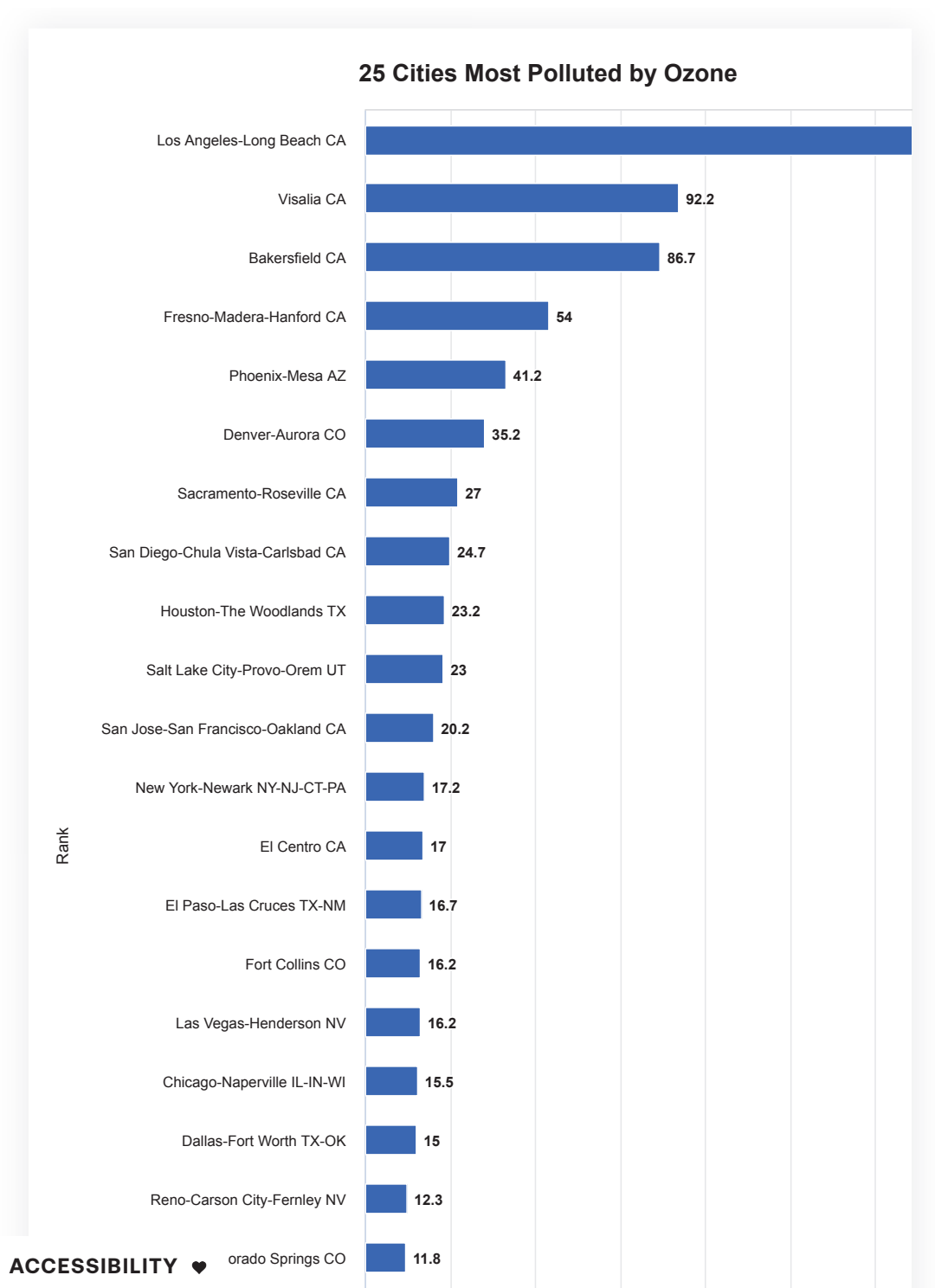
Cities in the West and the Southwest continue to dominate the list of most ozone-polluted. California retains its historic record of being the state with the most places on the list, with 10 of the 25 most-polluted cities. Cities in the Southwest fill most of the remaining slots, with twelve cities spread across six states in this year’s report. New York, Chicago and Hartford were the only three of the worst 25 cities for ozone east of the Mississippi River.

ACCESSIBILITY ♥ : worst 25 list, 13 saw an increase in the weighted average

number of high ozone days and 12 had a decrease compared with last year's report. Bakersfield, Fresno, San Diego and El Centro, California, along with Las Vegas and New York, all recorded their fewest days of high ozone in the report's 24-year history. New York did so for the third year in a row.

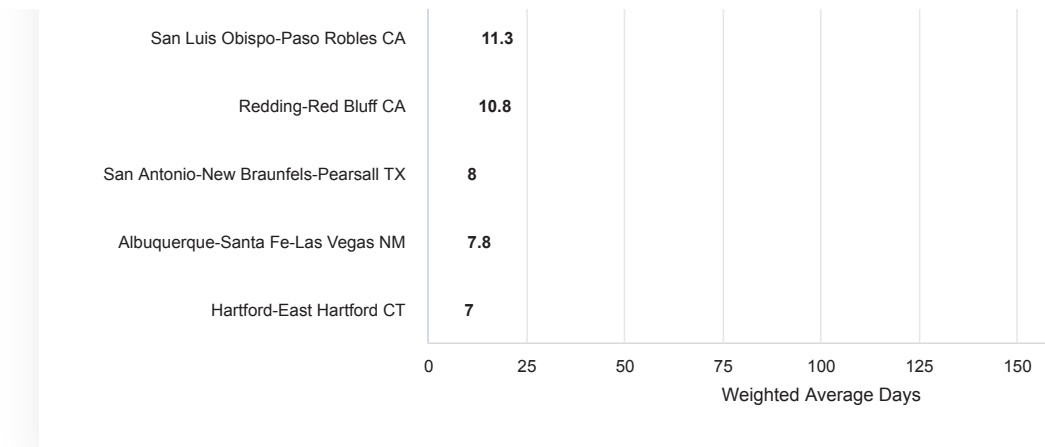
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(con't)

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(con't)

Ozone Pollution Trends | State of the Air | American Lung Association

<https://www.lung.org/research/sota/key-findings/ozone-pollution>CBD-94
(con't)

The geographical distribution of cities with the worst ozone problems confirms a pattern seen over the past seven reports: nearly all are western cities and only a few lie in the East. Although cleanup of ozone precursor pollutants has been working to reduce ozone concentrations, the impact of climate change in the West has meant higher temperatures, dry, sunny skies and more frequent stagnation events that are contributing to the number of unhealthy ozone days being higher than it would otherwise be. Simply, climate change is undercutting the progress we would have made.

ACCESSIBILITY ♥

[History](#)<https://longbeach.gov/energyresources/about-us/oil/history>

LONG BEACH



ENERGY RESOURCES

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(con't)

Historical - Oil Operations

Wilmington Oil Field

The Wilmington Oil Field is the third largest field in the contiguous United States with an ultimate recovery estimated at three billion barrels of oil. The field is located on the 13 mile long and 3 mile wide Wilmington Anticline that extends from onshore San Pedro to offshore Seal Beach and is divided vertically by faults creating separate producing entities called Fault Blocks. Oil is produced from five major sand intervals ranging in depths from 2,000 feet to 11,000 feet where over two and one-half billion barrels of oil have been recovered. Oil and Gas are recovered through primary production, secondary water flooding, and steam flooding. A total of 6,150 wells have been drilled to date.

Oil Operating Areas



Oil Operations

In the Wilmington Oil Field, which encompasses both tidelands and uplands properties, DOP oversees the work of two private contractors and their 300 employees. **Tidelands Oil Production Company** is the Field Contractor for west Wilmington. Since 1932, more than 3,400 land based wells have been drilled. In the 1950's

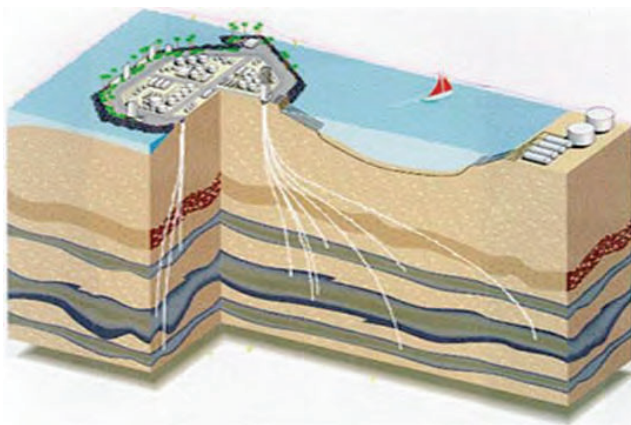
History

<https://longbeach.gov/energyresources/about-us/oil/history>

and 1960's, water flooding was initiated to increase recovery and control subsidence.



California Resources Corporation (CRC) is the field Contractor for the Long Beach Unit (LBU), the eastern offshore portion of the Wilmington Field. **THUMS Long Beach Company** (named for the original Field Contractors: Texaco, Humble, Union, Mobil, and Shell) is the agent for CRC. In 1964 four man-made islands, named after the astronauts that lost their lives during the early years of the U.S. space exploration (Grissom, White, Chaffee, and Freeman), were built. Pier J was expanded into the Long Beach Harbor to develop the LBU. Approximately 1,450 wells have been drilled. The Long beach Unit began water flooding at start-up to help prevent subsidence. Today, Wilmington Field oil production is approximately 46,000 barrels per day from 1,550 active wells.

Island Schematic**Island Grissom**

Wilmington, Carson, West Long Beach

IN THIS SECTION

CONTACT

Community Air Protection Program

Email CommunityAir@arb.ca.gov

Phone (916) 322-7049

Overview

- **Selection year:** 2018
- **Selected for:** Community Air Monitoring Plan and Community Emissions Reduction Program
- **Air District:** South Coast Air Quality Management District
- **CARB Community Lead Contact:** Terry Allen

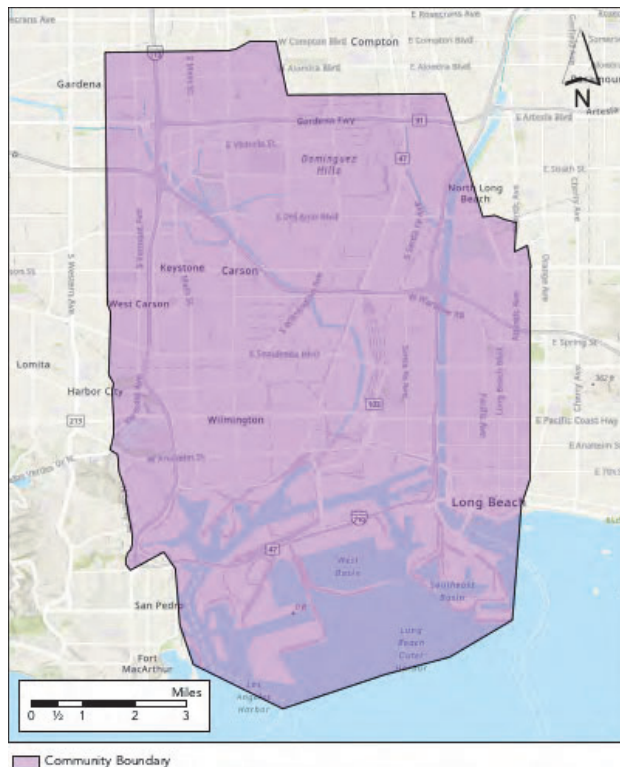
The community of Wilmington, West Long Beach, and Carson is located in the greater Los Angeles area in the SCAQMD. The community is impacted by a variety of sources including freight, freeway traffic, port and rail operations, oil and gas production, and refineries. The community has a high cumulative air pollution exposure burden, a significant number of sensitive receptors, and includes census tracts that have been designated as disadvantaged communities. The community has been a long-standing focus of monitoring studies including a CARB community study in 2003, and the Harbor Communities Monitoring Study in 2007, as well as the SCAQMD MATES program. These programs provide the necessary foundation for the development of a community emissions reduction program, and additional air monitoring will provide more localized information within the community and help track progress on implementing the emissions reduction program.

The Wilmington, West Long Beach, and Carson community represents an area of 48 square miles with a population of approximately 261,000. Refineries, seaport activities, 9 rail yards, warehouses, and 4 major freeways surround the community. The Port of Long Beach is located adjacent to the communities of Wilmington and West Long Beach. Highways 110, 710, and 91 and Interstate 405 run through the community along with the Alameda Corridor, which connects the port to the rail yard near downtown Los Angeles.

The community is also impacted by neighborhood oil drilling. The sensitive receptors in the community include 83 schools, 132 licensed daycare facilities, and 15 hospitals. The community has high rates of poverty and unemployment, and in some portions of the community, there are schools in close proximity to air pollution sources.

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Community Boundary



Wilmington, Carson, West Long Beach's AB 617 community boundary files

Community Air Monitoring

In 2018, the Community was nominated by the District and selected by CARB as a monitoring community. The District published the *AB 617 Community Air Monitoring Plan For the Wilmington, Carson, West Long Beach Community* in April 2019.

The Community Air Monitoring Plan identifies areas of interest for AB 617 monitoring such

as stationary and mobile sources, monitoring site locations, sampling schedules, and types of equipment and strategies. The plan was designed to obtain detailed air pollution levels through the Community, determine areas in the community of highest risk, quantify sources of air pollution within the community, and to position the Community to develop emissions reduction strategies and monitor the effectiveness of those strategies.

CARB and the District have historically implemented air monitoring which includes regulatory monitoring in Los Angeles County. The AB 617 community air monitoring plan is specifically designed with the community steering committee input to measure and collect localized and elevated air pollution levels data. The District considered health statistics, air quality concerns from residents in multiple communities, as well as screening tools that combine environmental, health, and socio-economic information to calculate community-wide risk factors in the planning and implementation of community air monitoring. Community-level expertise through steering committee meetings and input from a broad range of stakeholders supported the District's development of this plan.

The collection of comprehensive air quality data is essential to develop emissions reduction plans and strategies. The monitoring data is being provided to CARB and is available on AQView where monitoring data from other AB 617 community air monitoring plans are also included.

Community Emissions Reduction Program

The *Community Emissions Reduction Plan (CERP) for Wilmington, West Long Beach, Carson* outlines the actions and commitments by the Community Steering Committee (CSC) and the South Coast AQMD to reduce air pollution in the Wilmington, Carson, West Long Beach community. An essential piece of the AB 617 program is the partnership and collaboration with the community to ensure that the CERP addresses the community's air quality priorities. At the center of these efforts is the CSC that was established, in part, to participate in the development and implementation of these plans. The CSC is a diverse group of people who live, work, own businesses, and/or attend school within the community. Local land use agencies and public health agencies that serve the community are also part of the CSC. Through the CERP development process, the CSC members provided guidance, insight, and community wisdom, all of which were important ingredients for the CERP. The CERP is a critical part of implementing Assembly Bill 617 (AB 617), which is a California law that addresses the disproportionate impacts of air pollution in environmental justice communities. The AB 617 program aims to invest new resources

and conduct focused actions in these communities to improve air quality as a step toward environmental equity.

The Wilmington, Carson, West Long Beach community identified the following air quality priority areas for addressing through this plan:

- Refineries
- Ports
- Neighborhood Truck Traffic
- Oil Drilling and Production
- Railyards
- Schools and Homes

Community Engagement



Community engagement is a key part of the AB 617 program. Air districts are responsible for convening a community steering committee using an open and transparent nomination process. Community steering committees create new, and foster existing,

local partnerships which drive the AB 617 program. In this advisory role, community steering committees oversee the development and implementation of the program such as in community identification, community air monitoring, and community emissions reduction programs. The steering committee aims to identify metrics, track progress, solicit, and share information with the Wilmington, West Long Beach, Carson community. The current Community Steering Committee was selected representing a diverse range of community viewpoints. This broad range of stakeholders also forms a collaborative AB 617 Technical Advisory Group, which provides input to South Coast AQMD staff on technical details related to source attribution, air monitoring and other technical analysis needed to develop air monitoring plans and Community Emissions Reduction Plans for AB 617 implementation.

The current Community Steering Committee charter describes the Wilmington, West Long Beach, Carson Community Steering Committee membership process, how meetings are conducted, and how information is made available to its members and the public.

Annual Implementation Progress

Annual progress reports are completed by the District. Qualitative and quantitative progress assessments as well as status updates from interim milestones identified by the CARB Governing Board are available in the annual progress report and accompanying metric workbooks. A detailed update for each strategy can also be found here as it is made available.

- *Annual Progress Report for AB 617 Community Emissions Reduction Plans (District Link)*
- *2020 Annual Progress Report and Annual Report Data Template*

Additional Resources

- Air District web page for Wilmington, Carson, West Long Beach
- Community Air Monitoring Plan
- Community Emissions Reduction Program

Wilmington, Carson, West Long Beach | California Air Resources Board

<https://ww2.arb.ca.gov/our-work/programs/community-air-protection-p...>

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California Releases Report Charting Path to 100 Percent Clean Electricity <https://www.energy.ca.gov/news/2021-03/california-releases-report-char...>



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California Releases Report Charting Path to 100 Percent Clean Electricity

Newsroom



For Immediate Release: March 15, 2021

Initial Assessment Projects Energy Resources Needed, Details Benefits of Achieving State Law



Sacramento – The [California Energy Commission](#) (CEC), [California Public Utilities Commission](#) (CPUC) and [California Air Resources Board](#) (CARB) today released the [first joint agency report](#) and [a summary document](#) examining how the state's electricity system can become carbon free by 2045.

The report is the initial analysis called for in Senate Bill 100 (SB 100, De León, Chapter 312, Statutes of 2018), the state's landmark policy requiring that renewable and zero-carbon

California Releases Report Charting Path to 100 Percent Clean Electricity <https://www.energy.ca.gov/news/2021-03/california-releases-report-char...>

energy resources supply 100 percent of electric retail sales to customers by 2045. The bill was signed into law in 2018 and calls for these resources to replace fossil fuels for generating electricity in the state.

The 178-page report finds that the goals of SB 100 can be achieved in different ways, but reaching them will require significant investments in new and existing technologies and an increased, sustained build-out of clean energy projects to bring new resources on-line. The report modeled various scenarios to examine sample paths to carbon-free energy. It will be followed with additional analyses of energy reliability and evolving conditions.

“The results of this preliminary analysis show that it is indeed possible to achieve a 100 percent clean electricity future. The threat posed by climate change requires us to think and act boldly today,” said CEC Chair David Hochschild. “Building a carbon-free grid is foundational to achieving our climate goals and will provide good paying jobs and cleaner air to those who need it most.”

Highlights from the report include the following:

- To reach the 2045 target while electrifying other sectors to meet the state’s economywide climate goals, California will need to roughly triple its current electricity grid capacity.
- California will need to sustain its expansion of clean electricity generation capacity at a record-breaking rate for the next 25 years. On average, the state may need to build up to 6 gigawatts (GW) of new renewable and storage resources annually. By comparison over the last decade, the state has built on average 1 GW of utility solar and 300 megawatts (MW) of wind per year. Over the next three years, electricity providers regulated by the CPUC will add another 8 GW of clean energy resources.
- In addition to social benefits such as less air pollution and improved public health, transitioning to a carbon-free electric system will also create thousands of jobs such as manufacturing and installing wind turbines and solar panels and developing new clean energy technologies.
- Modeling of the core scenario for achieving 100 percent clean electricity showed a 6 percent increase in total annual electricity system costs by 2045, compared to the estimated cost of achieving 60 percent renewable electricity by 2030.
- Advancements in emerging technologies, increased demand flexibility and cost declines in existing technologies may decrease the total electricity resource requirements and implementation costs. These topics, along with reliability, will be

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California Releases Report Charting Path to 100 Percent Clean Electricity <https://www.energy.ca.gov/news/2021-03/california-releases-report-char...>

examined more closely in future analyses.

- A clean electricity grid is necessary to achieve economywide carbon neutrality. Using clean electricity to power transportation, buildings and industrial operations helps decarbonize these sectors of the economy, which, along with electricity generation, account for 92 percent of the state's carbon emissions.

"Achieving 100 percent clean electricity by 2045 is not only a bold pursuit, but a wise one," said CPUC President Marybel Batjer. "Such action is required to avoid the worst impacts and costs of climate change and to ensure the delivery of safe, affordable, reliable and clean power to all Californians."

California has already made significant progress toward a clean energy future. Due to many efforts that promote renewable energy, energy efficiency and the storage technologies needed to retire fossil fuel resources, the state's electricity mix is already more than 60 percent carbon free. About 36 percent of that comes from renewable sources, predominantly wind and solar.

"We know reaching carbon neutrality is critical to avoiding the worst impacts of climate change and achieving our climate goals," said CARB Chair Liane Randolph. "Zero-carbon electricity is also critical for displacing combustion of fossil gas and petroleum to deliver needed public health benefits, especially in our frontline communities."

The report was developed using computer modeling and incorporates existing studies; the state's energy, climate, equity and public health priorities; and information gathered through a yearlong series of public workshops throughout the state.

Although the report examines the challenges and opportunities for a carbon-free electricity system, the three agencies highlight that it is only a first step in an ongoing effort. The agencies also note that costs, performance and innovations in zero-carbon technologies will change over the next 25 years.

Additional Multiagency Actions

The CPUC, California Independent System Operator and CEC are implementing actions to prevent electricity shortages and ensure delivery of clean, reliable and affordable energy in response to the August 2020 extreme heat wave. Among the actions are expediting the regulatory and procurement processes to develop additional resources that can be on-line by summer 2021 and ensuring that the generation and storage projects under construction are completed as scheduled.

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California Releases Report Charting Path to 100 Percent Clean Electricity <https://www.energy.ca.gov/news/2021-03/california-releases-report-char...>

This year, CARB will also begin the process to update the Assembly Bill 32 Climate Change Scoping Plan, which will assess progress towards reducing GHG emissions 40 percent below 1990 levels by 2030 and chart the path to carbon neutrality by 2045. The SB 100 report is one of the foundational reports that will inform the development of the next scoping plan. The CARB board will consider acting on the scoping plan in late 2022.

For details on the report, view the [full SB 100 report and summary](#).

###

About the California Energy Commission

The California Energy Commission is leading the state to a 100 percent clean energy future. It has seven core responsibilities: developing renewable energy, transforming transportation, increasing energy efficiency, investing in energy innovation, advancing state energy policy, certifying thermal power plants, and preparing for energy emergencies.

About the California Public Utilities Commission

The CPUC regulates services and utilities, protects consumers, safeguards the environment, and assures Californians' access to safe and reliable utility infrastructure and services. For more information on the CPUC, please visit www.cpuc.ca.gov.

About the California Air Resources Board

CARB's mission is to promote and protect public health, welfare, and ecological resources through effective reduction of air pollutants while recognizing and considering effects on the economy. CARB is the lead agency for climate change programs and oversees all air pollution control efforts in California to attain and maintain health-based air quality standards.

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(916) 654-4989

CATEGORIES

Topic
[Energy Assessments](#)

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[Siting, Transmission, and Environmental Protection](#)

Program

[Power Plants](#)

[Renewables Portfolio Standard - RPS](#)

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California Energy Commission

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CBD-94
(con't)

December 2022



2022 Scoping Plan for Achieving Carbon Neutrality

Executive Summary



and trucks decades ago to the world-leading Advanced Clean Trucks program currently helping to electrify heavy-duty vehicles, this partnership continues to offer regulatory options and spread innovative technologies. A major example of future work is the Advanced Clean Cars II program, which lays out California's legally binding path to achieving 100 percent zero emission vehicle (ZEV) sales in 2035.¹⁰ The California Air Resources Board (CARB) continues to work closely with many other states that also see zero-emission vehicles as critical to their climate and public health goals and expects many states to choose to adopt this regulation as well. This partnership with other states also creates market certainty for automakers, which in turn helps to ensure that California consumers have access to a variety of ZEVs at multiple price points.


The Scoping Plan Process

Four scenarios were extensively modeled to develop this Scoping Plan, with the objective of informing the most viable path to remain on track to achieve our 2030 GHG reduction target: a reduction in anthropogenic emissions by 85% below 1990 levels and carbon neutrality by 2045. All four have their merits and are informed by stakeholder input. The scenario ultimately chosen as the basis of this Scoping Plan is the alternative that most closely aligns with existing statute and Executive Orders. It was selected because it best achieves the balance of cost-effectiveness, health benefits, and technological feasibility.

For the first time, this Scoping Plan includes modeling and quantification of GHG emissions and carbon sequestration in natural and working lands (NWL). To date, the focus has been only on reducing the emissions of GHGs from our transportation, energy, and industrial sectors. The state's 2020 and 2030 GHG reductions targets only include these sources, as they are the primary drivers of climate change and disproportionate harmful air pollution in our vulnerable communities. This Scoping Plan, through the lens of carbon neutrality, expands the scope to more meaningfully consider how our NWL contribute to our long-term climate goals. For the first time, new and cutting-edge modeling tools allow us to estimate the quantitative ability of our forests and other landscapes to remove and store carbon under different scenarios. These cutting-edge tools were developed through a stakeholder process and in coordination with other agencies for the purpose of this update and will continue to be refined over time and made available to others seeking to do similar work.

10. Executive Department. State of California. Executive Order N-79-20.





South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178

PERMIT TO CONSTRUCT

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Application No.
614274

Legal Owner or Operator: RIBOST TERMINAL, LLC.
DBA: WORLD OIL TERMINALS
9302 GARFIELD AVE
SOUTH GATE, CA 90280

Equipment Location: 1405 PIER "C" ST, LONG BEACH, CA 90802

Equipment Description :

Tank No. TK-1, capacity 25,000 barrels, 60'-0" Dia. X 56'-0" H., welded shell, with a fixed roof and equipped with an internal floating pan, with a liquid-mounted mechanical shoe primary seal, rim-mounted secondary seal, and a mixer.

Conditions :


1. Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be properly maintained and kept in good operating condition at all times.
3. The operator shall limit the tank throughput to no more than 75,000 barrels in any given calendar month.
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.
5. The operator shall use this equipment in such a manner that the hydrocarbon concentration in the vapor space above the internal floating roof does not exceed 30 percent of the lower explosive limit (LEL). An explosimeter shall be used to monitor the hydrocarbon concentration twice per year at 4 to 8 month intervals. Adequate records shall be kept to show compliance with this condition.
6. The operator shall comply with the following throughput measurement practices.

The operator shall calculate the throughput, in barrels, by the following equation: $0.14 \times D \times D \times L$, where D is the diameter of the tank in feet based on the tank strapping chart and L is the total vertical one-way roof travel in feet per month.

The operator shall install and maintain an Automatic Tank Level Gauge (ATLG) and recorder to continuously record the vertical movement of the roof. For the purpose of this condition, continuous recording is defined as once every 15 minutes.


The operator shall calculate the total one-way roof movement, in feet, on a daily and monthly basis.

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Legal Owner or Operator: RIBOST TERMINAL, LLC.
DBA: WORLD OIL TERMINALS
9302 GARFIELD AVE
SOUTH GATE, CA 90280

Equipment Location: 1405 PIER "C" ST, LONG BEACH, CA 90802

Equipment Description :

Tank No. TK-2, capacity 25,000 barrels, 60'-0" Dia. X 56'-0" H., welded shell, with a fixed roof and equipped with an internal floating pan, with a liquid-mounted mechanical shoe primary seal, rim-mounted secondary seal, and a mixer.

Conditions :


- Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
- This equipment shall be properly maintained and kept in good operating condition at all times.
- The operator shall limit the tank throughput to no more than 75,000 barrels in any given calendar month.
- 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.
- The operator shall use this equipment in such a manner that the hydrocarbon concentration in the vapor space above the internal floating roof does not exceed 30 percent of the lower explosive limit (LEL). An explosimeter shall be used to monitor the hydrocarbon concentration twice per year at 4 to 8 month intervals. Adequate records shall be kept to show compliance with this condition.
- The operator shall comply with the following throughput measurement practices.

The operator shall calculate the throughput, in barrels, by the following equation: $0.14 \times D \times D \times L$, where D is the diameter of the tank in feet based on the tank strapping chart and L is the total vertical one-way roof travel in feet per month.

The operator shall install and maintain an Automatic Tank Level Gauge (ATLG) and recorder to continuously record the vertical movement of the roof. For the purpose of this condition, continuous recording is defined as once every 15 minutes.

The operator shall calculate the total one-way roof movement, in feet, on a daily and monthly basis.

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RESEARCH ARTICLE

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The effects of Fenton process on the removal of petroleum hydrocarbons from oily sludge in Shiraz oil refinery, Iran

Mehdi Farzadkia¹, Mansoor Dehghani^{2*} and Maryam Moafian²

Abstract

Background: Due to the high concentrations of total petroleum hydrocarbons (TPH) in oily sludge and their environmental hazards, the concern regarding their effects on health and the environment has increased. The main objective of this research was focused on evaluating the feasibility of using Fenton process in removing TPH in oily sludge from Shiraz oil refinery, Southern Iran.

Results: To determine optimum conditions, four different parameters were assessed at four different levels using Taguchi method. According to data, the optimum conditions were as follows: the reaction time of 1 hour, H_2O_2 to sample mass ratio of 15, H_2O_2 to Fe (II) molar ratio of 10 and pH of 5. The maximum TPH reduction rate was 36.47%. Because of the semi-solid nature of the sample and the hydroxyl radicals mainly generated in the aqueous solution, TPH reduction rate greatly improved by adding water. Ultimately, by adding 40 ml water per gram of the oily sludge under optimized conditions, the reduction rate of 73.07% was achieved.

Conclusions: The results demonstrated that this method can be used as a pre-treatment method for the oily sludge. Moreover, a complementary treatment is necessary to reach the standard limit.

Keywords: Fenton process, Total petroleum hydrocarbon, Oily sludge, Shiraz oil refinery

Background

Crude oil contains saline, water, heavy hydrocarbons, and dirt. When crude oil is stored in refinery tanks, a dense phase is gradually formed at the bottom of the tanks called oily sludge. Considering the high concentrations of petroleum hydrocarbons in the created sludge at refineries, the California Environment Protection Agency has listed this compound as a hazardous material (K series) [1]. Petroleum hydrocarbons consist of different fractions of alkanes, alkenes, aromatic hydrocarbons and asphalts [2].

Most of these compounds cause cancer and mutations and have the potential of biological accumulation in living organisms. These compounds are resistant to biodegradation and stay in the environment for a long period of time. Disposal of the oily sludge into the environment is a threat for people as well as the environment. Therefore, the purification of the oily sludge

before releasing it to the environment is inevitably crucial [3-5].

The removal of oil pollutants are often performed by physical or chemical processes. These methods are commonly expensive with the potential of producing by-product pollutants [6]. Advanced oxidation processes are used for removing organic hydrocarbons. Fenton's method has more advantages comparing to other methods since it is cheaper, reduced reaction time and energy consumption, non-toxic nature of the compounds, and operation and control simplicity [7].

The basis of the Fenton method is the decomposition of H_2O_2 and the production of hydroxyl radicals in the presence of Fe^{3+} ions as a catalyst [8-10]. Studies have shown that produced hydroxyl radicals are capable of decomposing and degrading organic contaminants such as petroleum hydrocarbons [11-16].

Lu et al. studied the remediation of petroleum-contaminated soil using Fenton method. They concluded that Fenton method increased the efficiency of the biological process [17]. In another study, petroleum-

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Table 1 The chemical and physical properties of the oily sludge sample at Shiraz oil refinery

Test	Test method	Result
SP ¹ (15.56 °C)	ASTM D 4052	0.9163
Water content (%)	ASTM D 95	26
Wax content (%)	UOP 46	33.3
Drop melting point (°C)	IP 36	79
Sediment by extraction (%)	ASTM D 473	10.5
Nickel content (%)	AAS	0.01
Vanadium content (%)	AAS	<0.01
Iron content (%)	AAS	0.4
Lead content (%)	AAS	<0.01
Sodium content (%)	AAS	0.3
SiO ₂ content (%)	Gravimetric	2.2

¹ specific gravity.

contaminated soil was treated using phosphate to increase the efficiency of the Fenton process but the reduction of more than 40% was not achieved [18]. The removal efficiency of polycyclic aromatic hydrocarbons (PAHs) was in the range of 70-98% (depending on the chemical characteristics of PAHs) using the combined biodegradation and a modified Fenton method [19].

Since Fars (in Southern part of Iran) enjoys the top rank in oil refinery in the country in recent years, there is a concern regarding the effect of petroleum hydrocarbons in oily sludge on people's health and the environment. Therefore, the objectives of the study were to (i) evaluate the feasibility of using Fenton method in removing petroleum hydrocarbons in oily sludge obtained from Shiraz oil refinery, (ii) determine the optimum conditions using Taguchi method so that the standard limit can be achieved by further complementary treatment.

Methods

The oily sludge sample was obtained from the bottom of one of the crude oil tanks at Shiraz oil refinery and stored at 4°C until they were used. The tank was drained

Table 2 Tested parameters at four different levels

Parameters	Levels			
	1	2	3	4
H ₂ O ₂ to sample mass ratio	5	10	15	20
H ₂ O ₂ to Fe (II) molar ratio	0 ¹	1	5	10
Reaction time (hr)	1	12	24	48
pH	3	5	7 ²	9

¹ No iron added.² pH of oily sludge.

after 2 years because of some repairs. The sample kept at standard conditions [20]. Data regarding the chemical and physical properties of oily sludge sample is summarized in Table 1.

The standard methods (State Department of Natural Resources, Texas, US) was applied to measure TPH [20]. American Public Health Association (APHA) was used to determine the amount of humidity and iron [21]. The water content was measured by the Karl Fischer method [22].

According to Table 1, TPH concentration, iron and water content were high in the oily sludge sample while the moisture content was low. PROFEPA reported a maximum allowable TPH concentration of 2000 ml/kg in soil [23]. Due to very high concentrations of TPH in the oily sludge sample, it is very important to select a proper treatment method. In this study we used Taguchi method to determine the optimum conditions. This method is based on the effect of different parameters and the amount of response. The optimization in experimental design was performed by a limited number of tests [24-26].

The experiment was performed at a bench-scale batch reactor mode at room temperature and normal pressure. The effect of different parameters (H₂O₂ to sample mass ratio, H₂O₂ to Fe (II) molar ratio, reaction time, and pH) on the reduction rate of TPH were determined at four different levels. The retention time (1, 12, 24, and 48 hours), the molar ratio of H₂O₂ to Fe (II) (1, 5, and 10), the mass ratio of H₂O₂ to sludge (5, 10, 15, and 20) and pH (3, 5, 7, and 9) were assessed. Table 2 summarizes parameters at four different levels. Qualitek-4 software was used to design the test. The sixteen experiments were performed at two replications and the fifth factorial was used to calculate degree of freedom for determining the error [27]. Control (without Fenton's reagent) was also used to show the effect of volatile organic content in the oily sludge.

All chemicals were purchased from Merck (Germany). Because of the low water content of the oily sludge sample, distilled water (1 ml per 0.5 g oily sludge) was added to the sample and the pH was adjusted by sodium hydroxide (NaOH) and sulphuric acid (H₂SO₄). FeSO₄·7H₂O (99% purity) and H₂O₂ (30% purity) were used. After the specified reaction time, the remaining TPH was measured by Shimadzu Model gas chromatography, Flame Ionization Detector.

Results and discussion

Table 3 shows the designed experiments and their results. As shown, experiment 12 had the highest response rate (mean 35.02%). The lowest efficiency was related to experiment 14 (1.36%).

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Table 3 The experimental design for the reduction rate of TPH from oily sludge sample at Shiraz oil refinery using Taguchi method

Number of experiment	Levels of different variables				TPH reduction rate (%)	
	H ₂ O ₂ to sample mass ratio	H ₂ O ₂ to Fe(II) molar ratio	Retention time	pH	1 st repetition	2 nd repetition
1	3	3	3	3	14.1	14.26
2	3	1	3	3	8.76	8.85
3	1	4	4	3	21.41	21.53
4	2	1	2	4	4.58	46
5	4	1	4	2	11.31	11.36
6	4	4	2	1	9.41	9.51
7	2	3	4	1	15	15.05
8	4	2	3	1	34.99	35.05
9	2	2	1	3	7.66	7.74
10	4	4	1	4	23.28	23.24
11	2	4	3	2	19.87	19.87
12	3	2	4	4	35.1	34.97
13	4	3	2	3	20.89	20.99
14	1	3	3	4	1.32	1.41
15	1	1	1	1	6.2	6.3
16	1	2	2	2	22.54	22.57

The effect of pH on the reduction rate of TPH in the oily sludge sample at Shiraz oil refinery

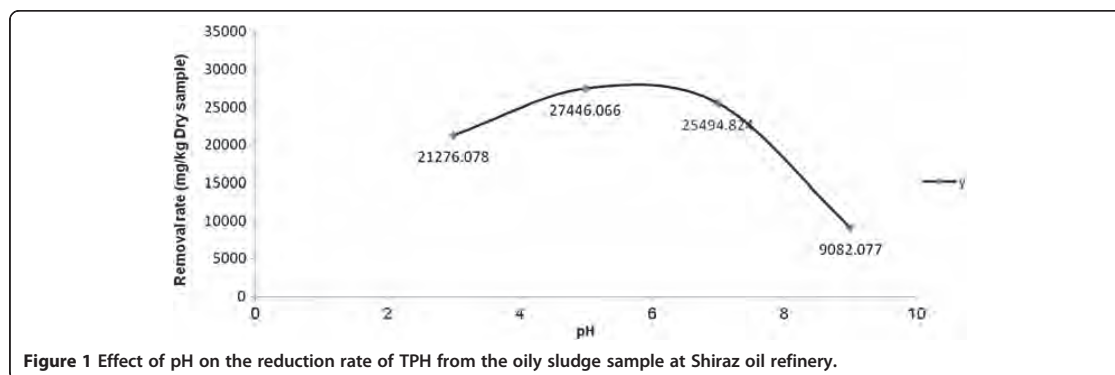
The variations of pH on TPH reduction rate were shown on Figure 1. The rate of TPH reduction increased quickly when the pH increased from 3 to 5 and then reaching constant with relative slower rate up to pH equal 7 after that the reduction rate decreased when the pH increased to 9.

Due to at the production of Fe (H₂O)²⁺ at very low pH (<2.5), the rate of TPH reduction decreased. Fe (H₂O)²⁺ reacts with hydrogen peroxide and cause the reduction of hydroxyl radicals. Moreover, the reaction between Fe³⁺ ions and hydrogen peroxide is inhibited [28,29]. At pH < 4 the decomposition of pollutants is reduced because of the reduction of free iron ions in the solution and this can be

caused by the complex formation of Fe²⁺ ions and buffer or the production of ferric hydroxide precipitate [28,29]. In alkaline conditions, the lower reduction rate is experienced as Fe²⁺ changes to Fe (OH)₃. Fe (OH)₃ reacts with H₂O₂ and inhibits the production of OH radicals. Moreover, studies have shown that the oxidative potential of OH radicals reduced as pH increased [28,29].

Many studies have shown that the optimum conditions for the Fenton process is the acidic condition. By adding the Fenton's reagent, pH is reduced. This pH reduction has been accompanied with the production of intermediates such as carboxylic acid; therefore, the maximum reduction rate occurred at higher pH.

Kumar et al. found that the removal efficiency of chemical oxygen demand (COD) was 60% at pH = 4.27 for the



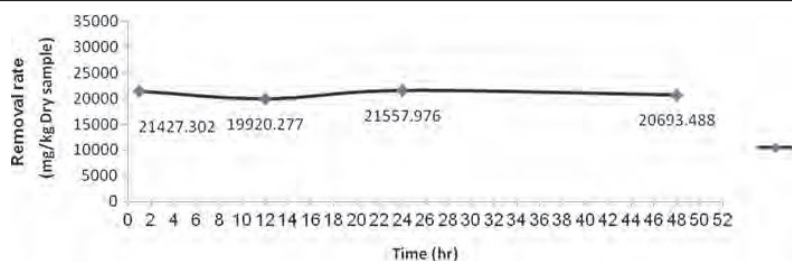


Figure 2 Effect of reaction time on TPH removal from the oily sludge sample at Shiraz oil refinery.

coffee pulping wastewater using the Fenton process. If pH was increased to 6.4, the removal efficiency was increased to 83.9% [30]. Barbano-Arturo et al., assessed the effect of pH on the degradation of methyl tertiary butyl ether (MTBE) using the Fenton process. This study associated the pH reduction during the reaction to the production of carboxylic acids [31].

The effect of reaction time on the reduction rate of TPH in the oily sludge sample at Shiraz oil refinery

Figure 2 shows the effect of time on the reduction rate of TPH. As shown, the maximum reduction rate was achieved at the reaction time of 1 hr and then remains constant.

One of the most advantages of the Fenton process is that the reaction is very fast compared with other oxidation methods. However, the reaction time depends mostly on the type of wastewater and the amount of catalyst was used. An optimum reaction time of 90 minutes was achieved for the treatment of landfill leachate using the Fenton method. Fenton process effectively degraded high molecular weight in landfill leachate in 30 minutes [32]. The removal efficiency of 95% was achieved for TOC removal at a reaction time of 60 minutes for bamboo industry wastewater [33].

The effect of ratio of peroxide to sample on the reduction rate of TPH in the oily sludge sample at Shiraz oil refinery

Figure 3 shows the effect of ratio of peroxide to sample on TPH reduction rate. According to Figure 3, the TPH reduction rate increased when the mass ratio increased from 5 to 15, but its reduction decreased when the mass ratio increased from 15 to 20. Therefore, peroxide concentration plays an important role on the reduction of TPH. Oily sludge contains other compounds such as heavy metals, salt, water, and also many other unknown compounds that can affect the Fenton process. Since these compounds consumed hydrogen peroxide, determining the exact amount of hydrogen peroxide is highly important. Using the higher amount of hydrogen peroxide, more than required concentration for the optimum condition, increased the COD in the effluent. Moreover, the presence of hydrogen peroxide in the effluent has toxic effect on microorganisms and decreases the feasibility of biodegradation rate. Using low concentration of H_2O_2 makes the Fenton process economically acceptable [32,34]. The excess amount of H_2O_2 acts as hydroxyl radical's scavenger (HO_2^\cdot) and reduced the reaction rate [35,36].

The required concentration of H_2O_2 for the reaction depends on the concentration and type of the pollutant. Using combined Fenton and microbial processes in a

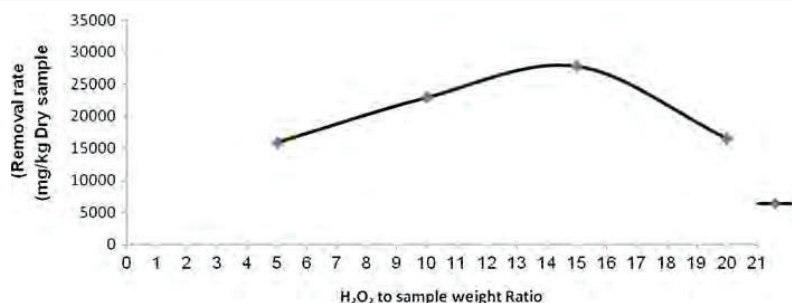


Figure 3 The effect of H_2O_2 on the reduction rate of TPH from the oily sludge sample at Shiraz oil refinery.

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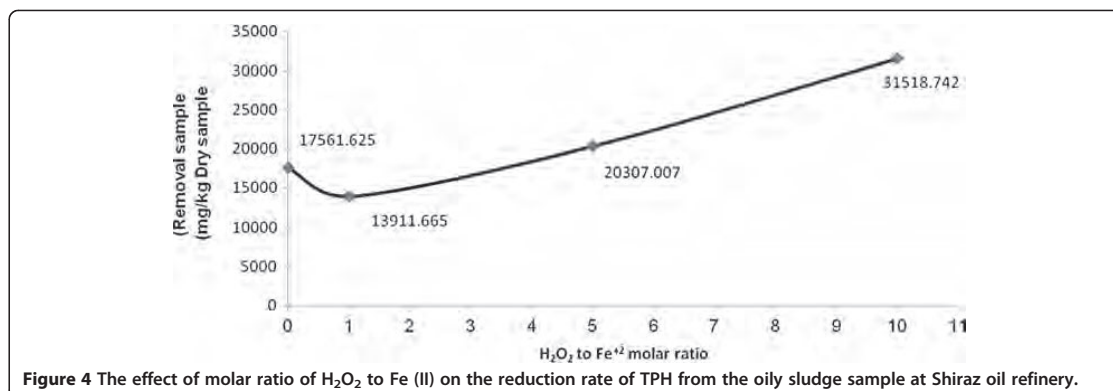


Figure 4 The effect of molar ratio of H₂O₂ to Fe (II) on the reduction rate of TPH from the oily sludge sample at Shiraz oil refinery.

contaminated soil with benzoanthracene, the optimum amount of H₂O₂ was 0.3 ml per gram soil [37].

The effect of molar ratio of H₂O₂ to Fe (II) on the reduction rate of TPH in the oily sludge sample at Shiraz oil refinery

The molar ratio of H₂O₂ to Fe (II) was tested at three levels of 1, 5, and 10. The oxidation of the pollutant occurred in the presence of H₂O₂ with or/ without the addition of iron to the sample. To examine the effect of H₂O₂ on the reduction rate of TPH, one of the levels was done without the addition of Fe (II). Figure 4 shows the effect of molar ratio of H₂O₂ to Fe (II) on the reduction rate of TPH in the oily sludge sample at Shiraz oil refinery at different levels. According to this Figure, using H₂O₂ without addition of Fe (II) did not have a considerable effect on the TPH reduction. In addition adding Fe (II) with the ratio of 1/1 did not increase the reduction. However, by increasing this ratio to 5 and 10, the reduction rate considerably increased.

The molar ratio of H₂O₂ to Fe (II) is an important factor in the Fenton process. Lower ratios reduce the removal efficiency because of the reaction between

excess Fe ions and hydroxyl radicals leading to the production of Fe (OH)₃. The excess Fe would further increase the turbidity [26,38]. Because of the reaction between H₂O₂ and hydroxyl radicals, the higher ratios reduced the removal efficiency [38-41]. Studies have reported the different molar ratios of H₂O₂ to Fe (II) as the optimum ration. The amount of this ration depends on the type, concentration, and the mineral contents of the pollutant [42,43].

The Fenton process and microbial degradation was applied to remove PAHs. The optimum ration of H₂O₂ to Fe (II) was 10 to 1 [42]. Another study reported a similar molar ratio of H₂O₂ to Fe (II) 10 to 1 for removing hydrocarbons with 2-4 rings [44]. The same ratio was also obtained for the removal of aromatic hydrocarbons from soil [45].

Table 4 shows the results of analysis of variance of ANOVA. Since the four parameters were studied at four levels, the degree of freedom for comparing the response rates at 4 levels was 3. According to Table 4, the order of studied parameters regarding the effectiveness on the reaction rate was as follows: pH, H₂O₂ to Fe (II) molar ratio, H₂O₂ to sample mass ratio. The reaction time of more than one hour did not have a significant effect on the Fenton process for removing TPH from the oily sludge.

Using Figures and the ANOVA results, the relative optimum conditions can be obtained for the maximum

Table 4 ANOVA results and results analysis using the Taguchi method

Variable	Degree of freedom	Variance (V)	Variance ratio (F)	Distribution percentage (P %)
H ₂ O ₂ to sample mass ratio	3	256330804.3	3.714	11.005
H ₂ O ₂ to Fe(II) molar ratio	3	461515155.048	6.687	23.061
Reaction time	3	3696500.439	0.053	0
pH	3	543321759.458	70872	27.867
Error	19	69016758.195	-	38.067
Total	31	-	-	100.00

Table 5 The optimal conditions for maximum reduction rate of TPH in the oily sludge sample at Shiraz oil refinery

Variables	Optimal level
H ₂ O ₂ to sample mass ratio	15
H ₂ O ₂ to Fe(II) molar ratio	10
Reaction time (hr)	1
pH	5

Table 6 The effect of moisture content on the reduction rate of TPH from the oily sludge sample at Shiraz oil refinery

Added amounts of water	TPH removal percentage (1 st repetition)	TPH removal percentage (2 nd repetition)	Removal mean (%)
5	40.07	40.46	40.26
10	55.56	55.43	55.49
20	72.98	73.17	73.07
30	74.12	73.89	74.00

reduction rate of TPH in the oily sludge sample at Shiraz oil refinery (Table 5).

The optimum TPH removal conditions were determined by data analysis. Based on the analyses, the predicted percentage rate was 35.28%. According to data in this study, TPH reduction rate of 36.47% was obtained which is very close to the predicted results by Taguchi method.

The effect of available water content on the reduction rate of TPH in the oily sludge sample at Shiraz oil refinery
Since hydroxyl radicals are formed in the aqueous phase [8], the effect of dilution was evaluated in this study. Investigation on soil samples showed that pollutant should initially be separated from the solid phase then the generated hydroxyl radicals in an aqueous phase oxidize the pollutants [46,47]. Initially, dilution was done by adding 1 ml water to 0.5 g sample. Although this amount of water was adequate for producing a solid/solution suspension, water was trapped by the sample so that the moisture content of the sample was considerably reduced. In order to increase the moisture content of the sample, different amounts of distilled water (5, 10, 20, and 30 ml distilled water) was added to reach the optimum condition for removal of TPH from oily sludge sample. Table 6 summarizes the data obtained from the reduction rate of TPH in the oily sludge sample at Shiraz oil refinery at different moisture content. According to Table 6, adding 20 ml water increased the reduction rate of TPH up to 73.03%. Increasing water content to 30 ml increased the TPH reduction rate only by 1%. Therefore, the optimum amount of added water was 20 ml to obtain the highest TPH reduction rate.

Evaporation of TPH

TPH reduction rate in the control reactor was 1.31%. Since all the experiments were performed at room temperature, the evaporation of TPH was quite low. Therefore, it can be concluded that Fenton's reagent was played the main role in TPH reduction. Data obtained from this study are consistent with other studies [48,49].

The effect of other pollutants present in the oily sludge on the reduction rate of TPH in the oily sludge sample at Shiraz oil refinery

According to the characteristics of the oily sludge sample (Table 1), it can be assumed that generated hydroxyl radicals were used for reduction of TPH and oxidation of other pollutants such as heavy metals as well.

Conclusions

Using Taguchi method, the optimum conditions for the maximum reduction rate of TPH in oily sludge were achieved. The results demonstrated that the most effective parameters on the performance of the Fenton process were as follows: pH, the mass ratio of H₂O₂ to sample, the molar ratio of H₂O₂ to Fe (II), and the reaction time. The optimum condition of pH, the mass ratio of H₂O₂ to sample, and the molar ratio of H₂O₂ to Fe (II) were 5, 15, and 10, respectively. The reduction rate of TPH was 36.47% at optimum condition. Increasing the moisture content by diluting with water had a very effective role in enhancing the reduction rate up to 73.07%. Ultimately, the effluent TPH was 35 g/kg. This method can be a suitable pre-treatment method for treating oily sludge and adding a complementary treatment stage is necessary for reaching the desired standards.

Competing interests

The authors declare that they have no competing interests.

Authors' contributions

The overall implementation of this study including design, experiments and data analysis, and manuscript preparation were the results of efforts by corresponding author. All authors have made extensive contribution into the review and finalization of this manuscript. All authors read and approved the final manuscript.

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Table 1. Number and Capacity of Operable Petroleum Refineries by PAD District and State as of January 1, 2023

PAD District and State	Number of Operable Refineries			Atmospheric Crude Oil Distillation Capacity					
				Barrels per Calendar Day			Barrels per Stream Day		
	Total	Operating	Idle ^a	Total	Operating	Idle ^b	Total	Operating	Idle ^b
PAD District I	7	7	0	877,800	877,800	0	930,900	930,900	0
Delaware.....	1	1	0	171,000	171,000	0	180,000	180,000	0
New Jersey.....	2	2	0	418,500	418,500	0	438,100	438,100	0
Pennsylvania.....	3	3	0	266,000	266,000	0	289,800	289,800	0
West Virginia.....	1	1	0	22,300	22,300	0	23,000	23,000	0
PAD District II	25	22	3	4,206,105	3,948,885	257,220	4,464,787	4,179,287	285,500
Illinois.....	4	4	0	1,043,485	1,043,485	0	1,100,800	1,100,800	0
Indiana.....	2	2	0	469,500	469,500	0	475,700	475,700	0
Kansas.....	3	3	0	404,600	404,600	0	416,767	416,767	0
Kentucky.....	1	1	0	291,000	291,000	0	306,000	306,000	0
Michigan.....	1	1	0	140,000	140,000	0	152,000	152,000	0
Minnesota.....	2	2	0	440,000	440,000	0	485,000	485,000	0
North Dakota.....	1	1	0	71,000	71,000	0	74,000	74,000	0
Ohio.....	4	3	1	604,720	455,800	148,920	630,000	470,000	160,000
Oklahoma.....	5	4	1	523,800	453,500	70,300	569,520	494,020	75,500
Tennessee.....	1	1	0	180,000	180,000	0	205,000	205,000	0
Wisconsin.....	1	0	1	38,000	0	38,000	50,000	0	50,000
PAD District III	56	56	0	9,676,729	9,676,729	0	10,276,994	10,276,994	0
Alabama.....	3	3	0	142,100	142,100	0	148,700	148,700	0
Arkansas.....	2	2	0	90,500	90,500	0	92,700	92,700	0
Louisiana.....	15	15	0	2,964,220	2,964,220	0	3,116,355	3,116,355	0
Mississippi.....	3	3	0	393,940	393,940	0	415,000	415,000	0
New Mexico.....	1	1	0	110,000	110,000	0	124,000	124,000	0
Texas.....	32	32	0	5,975,969	5,975,969	0	6,380,239	6,380,239	0
PAD District IV	15	13	2	650,164	537,564	112,600	696,200	574,500	121,700
Colorado.....	2	0	2	103,000	0	103,000	111,700	0	111,700
Montana.....	4	4	0	214,600	205,000	9,600	223,400	213,400	10,000
Utah.....	5	5	0	206,714	206,714	0	217,200	217,200	0
Wyoming.....	4	4	0	125,850	125,850	0	143,900	143,900	0
PAD District V	26	26	0	2,649,571	2,643,571	6,000	2,787,900	2,779,900	8,000
Alaska.....	5	5	0	165,500	165,500	0	180,000	180,000	0
California.....	14	14	0	1,740,371	1,734,371	6,000	1,835,400	1,827,400	8,000
Hawaii.....	1	1	0	93,500	93,500	0	95,000	95,000	0
Nevada.....	1	1	0	2,000	2,000	0	5,000	5,000	0
Washington.....	5	5	0	648,200	648,200	0	672,500	672,500	0
U.S. Total	129	124	5	18,060,369	17,684,549	375,820	19,156,781	18,741,581	415,200

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Table 1. Number and Capacity of Operable Petroleum Refineries by PAD District and State as of January 1, 2023

PAD District and State	Downstream Charge Capacity (Barrels per Stream Day)							
	Vacuum Distillation	Thermal Cracking	Catalytic Cracking		Catalytic Hydro- Cracking	Catalytic Reforming	Hydrotreating/ Desulfurization	Fuels Solvent Deasphalting
			Fresh	Recycled				
PAD District I	391,200	54,500	305,000	5,000	48,000	182,900	754,800	22,000
Delaware	104,600	54,500	82,000	4,000	25,000	43,000	180,300	0
New Jersey	165,000	0	145,000	0	0	69,000	298,100	22,000
Pennsylvania	113,000	0	78,000	1,000	23,000	66,200	252,300	0
West Virginia	8,600	0	0	0	0	4,700	24,100	0
PAD District II	1,855,542	607,805	1,362,435	8,800	361,500	903,658	4,196,664	18,500
Illinois	491,800	213,420	324,300	0	101,200	250,100	976,610	0
Indiana	290,700	102,000	185,800	200	0	73,500	619,100	0
Kansas	162,500	75,000	104,800	500	43,000	84,500	406,400	0
Kentucky	134,000	0	104,000	0	0	58,000	280,000	14,000
Michigan	90,500	38,000	44,000	0	0	21,500	135,000	0
Minnesota	284,000	82,000	127,000	2,500	67,000	72,500	454,500	4,500
North Dakota	0	0	28,000	3,600	0	12,500	60,400	0
Ohio	164,500	59,000	206,300	0	109,800	172,300	523,400	0
Oklahoma	214,042	38,385	156,912	2,000	14,000	113,458	571,754	0
Tennessee	0	0	70,000	0	26,500	36,000	129,000	0
Wisconsin	23,500	0	11,323	0	0	9,300	40,500	0
PAD District III	4,696,325	1,661,207	2,829,567	16,500	1,387,300	1,844,480	9,162,858	258,500
Alabama	55,000	38,000	0	0	23,000	40,000	120,700	0
Arkansas	48,850	0	21,000	0	0	15,300	98,750	0
Louisiana	1,539,100	577,000	946,000	3,500	456,900	569,400	2,681,200	72,000
Mississippi	354,875	104,000	88,000	0	119,000	101,600	307,300	0
New Mexico	34,300	0	30,000	0	18,000	24,000	118,000	18,000
Texas	2,664,200	942,207	1,744,567	13,000	770,400	1,094,180	5,836,908	168,500
PAD District IV	239,000	76,000	209,860	1,990	37,200	120,550	561,750	6,000
Colorado	33,500	0	30,000	500	0	21,900	87,430	0
Montana	119,600	46,000	67,160	990	6,200	35,500	213,820	0
Utah	34,900	10,000	72,700	0	15,000	38,250	146,700	6,000
Wyoming	51,000	20,000	40,000	500	16,000	24,900	113,800	0
PAD District V	1,422,106	562,400	758,900	16,600	557,600	554,000	2,422,900	80,000
Alaska	26,000	0	0	0	13,000	13,500	24,500	0
California	1,033,256	464,600	611,500	13,600	459,600	385,500	1,857,500	56,000
Hawaii	40,000	11,000	0	0	20,000	13,500	13,000	0
Nevada	2,750	0	0	0	0	0	0	0
Washington	320,100	86,800	147,400	3,000	65,000	141,500	527,900	24,000
U.S. Total	8,604,173	2,961,912	5,465,762	48,890	2,391,600	3,605,588	17,098,972	385,000

^a Refineries where distillation units were completely idle but not permanently shutdown on January 1, 2023.

^b Includes capacity from refineries that are either completely or partially idle.

Source: Energy Information Administration (EIA), Form EIA-820, "Annual Refinery Report."

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California Oil Refinery History



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California Oil Refinery History

- There are three tables based on refinery operational status (Open, Idle, Closed).
- Refineries are arranged alphabetically in each table.
- Information current as of October 12, 2023.
- **Contact:** Media & Public Communications Office | mediaoffice@energy.ca.gov | 916-654-4989

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Open California Refinery Facilities

California Refinery Facilities	Began Operations	Ownership Information	Current Crude Capacity (Barrels/Day)	Notes
Chevron, El Segundo Refinery	1912	Standard Oil Co: 1912-1926 Standard Oil Company of California (Socal): 1926-1977 Chevron USA Inc: 1977-2001 ChevronTexaco Corp: 2001-2005 Chevron Corp: 2005-Present	269,000	

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California Oil Refinery History

Chevron, Richmond Refinery	1902	Pacific Coast Oil: July 7, 1902- 1906 Standard Oil Co: 1906-1926 Standard Oil Company of California (Socal): 1926-1977 Chevron USA Inc: 1977-2001 ChevronTexaco Corp: 2001- 2005 Chevron Corp: 2005-Present	245,271	
Kern Energy, Bakersfield Refinery	1934	El Tejon Oil & Refining Co: 1934-1943 Kreiger Oil Co: 1943-1945 Douglas Oil Co: 1945-1962 Continental Oil: 1962-1966 Edgington Oil/Signal Oil & Gas: 1966-1971 Kern County Refinery Inc. (Charter Oil Co.): 1971-1976 Kern County Refinery Inc. (Privately Held): 1976-1982 Kern Oil & Refining Co: 1982- Present	26,000	Also known as Kern Oil & Refining Company.
Lunday Thagard Oil Company, South Gate Refinery	1937	Lunday Thagard Oil Co: 1937- Present	8,500	Subsidiary of World Oil Company.
Marathon Petroleum Co., Carson Refinery	1938	Richfield Oil Corp: 1938-1966 Atlantic Richfield Company (ARCO): 1966-2000 BP West Coast Products: 2000-June 2013 Tesoro Refining & Marketing: June 2013-August 2017 Andeavor: August 2017- October 2018 Marathon Petroleum: October 2018-Present	256,830	Marathon Carson and Wilmington began reporting as one entity known as Marathon Los Angeles Refinery (LAR) as of 2019 with a capacity of 363,000 barrels per day.

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California Oil Refinery History

Marathon Petroleum Co., Wilmington Refinery	1923	California Petroleum Corp: 1923-1928 Texas Company: 1928-1959 Texaco, Inc: 1959-1998 Equilon Enterprises (joint venture of Shell Oil Co. & Texaco Inc.): 1998-2002 Shell Oil Co: 2002-2007 Tesoro Refining & Marketing: June 2013-August 2017 Andeavor: August 2017-October 2018 Marathon Petroleum: October 2018-Present	98,340	Marathon Carson and Wilmington began reporting as one entity known as Marathon Los Angeles Refinery (LAR) as of 2019 with a capacity of 363,000 barrels per day.
PBF Energy, Martinez Refinery	1915	Shell Company of Calif: 1915-1939 Shell Oil Company, Inc: 1939-1949 Shell Oil Co: 1949-1998 Equilon Enterprises (joint venture of Shell Oil Co. & Texaco Inc.): 1998-2002 Shell Oil Co: 2002-February 2020 PBF Energy: February 2020-Present	156,400	
PBF Energy, Torrance Refinery	1907	Vacuum Oil Co: 1907-1929 General Petroleum Corporation of Calif: 1929-1931 Socony-Vacuum Corp: 1931-1934 Socony-Vacuum Oil Company, Inc: 1934-1955 Socony Mobil Oil Co: 1955-1966 Mobil Oil Corp: 1966-2000 ExxonMobil: 2000-July 2016	160,000	

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California Oil Refinery History

PBF Energy: July 2016-
Present

Phillips 66, Rodeo Refinery	1896	Union Oil Co of Calif: 1955-1983 Unocal: 1983-1997 Tosco Corp: 1997-2001 Phillips: 2001-2002 ConocoPhillips: 2002-May 2012 Phillips 66: May 2012-Present	90,200	Facility to be reconfigured to produce 800 million gallons per year of renewable diesel, renewable gasoline, and sustainable jet fuel. Production is expected to begin in 2024. Phillips 66 Rodeo and Santa Maria began reporting as one entity as of 2017 with a capacity of 120,200 barrels per day. Phillips 66 Santa Maria ceased operations in January 2023.
Phillips 66, Wilmington Refinery	1917	Union Oil Co of Calif: 1917-1983 Unocal: 1983-1997 Tosco Corp: 1997-2001 Phillips: 2001-2002 ConocoPhillips: 2002-May 2012 Phillips 66: May 2012-Present	139,000	Also known as Phillips 66, Los Angeles Refinery (LAR).
San Joaquin Refining Company, Bakersfield Refinery	1969	San Joaquin Refining Co: 1969-Present	15,000	

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California Oil Refinery History

Talley Asphalt Inc., Kern Refinery	2021	Talley Asphalt Products: 2021-Present	1,700	
Valero, Benicia Asphalt Refinery	1982	Huntway Refining: 1982-2001 Valero Refining Co: 2001- Present	13,000	Now part of Valero Benicia Refinery with a capacity 145,000 barrels per day.
Valero, Benicia Refinery	1968	Exxon Co USA: 1968-2000 Valero Refining Co: 2000- Present	145,000	
Valero, Wilmington Asphalt Refinery	1980	Huntway Refining: 1980-2001 Valero Refining Co: 2001- Present	6,300	
Valero, Wilmington Refinery	1969	Champlin Petroleum Co: 1969-1987 Union Pacific Resources Co: 1987-1988 Ultramar Refining: 1988-1997 Ultramar Diamond Shamrock: 1997-2002 Valero Refining Co: 2002- Present	85,000	

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Idle California Refinery Facilities

California Refinery Facilities	Began Operati ons	Ownership Information	Current Crude Capacity (Barrels/ Day)	Notes
Global Clean Energy Holdings, Bakersfield Refinery	1932	Mohawk Petroleum Corp: 1932-1975 Reserve Oil & Gas Co:	66,000	Facility to be converted to produce renewable

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California Oil Refinery History

		1975-1980 Getty Oil Co: 1980-1984 Texaco, Inc: 1984-2000 Equilon: 2000-2001 Shell Oil Co: 2001-2005 Big West of Calif. (Flying J): 2005-June 2010 Alon USA Energy Inc: June 2010-July 2017 Delek US: July 2017- May 2020 Global Clean Energy Holdings: May 2020- Present		diesel fuel with capacity of 17,000 barrels per day. Work projected to be completed by 2nd half of 2023.
Marathon Petroleum Co., Golden Eagle Refinery, Martinez/Avon	1913	Associated Oil Co: 1913-1937 Tidewater Associated Oil Co: 1937-1966 Phillips Petroleum: 1966-1976 Tosco Corp: 1976-2000 Ultramar Diamond Shamrock: 2000-2002 Valero Refining Co: 2002 Tesoro Refining & Marketing: June 2013- August 2017 Andeavor: August 2017- October 2018 Marathon Petroleum: October 2018-Present	166,000	Facility to be converted to produce renewable diesel fuel with capacity of 48,000 barrels per day by late 2023. The facility has reached full Phase I production capacity of 17,000 barrels per day of renewable diesel.
World Energy, Paramount Refinery	1930s	Ajax Oil Company: 1930s-1937 Kreiger Oil Co: 1937- 1940s Douglas Oil Co: 1940s- 1961	50,000	

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California Oil Refinery History

Continental Oil
 Company (Conoco):
 1961-September 1981
 El du Pont de Nemours
 & Co: September 1981-
 January 1983
 Pacific Oasis, Inc:
 January 1983-April
 1984
 Paramount Petroleum
 Corp: April 1984-2006
 Alon USA Energy Inc:
 2006-July 2017
 Delek US: July 2017-
 March 2018
 World Energy: March
 2018-Present

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Closed California Refinery Facilities

California Refinery Facilities	Began Operations	Ownership Information	Current Crude Capacity (Barrels/Day)	Notes
Anchor Refining, McKittrick Refinery	1979	Anchor Refining: 1979-February 1984	9,000	
Bridge Point Long Beach, LLC, Long Beach Refinery	1932	Apex Oil Co: 1932-1941 Edgington Oil Co: 1941-2006 Alon USA Energy Inc: 2006-July 2017 Delek US: July 2017-July 2018 Bridge Point Long Beach, LLC: July 2018-Present	31,500	Refinery was removed and converted to commercial warehousing as of August 2021.

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California Oil Refinery History

Chemoil Refining Corporation, Signal Hill Refinery	1923	MacMillan Ring-Free Oil Co: 1923-1988 Chemoil Refining Co: 1988-April 1994	18,000	
Chevron, Bakersfield Refinery	1913	Standard Oil Co: February 22, 1913-1926 Standard Oil Company of California (Socal): 1926-1977 Chevron USA Inc: 1977-July 1986	26,000	
Coastal Petroleum Refiners, Inc., Bakersfield Refinery	1980	Coastal Petroleum Refiners: 1980-December 1985	10,000	
DeMenno/Kerdoon, Compton Refinery	1977	DeMenno/Kerdoon: 1977-August 1983	15,000	Reprocesses Waste Oil as Oil Re-Refiner.
Eco Petroleum, Signal Hill Refinery	1977	ECO Petroleum: 1977-1984	10,550	
Gibson Oil Refining, Bakersfield Refinery	1978	Gibson Oil Refining: 1978-July 1987	9,600	
Golden Eagle Refining, Carson Refinery	1948	Sunset Oil: 1948-1958 Golden Eagle Refining: 1958-February 1985	16,170	
Golden West Refining Company, Santa Fe Springs Refinery	1936	Wilshire Oil Co: 1936-1960 Gulf Oil Corp USA: 1960-August 1983 Golden West Refining Co. (sub. of Thrifty Oil Co.):	47,000	Refinery Closed in March of 1992, Continued Operating as a Terminal Until 1997.

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California Oil Refinery History

August 1983-March
1992

Greka Energy, Santa Maria Asphalt Refinery	1932- 33	Five C Refining Co: 1932/33-1951 Douglas Oil Co: 1951- 1960 Conoco: 1960- September 1981 El du Pont de Nemours & Co (DuPont): September 1981-1994 Saba Petroleum Co: 1994-1999 Greka Energy: 1999- Present	9,500	Ceased operations in April 2021 and shutdown in January 2022.
Independent Valley Energy Company (IVEC), Bakersfield Refinery	1978	Independent Valley Energy Co: Late 1978- April 1984 Paramount Petroleum Corp.: April 1984-August 1987 Texaco: August 1987- 1988 Texaco Inc: 1988 - integrated with Alon USA Bakersfield refinery	27,000	Integrated as part of Alon USA Bakersfield Refinery.
Pacific Refining, Hercules Refinery	1967	Sequoia Refining Corp: 1967-1968 Gulf Oil Corp USA: 1968- 1976 Pacific Refining: 1976- July 1995	50,000	Ceased refinery operations July of 1995. Continued limited storage and terminal operations until September of 1997.
Pauley Petroleum Co., Newhall Refinery	1930	San Fernando Refining Co: 1930-1942 Newhall Refining Co: 1942-February 1959	22,500	

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California Oil Refinery History

Pauley Petroleum Co:
February 1959-
December 1989

Pauley Petroleum Co., Wilmington Refinery	Prior to 1951	Fletcher Oil Refining: Prior to 1951-March 1988 Pauley Petroleum: March 1988-October 1992	29,675	
Phillips 66, Santa Maria Refinery	1955	Union Oil Co of Calif: 1955-1983 Unocal: 1983-1997 Tosco Corp: 1997-2001 Phillips: 2001-2002 ConocoPhillips: 2002- May 2012 Phillips 66: May 2012- Present	41,800	Phillips 66 Rodeo and Santa Maria began reporting as one entity as of 2017 with a capacity of 120,200 barrels per day. Phillips 66 Santa Maria ceased operations in January 2023.
Powerine Oil Company, Santa Fe Springs Refinery	1934	Rothschild Oil Co/Powerine Oil Co: 1934-1984 Closed - bankruptcy: 1984-1986 Powerine Oil Co: 1986- 1993 Castle Energy Corp: 1993-1995 Kenyon Resources: 1995-1996 Energy Merchant Corp: 1996-1998 Creative Energy Company (CENCO): 1998-Present	46,500	Ceased refinery operations June of 1995. CENCO was offering the refinery equipment for sale, as of April 2007.
Quad Refining Company, Bakersfield	1979	Quad Refining Co: 1979- October 1981	7,000	

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California Oil Refinery History

Refinery				
Road Oil Sales, Inc., Bakersfield Refinery	1973	Road Oil Sales, Inc: 1973-December 1981	6,000	
Sabre Refining, Inc., Bakersfield Refinery	1972	Sabre Refining Co: 1972-September 1987	10,000	
Shell Oil Products US, Carson Refinery	1923	Shell Company of Calif: 1923-1939 Shell Oil Company, Inc: 1939-1949 Shell Oil Co: 1949-1992 Converted to distribution terminal: 1992-Present	120,000	Was converted to distribution terminal in 1992.
Sunland Refining Corporation, Bakersfield Refinery	Prior to 1929	Sunland Refining Corp: Prior to 1929-December 1995	12,000	Ceased Operations March 1995.
Tenby Incorporated, Oxnard Refinery	Prior to 1951	Tenby Inc: Prior to 1951- December 2011	2,800	Also known as Oxnard Oil Refining.
Tosco, Bakersfield Refinery	1941	U.S. Government: 1941- 1946 (Area 2) Idle 1946-1950 Norwalk Co: 1950-1950s Bankline: 1950s-1959 Signal Oil and Gas Co:1959-1970 Tosco Corp:1970-1983 Idle 1983-1986 Texaco Inc: 1986 - integrated with Alon USA Bakersfield refinery	38,800	Integrated as part of Alon USA Bakersfield Refinery.
Tricor Refining LLC, Oildale Refinery	1938	Witco Chemical Corp: 1938-1997 Golden Bear: 1997-June 2001	12,500	

<https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/californias-oil-refineries/california-oil>

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California Oil Refinery History

Tricor Refining LLC:
June 2001-January
2002

Ultramar Oil, Hanford Refinery	1931	HH Bell Refinery Co. 1931-1932 Caminol Oil Co: 1932-1967 Beacon Oil Co: 1967-1982 Ultramar Oil Co: 1982-December 1987	17,300
USA Petrochem Corporation, Ventura Refinery	1977	USA Petrochem Corp: 1977-December 1984	24,000
West Coast Oil Company, Oildale Refinery	1948	West Coast Oil Co: 1948-October 1988	5,000
Western Oil Refining, Long Beach Refinery	1977	Marlex Oil Refining: 1977-August 1985 Western Oil Refining: August 1985-December 1987	19,200

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Source: Compiled by California Energy Commission, Energy Assessments Division,
Transportation Fuels Data Unit

Notes: 1 Atmospheric crude oil distillation processing capacity as measured in barrels per
calendar day - source: Energy Information Agency - Refinery Capacity Reports

CONTACT

California Energy Commission
715 P Street
Sacramento, CA 95814

<https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/californias-oil-refineries/california-oil>

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California Oil Refinery History

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California Refineries | California Air Resources Board

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California Refineries

Information regarding current activities related to refineries conducted at the state and local air district levels

CATEGORIES

Topics Fuels

Programs Fuels Program

Type Information

General Information

Currently, there are 15 refineries in California that produce transportation fuel¹ (Updated July 14, 2020)

Southern California: (South Coast Air Quality Management District)

- Marathon Petroleum (Carson)
- Chevron (El Segundo)
- Marathon Petroleum (Wilmington)
- PBF Energy (Torrance)
- Valero (Wilmington)
- AltAir Paramount, LLC (Paramount)
- Phillips 66 (Wilmington)

Northern California: (Bay Area Air Quality Management District)

- Chevron (Richmond)
- PBF Energy (Martinez)
- Phillips 66 (Rodeo)
- Marathon Petroleum (Martinez)
- Valero (Benicia)

Central California: (San Joaquin Valley Unified Air Pollution Control District)

- Alon (Bakersfield)
- Kern Oil and Refining Company (Bakersfield)
- San Joaquin Refining Company (Bakersfield)

<https://ww2.arb.ca.gov/resources/documents/california-refineries>

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There are four refineries in California that currently do not produce transportation fuel¹.

Central Coast California: (Santa Barbara County Air Pollution Control District)

- Phillips 66 (Santa Maria)
- Greka Energy Company (Santa Maria)

Southern California: (South Coast Air Quality Management District)

- World Oil Refining (Lunday Thagard) (South Gate)
- Valero Wilmington Asphalt Refinery (Wilmington)

For the California Oil refineries and their statistics and data, please visit the California Energy Commission's Refinery website.

¹Source: California Energy Commission's Refinery website

Outreach and Emergency Response Program

California Refineries Outreach Programs and Emergency Response Plans

- Staff Report and Appendices A-G
- Staff Report
 - Appendix A
 - Appendix B
 - Appendix C
 - Appendix D
 - Appendix E
 - Appendix F
 - Appendix G

Emission Impacts of Refineries

Assessment of the Local and Regional Emission Impacts from CaRFG2 and Related Clean Fuels Refinery Modifications

- Staff Report and Appendices A-Q

<https://ww2.arb.ca.gov/resources/documents/california-refineries>

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- Staff Report
 - Appendix A
 - Appendix B
 - Appendix C
 - Appendix D
 - Appendix E
 - Appendix F
 - Appendix G
 - Appendix H
 - Appendix I
 - Appendix J
 - Appendix K
 - Appendix L
 - Appendix M
 - Appendix N
 - Appendix O
 - Appendix P
 - Appendix Q

California Emission Inventory Database

Local Air District Activities

CARB Evaluation of Penalty Assessment at Refineries

- Staff Report and Appendices A-C

Bay Area AQMD Refinery Control Measures and Further Studies

- CARB Evaluation of Refinery Wastewater Systems for Bay Area Refineries

South Coast AQMD Rules including Refinery Specific Rules

San Joaquin Valley APCD Rules including Refinery Specific Rules

<https://ww2.arb.ca.gov/resources/documents/california-refineries>

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Related Links

CA Strategy to Reduce Petroleum Dependence (AB 2076) - Joint Report of CEC and CARB (August 2003). For more information please visit the California Energy Commission website

CARB Fuels Email List

If you would like to receive an email when changes are made to the fuel specifications area of this website, you can subscribe to the Fuels Email List.

RELATED RESOURCES

**Renewable Diesel
Agriculture Engine
Emissions Testing**

**California
Reformulated
Gasoline Regulatory
Advisory (September
2023)**


**Mobile Source
Strategy**

(800) 242-4450 | helpline@arb.ca.gov
1001 I Street, Sacramento, CA 95814
P.O. Box 2815, Sacramento, CA 95812



<https://ww2.arb.ca.gov/resources/documents/california-refineries>

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<http://blogs.dailymirror.com/history/files/import/22572-chevonaerialshump-403422.jpg>

<https://media.gettyimages.com/videos/oil-refinery-at-dusk-drone-shot-video-id/0588373025-640x640>

Proposed Amended Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities

WORKING GROUP MEETING 2 JULY 15, 2021

JOIN ZOOM MEETING
[HTTPS://SCAQMD.ZOOM.US/J/93814044899](https://scaqmd.zoom.us/j/93814044899)
 MEETING ID: 938 1404 4899
 TELECONFERENCE DIAL-IN: 1-669-900-6833

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Facilities Subject to Rule 1178 (continued)

- 41 facilities with tanks subject to Rule 1178

			
11 Refineries	8 Bulk Storage Facilities	12 Bulk Loading Facilities	10 Portable Tank Suppliers
Refine crude product into usable fuels through processes	Intermediate site for storage usually connected by pipeline	Storage site for fuels to be moved by tanker (truck or boat)	Supply smaller tanks for temporary uses such as tank degassing

Tanks Subject to Rule 1178

- Above-ground with capacity $\geq 19,815$ gallons storing organic liquid with TVP > 0.1 psia



Stationary Tanks

Above-ground tanks and permanent equipment at site



Portable Tanks

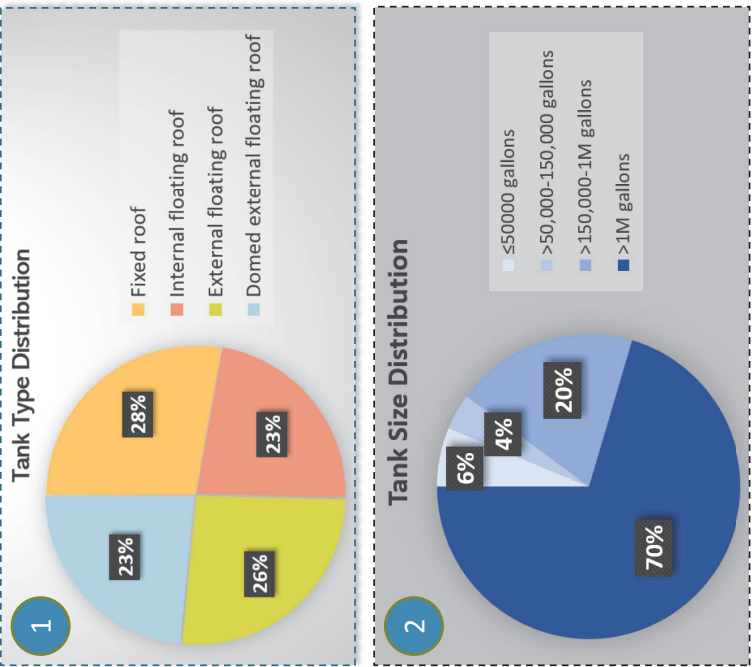
Individually permitted tanks



Portable Tank Systems

Permitted as a system containing 2 or more tanks used individually or together in a process

Stationary Tanks Types and Sizes



1,108 Stationary Tanks

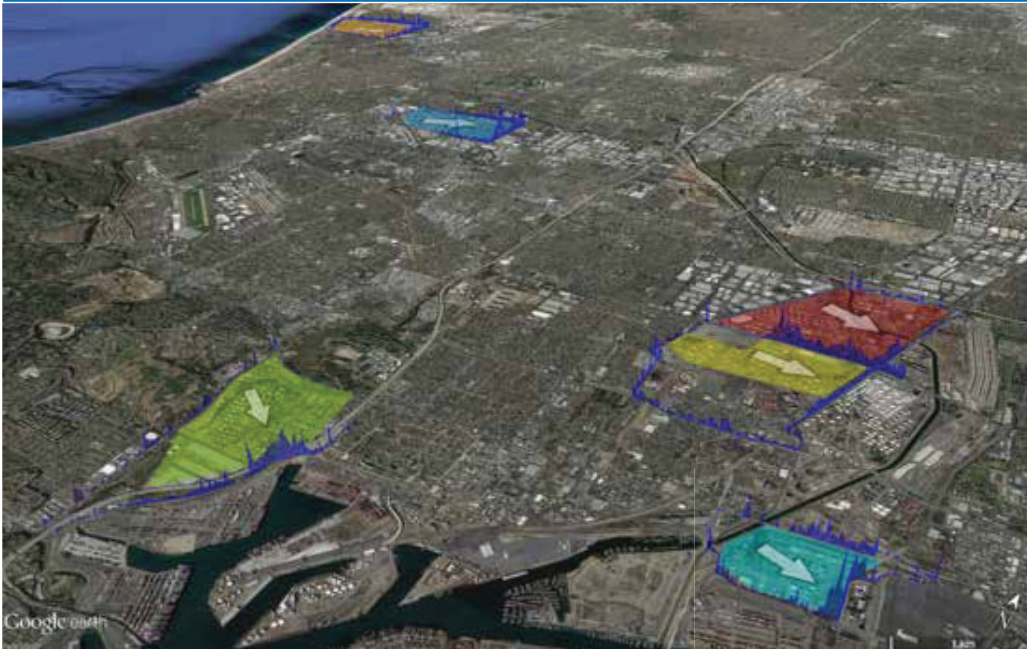
- 1 Even distribution of the four different types of tanks
- 2 About 70 percent of tanks are large capacity (>1 million gallons)

Tank Size Category (gal)	# Tanks	Total Gallons Stored	Average Tank Capacity (gal)
≤50000	70	3 million	43,000
>50,000 to 150,000	43	4 million	93,000
>150,000 to 1 million	217	100 million	460,000
>1 million	778	3 billion	3.9 million

18

2015

Emission Measurements of VOCs, NO₂ and SO₂ 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

FluxSense/SCAQMD-2015

Date: 11 April 2017

Title: Emission Measurements of VOCs, NO₂ and SO₂ from the Refineries in the South Coast Air Basin Using Solar Occultation Flux and Other Optical Remote Sensing Methods

Authors: Johan Mellqvist^{1,2}, Jerker Samuelsson^{1,2}, Oscar Isoz¹, Samuel Brohede¹, Pontus Andersson¹, Marianne Ericsson², John Johansson¹

¹FluxSense AB, Hörsalsvägen 11, SE-41296 Göteborg, Sweden

²FluxSense Inc, 113 W G Street # 757, San Diego, CA 92101

E-mail: johan.mellqvist@fluxsense.se

FluxSense Inc is subsidiary of FluxSense AB (www.fluxsense.se; San Diego, CA). FluxSense started as a spin-off company from research conducted at Chalmers University of Technology in Sweden and has been active for more than 10 years. FluxSense has carried out more than 100 industrial site surveillances in Austria, Belgium, Denmark, France, Middle East, Netherlands, Norway, Sweden and the US.

[Cover: Visualization of alkane plume transects (blue curves) from Solar Occultation Flux (SOF) measurements conducted at the six refineries for this study during similar wind conditions. The apparent height of the blue line is proportional to the integrated vertical column concentration expressed in mg/m². White arrows indicate wind directions during these measurements. Image mapped on Google Earth © 2016.]

FluxSense/SCAQMD-2015

Executive summary

BACKGROUND

Accurate characterization of facility-wide emissions from industrial sources on a real or near-real time basis is critical for developing effective control strategies to improve regional air quality, promoting compliance, and reducing exposure for nearby communities. To improve the understanding of such emissions in the South Coast Air Basin (SCAB), the South Coast Air Quality Management District (SCAQMD) has sponsored a series of measurement projects to study industrial emissions using Optical Remote Sensing (ORS) methods. The projects include experimental studies of emissions from refineries, oil depots, treatment facilities, oil wells, gas stations, fuel islands and barges. In addition, SCAQMD has sponsored technology demonstration and validation studies to assess potential uncertainties of different optical techniques through side-by-side measurements of real sources and controlled source gas releases.

Numerous research studies using ORS conducted in the US and worldwide (including a 2013 pilot project sponsored by SCAQMD) suggest that measured emissions of VOCs from industrial facilities are larger compared to emission inventory estimates developed based on accepted reporting conventions. Given the large number of refineries and other industrial activities in the SCAB, it is therefore very important to evaluate novel measurement methods for detecting and quantifying industrial emissions directly.

This report presents the results of a two and a half month long measurement campaign aimed at characterizing and quantifying emissions of VOCs, NO_x, and SO₂ from six major refineries in the SCAB. The measurements spanned from August 28 to November 11 2015, with up to 15 individual measurement days at each site. Additionally, a detailed eight day long measurement study inside the tank farm of one of the refineries was conducted to quantify emissions from the tank farm, locate potential leak sources, and validate the SOF technique by comparative measurements to other ORS methods.

Mobile surveys using two ORS techniques, namely SOF (Solar Occultation Flux) and Mobile SkyDOAS (Differential Optical Absorption Spectroscopy), were conducted around the refineries' perimeters to estimate facility-wide emission fluxes of VOCs, SO₂ and NO₂. These ORS techniques were complemented by extractive optical methods, including MeFTIR (Mobile extractive Fourier Transform Infra-Red spectroscopy) and MWDOAS (Mobile White cell DOAS) to map ground concentrations of alkanes, methane and aromatic VOCs and to calculate inferred fluxes for methane and aromatics. The required wind information was collected using a stationary wind-LIDAR (LIght Detection and Ranging; which provides vertical wind profiles) and conventional wind mast measurements.

SOF is a proven technique employed by FluxSense in over 100 fugitive emission studies around the world. In Europe the SOF technique is considered Best Available Technology (BAT) for measurements of fugitive emission of VOCs from refineries (Barthe *et al.* 2015), and in Sweden it is used together with tracer correlation and optical gas imaging to annually screen all larger refineries and petrochemical industries. In Swedish facilities, ORS emission measurements are conducted annually for at least ten days, during different seasons, in order to obtain a good representation of the annual mean. These measurements represent the total emission flux coming from the entire refinery, divided into sub parts such as process areas, crude oil storage, product storage tanks, water treatment facilities, flares, and loading operations. In the study presented here, such sub-area measurements were demonstrated for the tank farm of Refinery A.

FluxSense/SCAQMD-2015

The estimated uncertainty for the SOF emission measurements is typically 30 % for total site emissions, and usually slightly higher for individual sub-parts. The estimated measurement uncertainties have been verified in several (blind and non-blind) controlled source gas release experiments (including the one performed during this study and discussed elsewhere) and in side-by-side measurements with other techniques. The uncertainties in the total refinery emissions of BTEX and CH₄ obtained from inferred fluxes are larger than for the direct flux measurements of alkanes. Ideally, the gases should be well mixed in the plume for this method to work the best, but in reality there will be a stronger weighting towards low elevated sources (tanks) compared to higher elevated ones (process units) depending on the measurement geometry. Based on canister samples collected in several European refineries in the past, we know that typically the BTEX fraction is higher in the process units (10-15 % of total VOCs) compared to tank farms (5-10 % of total VOCs). The inferred BTEX flux will consequently be a low estimate of actual BTEX emissions because plumes from tanks are usually located closer to the surface, while plumes from process areas can extend further up into the atmosphere. In this study the overall BTEX to alkane ratio was 0.11.

RESULTS

Table ES.1 shows the measured hourly emission rates (kg/h) of various gaseous species from the refineries investigated during this study. The emissions presented in table ES 1 represent median values of all valid transects obtained during the two and a half month study period. The BTEX and CH₄ emission values have been extrapolated from concentration ratios of these species to alkanes measured at ground level and scaled with direct alkane emission measurements by SOF. It should be noted that, rather consistently for all the refineries, the BTEX emissions are typically one tenth of the total VOC emissions, while CH₄ emissions are on average two thirds of the alkane emissions.

Table ES.1. Median values of all measured site emissions during the 2015 SCAQMD survey. The fluxes of alkanes, SO₂ and NO₂ are obtained from direct measurements, while BTEX and CH₄ are inferred from gas ratio measurements. Note that benzene is part of BTEX.

Measured Refinery SCAQMD Survey 2015	N Days	Alkane Flux [kg/h]	SO ₂ Flux [kg/h]	NO ₂ Flux [kg/h]	BTEX Flux [kg/h]	Benzene Flux [kg/h]	CH ₄ Flux [kg/h]
Refinery A	15	269	62	66	24	3.4	167
Refinery B	5	70	53	31	11	1.1	53
Refinery C	4	244	37	57	37	8.2	142
Refinery D	7	164	17	34	16	1.6	79
Refinery E	7	244	53	63	31	2.7	207
Refinery F	4	139	37	18	10	0.8	57
Sum		1130	259	269	129	18	705

In Table ES.2 the measured emission data for the various sites has been normalized by the corresponding crude oil capacity for each facility and compared to the reported emission inventories. The table shows that the measured VOC emission factors for the studied refineries range from 0.017 % to 0.045 % (mass emission per mass capacity of crude). SOF measurements carried out in other well-run refineries typically show average VOC emission factors of 0.03 % to 0.1 %. Thus, according to this data, the refineries in the SCAB are generally performing well,

FluxSense/SCAQMD-2015

with relatively low emission compared to their capacity. However, as highlighted in Table ES.2, significant differences exist between measured and reported inventory emissions for VOCs and, for all refineries combined, the overall discrepancy between measured and reported inventory values was a factor of 6.2. For benzene the corresponding overall discrepancy ratio was about 34, although the magnitude of BTEX emissions was relatively small. Refinery C stands out with a measured benzene emission being more than twice as high as the next refinery in order. The measured SO₂ and NO₂ emissions are much closer to, and in some instances lower than, those reported in the inventories. In Table ES 2, the reported annual emissions have been divided by 12 to obtain a monthly inventory value to compare to the measured monthly median emissions from this survey. Hence, the discrepancies and emissions factors are representative for September 2015 (the time-period when the majority of the ORS measurements were performed).

Table ES.2. VOC emission factors normalized by the corresponding crude oil capacity for the various sites, and ratios between measured values and reported inventories for the 2015 SCAQMD survey.

Measured Refinery Representative of September 2015	Crude capacity 2015*		Measured Monthly Emission for Sept. 2015	Emission Factor**	Discrepancy factor (Measured/Reported ²)			
	bbl/day	Tons ¹ /mo	Alkanes+BTEX Tons ¹ /mo	Alkanes+BTEX %	Alkanes+BTEX	SO ₂	NO ₂	Benzene
Refinery A	257300	1086215	214	0.020 %	6.4	1.2	1.0	43
Refinery B***	139000	586801	59	0.045 %	8.3	1.5	0.8	33
Refinery C***			205		11.8	2.7	1.1	202
Refinery D	104500	441156	132	0.030 %	10.5	1.7	1.1	39
Refinery E	269000	1135608	201	0.018 %	5.4	1.7	0.8	38
Refinery F	149500	631128	109	0.017 %	2.7	1.1	0.3	3.2
Overall****	919300	3880908	919	0.024 %	6.2	1.5	0.83	34

* Crude capacity data is obtained from the 2016 California Energy Commission report.

** Mass emission per mass capacity of crude oil.

*** Crude capacity for Refinery B and Refinery C are reported together since Refinery B processes the crude oil and the Refinery C upgrades intermediate products to finished products.

**** The overall discrepancy values are calculated from the total sum of reported and measured emissions, respectively. The overall emission factor is based on the sum of measured emissions for all refineries relative to the total capacity. Reported annual values have been divided by 12 to obtain a monthly inventory value to compare to the measured monthly average emissions from this survey. The comparisons are representative for September 2015 (the time-period when most of the measurements were performed).

¹ metric tons.

² Note that total nitrogen oxides (NO_x) are reported while only the NO₂ fraction was measured by SkyDOAS.

ORS measurements were also conducted for eight days inside the tank farm of one of the refineries listed above. The objective of this part of the study was to demonstrate the capability of real time ORS techniques to identify and quantify emissions and potential gas leak sources inside a refinery. Several storage and crude oil tanks were identified as VOC emitters, including a large underground reservoir containing vacuum gas oil (VGO).

2022 SCOPING PLAN FOR ACHIEVING
CARBON NEUTRALITY
NOVEMBER 16, 2022



Executive Summary

This Scoping Plan lays out the sector-by-sector roadmap for California, the world's fifth¹ largest economy, to achieve carbon neutrality by 2045 or earlier, outlining a technologically feasible, cost-effective, and equity-focused path to achieve the state's climate target. This is a challenging but necessary goal to minimize the impacts of climate change. There have been three previous Scoping Plans. Previous plans have focused on specific greenhouse gas (GHG) reduction targets for our industrial, energy, and transportation sectors—first to meet 1990 levels by 2020, then to meet the more aggressive target of 40 percent below 1990 levels by 2030. This plan, addressing recent legislation and direction from Governor Newsom, extends and expands upon these earlier plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045. This plan also takes the unprecedented step of adding carbon neutrality as a science-based guide and touchstone for California's climate work. The plan outlines how carbon neutrality can be achieved by taking bold steps to reduce GHGs to meet the anthropogenic emissions target and by expanding actions to capture and store carbon through the state's natural and working lands and using a variety of mechanical approaches.

What this means for California is an ambitious and aggressive approach to decarbonize every sector of the economy, setting us on course for a more equitable and sustainable future in the face of humanity's greatest existential threat, and ensuring that those who benefit from this transformation include communities hardest hit by climate impacts and the ongoing pollution from the use of fossil fuels. The combustion of fossil fuels has polluted our air—particularly in low-income communities and communities of color—for far too long and is the root cause of climate change. This Scoping Plan helps us chart the path to a future where race and class are no longer predictors of disproportionate burdens from harmful air pollution and climate impacts.

The major element of this unprecedented transformation is the aggressive reduction of fossil fuels wherever they are currently used in California, building on and accelerating carbon reduction programs that have been in place for a decade and a half. That means rapidly moving to zero-emission transportation; electrifying the cars, buses, trains, and trucks that now constitute California's single largest source of planet-warming pollution. It also means phasing out the use of fossil gas used for heating our homes and buildings. It means clamping down on chemicals and refrigerants that are thousands of times more powerful at trapping heat than carbon dioxide (CO₂). It means providing our communities

¹ In October 2022, California was poised to become the world's fourth largest economy.

with sustainable options for walking, biking, and public transit to reduce reliance on cars and their associated expenses. It means continuing to build out the solar arrays, wind turbine capacity, and other resources that provide clean, renewable energy to displace fossil-fuel fired electrical generation. It also means scaling up new options such as renewable hydrogen for hard-to-electrify end uses and biomethane where needed. Successfully achieving the outcomes called for in this Scoping Plan would reduce demand for liquid petroleum by 94 percent and total fossil fuel by 86 percent in 2045 relative to 2022.² Despite these world-leading efforts, some amount of residual emissions will remain from hard-to-abate industries such as cement, internal combustion vehicles still on the road, and other sources of GHGs, including high global warming chemicals used as refrigerants.

The plan addresses these remaining emissions by re-envisioning our natural and working lands—forests, shrublands/chaparral, croplands, wetlands, and other lands—to ensure they play as robust a role as possible in incorporating and storing more carbon in the trees, plants, soil, and wetlands that cover 90 percent of the state’s 105 million acres while also thriving as a healthy ecosystem. Modeling indicates that natural and working lands will not, on their own, provide enough sequestration and storage to address the residual emissions. For that reason, it is necessary to research, develop, and deploy additional methods of capturing CO₂ that include pulling it from the smokestacks of facilities, or drawing it out of the atmosphere itself and then safely and permanently utilizing and storing it, as called for in recent legislation. Carbon removal also will be necessary to achieve net negative emissions to address historical GHGs already in the atmosphere.

This is a plan that aims to shatter the carbon status quo and take action to achieve a vision of California with a cleaner, more sustainable environment and thriving economy for our children. This ambitious plan will serve as a model for other partners around the world as they consider how to make their transition. As we have so often in the past, California can continue to serve as a leader in innovation that has produced not only the fifth largest economy on the planet, but ultimately one of the most energy-efficient economies, with a track record of demonstrating the ability to decouple economic growth from carbon pollution. This plan also builds upon current and previous environmental justice efforts to integrate environmental justice directly into the plan, to ensure that all communities can reap the benefits of this transformational plan. Specifically, this plan:

² See <https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-PATHWAYS-data-E3.xlsx> for energy demand reductions.

- Identifies a path to keep California on track to meet its SB 32 GHG reduction target of at least 40 percent below 1990 emissions by 2030.
- Identifies a technologically feasible, cost-effective path to achieve carbon neutrality by 2045 and a reduction in anthropogenic emissions by 85 percent below 1990 levels.
- Focuses on strategies for reducing California's dependency on petroleum to provide consumers with clean energy options that address climate change, improve air quality, and support economic growth and clean sector jobs.
- Integrates equity and protecting California's most impacted communities as driving principles throughout the document.
- Incorporates the contribution of natural and working lands (NWL) to the state's GHG emissions, as well as their role in achieving carbon neutrality.
- Relies on the most up-to-date science, including the need to deploy all viable tools to address the existential threat that climate change presents, including carbon capture and sequestration, as well as direct air capture.
- Evaluates the substantial health and economic benefits of taking action.
- Identifies key implementation actions to ensure success.

The path forward is informed by robust science. The recent Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC) summarizes the latest scientific consensus on climate change. It finds that atmospheric concentrations of CO₂ have increased by 50 percent since the industrial revolution and continue to increase at a rate of two parts per million each year.³ By the 2030s, and no later than 2040, the world will exceed 1.5°C warming unless there is drastic action. While every tenth of a degree matters—every incremental increase in warming brings additional negative impacts—climate-related risks to human health, livelihoods, and biodiversity are projected to increase further under 2°C warming, compared to 1.5°C.⁴ For example, at 1.5°C of global warming, we would experience increasing heat waves, longer warm seasons, and shorter cold seasons, but at 2°C of global warming, heat extremes would more often reach critical tolerance thresholds for human health and agriculture.⁵ We are already seeing unprecedented climate change impacts, such as continued sea level rise, that are

³ IPCC. 2021. *Climate Change 2021: The Physical Science Basis*. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J. B. R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press. In Press. <https://www.ipcc.ch/report/ar6/wg1/>.

⁴ IPCC. 2018. *Global Warming of 1.5°C*. World Meteorological Organization. Geneva, Switzerland. 32 pp. <https://www.ipcc.ch/sr15/>.

⁵ IPCC. 2021. Climate change widespread, rapid, and intensifying – IPCC. August. <https://www.ipcc.ch/2021/08/09/ar6-wg1-20210809-pr/>.

(Adopted December 21, 2001)(Amended April 7, 2006)(Amended April 6, 2018)
(Amended November 6, 2020)(Amended May 5, 2023)(Amended September 1, 2023)

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**RULE 1178 FURTHER REDUCTIONS OF VOC EMISSIONS FROM STORAGE
TANKS AT PETROLEUM FACILITIES**

(a) Purpose

The purpose of this rule is to further reduce emissions of Volatile Organic Compounds (VOC) from Storage Tanks located at Petroleum Facilities.

(b) Applicability

The rule applies to the following Storage Tanks used to store Organic Liquid located at any Petroleum Facility that emits more than 40,000 pounds (20 tons) per year of VOC as reported in the Annual Emissions Report pursuant to Rule 301 – Permit Fees in any Emission Inventory Year starting with the Emission Inventory Year 2000:

- (1) Aboveground Storage Tanks with capacity equal to or greater than 75,000 liters (19,815 gallons) storing Organic Liquid; and
- (2) Storage Tanks with a Potential For VOC Emissions of 6 tons per year used in Crude Oil And Natural Gas Production Operations.

(c) Definitions

- (1) ACCESS HATCH is an opening in the roof with a vertical well and a cover attached to it. Access Hatch provides passage for workers and materials through the roof for construction or maintenance.
- (2) AMBIENT TEMPERATURE is the temperature of an Organic Liquid within a Storage Tank that has been influenced by atmospheric conditions only and is not elevated by a non-atmospheric means of heating at the tank which includes but is not limited to steam, hot water, heaters, heat exchangers, tank insulation, or tank jacketing.
- (3) CERTIFIED PERSON is a person who has successfully completed the South Coast AQMD tank self-inspection program and a South Coast AQMD approved fugitive emissions compliance inspection program, and who holds a certificate issued by the Executive Officer evidencing that such person is in good standing in this program.
- (4) COMPONENT INSPECTION is monitoring for Visible Vapors with a handheld Optical Gas Imaging Device of a Storage Tank roof and individual components,

1178-1

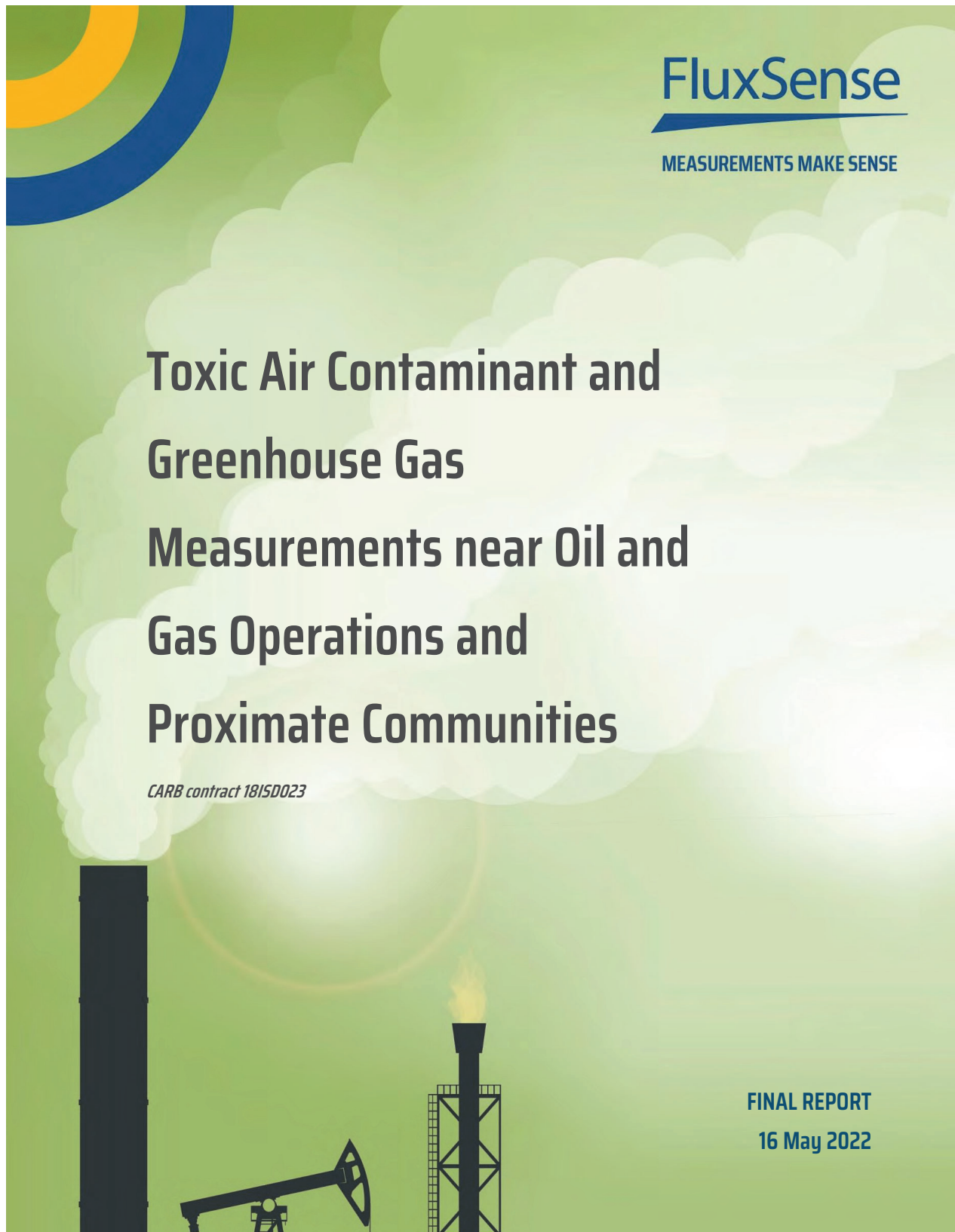
Rule 1178 (Cont.)

(Amended September 1, 2023)

- (c) including but not limited to Roof Openings and Rim Seal Systems, viewable from the tank platform, and ground for components not viewable from the tank platform but viewable at ground level.
- (5) CRUDE OIL AND NATURAL GAS PRODUCTION OPERATIONS are any operations from a crude oil well to the point of custody transfer to a refinery and any operations from a natural gas well to the natural gas customer.
- (6) DOMED ROOF is a self-supporting fixed roof attached to the top of an External Floating Roof Tank to reduce evaporative losses. An External Floating Roof Tank equipped with a Domed Roof is a Domed External Floating Roof Tank.
- (7) EMISSION CONTROL SYSTEM is a combination of capture system(s) and control equipment used to recover, reduce, remove or control the release of VOC to the atmosphere. Such equipment includes, but is not limited to, absorbers, adsorbers, compressors, condensers, incinerators, flares, boilers, and process heaters.
- (8) EMISSION INVENTORY YEAR is the annual emission-reporting period specified by the Annual Emission Reporting (AER) Program requirements for a given year..
- (9) EXTERNAL FLOATING ROOF TANK is a Storage Tank with a roof consisting of a double deck or pontoon single deck which rests or floats on the liquid being contained and is not equipped with a fixed roof above the floating roof.
- (10) FACILITY is any equipment or group of equipment or other VOC-emitting activities, which are located on one or more contiguous properties within the South Coast AQMD, in actual physical contact or separated solely by a public roadway or other public right-of-way, and are owned or operated by the same person (or by persons under common control), or an outer continental shelf (OCS) source as determined in 40 CFR Section 55.2. Such above- described groups, if noncontiguous, but connected only by land carrying a pipeline, shall not be considered one Facility.
- (11) FIXED ROOF SUPPORT COLUMN AND WELL is a column made of round pipe or of structural shape with an irregular cross section that passes through the floating roof via a peripheral vertical well and is used to support the roof of an internal floating roof tank.
- (12) FIXED ROOF TANK is a Storage Tank with a permanently affixed roof
- (13) FLEXIBLE ENCLOSURE SYSTEM is a VOC emission reduction system made of a VOC impervious material which is resistant to ultraviolet radiation, completely enclosing a Slotted Guidepole and controls the vapor emission

CBD-94
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Executive summary

BACKGROUND

CARB has initiated several programs and studies that respond to the recommendation to “assess public health as a function of proximity to all oil and gas development” from a report by California Council on Science and Technology (2015). This contract supports the following programs, studies, and regulation:

- SNAPS – The Study of Neighborhood Air near Petroleum Sources is a CARB program that aims to characterize air quality in communities near oil and gas extraction and related operations.
- CAPP - The Community Air Protection Program, initiated by Assembly Bill 617 (Garcia 2017), is a separate community monitoring effort that aims to better understand air quality and air pollution sources in disadvantaged communities.
- Fenceline air sampling pursuant to Senate Bill 4 (SB 4; Pavley 2013) and the resultant SB4 Well Stimulation Treatment Regulations.
- CARB regulation intended to reduce methane emissions from oil and gas sources.

The target gases for this work are methane, non-methane volatile organic compounds (NMVOCs), benzene, separately and with other aromatics as BTEX (benzene, toluene, ethylbenzene and xylene), NO₂ and SO₂. Methane directly affects climate, while NMVOCs (combined with NO_x emissions in the presence of sunlight) contribute to the formation of ground level ozone, which is harmful to human health and crop yields. Additionally, both NMVOC and ozone are greenhouse gases, although with generally short atmospheric lifetimes. Sources emitting significant amounts of NMVOCs may also co-emit BTEX and other air toxics that could directly impact health in surrounding communities. SO₂ contributes to the formation of particulate matter on the regional level, which is also a health concern.

Oil and gas are produced throughout California. Some of this production occurs in relatively close proximity to residential communities, especially in the San Joaquin Valley (SJV) and South Coast Air Basin (SCAB) regions. More broadly, a 2017 study (Czolowski, 2017) found that over two million Californians live within 1 mile of an active oil or gas well, making the quantification of emissions essential for future air quality management.

Three multiple-week field campaigns were conducted over the period September 2019 to October 2021, focusing on oil and gas related emissions of NMVOC and methane and concentration mapping of alkanes, methane, benzene and BTEX compounds at fenceline of production fields, and in nearby communities. The first survey in San Joaquin Valley in September-October 2019 involved in-field measurements of the Lost Hills oil and gas field, fenceline and community monitoring. The second project survey was conducted in the South Coast Air Basin from June-July 2021, and the final survey of a large number of oil fields and residential community areas in Kern County, SJV was conducted in September-October 2021.

OBJECTIVES AND METHODS

The objectives of this project are to:

1. Provide a better understanding of the emissions (composition and rate) from oil and gas sources in SJV and SCAB.
2. Trace the transport of enhanced VOC concentrations from oil and gas point sources.
3. Assess the impact of oil and gas emissions on local air quality.
4. Quantify toxic levels in communities close to the sources, adding on to the SNAPS and CAPP programs.

This study used an advanced mobile air pollution measurement lab equipped with four optical instruments for gas monitoring. Alkane emissions were measured by Solar Occultation Flux (SOF). Methane and alkane ground level concentrations were measured by MeFTIR, and in parallel MeDOAS (2021) (or MWDOAS (2019)) measured benzene and BTEX concentrations. Indirect emissions of methane, benzene and BTEX were obtained by combining the mass ratios to alkanes with the alkane emissions measured by SOF. SkyDOAS was applied to screen for sources of SO₂, NO₂ and H₂CO emissions. Wind data was obtained by a wind LIDAR that was applied at locations in the vicinity to the VOC measurements, providing vertical profiles of wind speed and wind direction in the 10 - 300 m range above ground.

Mobile lab driving routes varied by objective. Emissions were measured by driving around sources (e.g. entire oil fields) in a box pattern or downwind sources where no box was possible. Upwind source emissions were accounted for when present. Gas concentration mapping was conducted by driving through communities usually in a zig-zag fashion, distance decay measured by driving at successively farther distances from a suspected source, and in a few instances by parked van to get a stationary time series measurement.

In support of the second and third objective, the project involved application and adaptation of a dispersion model based on the Weather Research and Forecasting (WRF) model. Initialization and boundary conditions for WRF were taken from the High Resolution Rapid Refresh (HRRR) model. Model simulations were conducted using measured emissions from two locations (Lost Hills and Mountain View areas) where frequent emission measurements and concentration measurements had been made.

In this project the emissions of several air pollutants and greenhouse gases have been studied from Oil & Gas sites in the SJV and South Coast areas during three multiple-week surveys in the period October 2019 – October 2021.

RESULTS

Oil and gas emissions

The area surveyed in this report represents a significant portion of the oil and gas production in California. To give an indication of size, the sum of emissions for the fields in Kern County in San Joaquin Valley, wholly or partially measured, amount to 6100 kg/h of alkanes and 10300 kg/h methane (Table ES 1). This includes emissions from the Elk Hills, Asphalto, North and South Belridge, Coles Levee North, Cymric, McKittrick, Kern Front, Kern River, Edison, Mountain View and Lost Hills fields, and is based on measurements from at least one survey in 2019 or 2021.

For the South Coast region, Inglewood was the only oil field included in its entirety in this project, showing an alkane emission of 101 kg/h in June-July 2021. The corresponding methane emissions were 121 kg/h. It should be noted that there are many other strong sources in the South Coast region, such as the Long Beach field (Signal Hill) and refineries (Mellqvist, 2015a, 2015b) and the study area was primarily chosen based on its inclusion in the SNAP5 project.

BTEX and benzene emissions were only measurable above detection limit at some of the fields over the entirety of the oil field NMVOC plume, and thus only reported for a fraction of the oil fields. For field plumes with detectable BTEX and benzene to alkane mass fractions, measurements showed fractions on the order of 5% and 0.6-1.5%, respectively. For the most part, measurable fields (e.g. Lost Hills, Kern River, Inglewood) had processing facilities near the fenceline with detectable BTEX and benzene emissions.

Table ES 1. Summary of results from the 2019 and 2021 measurement surveys for Oil & Gas fields. Note: only oil fields with sufficient statistics (>3 valid measurements) are presented here. BDL – **concentration** below detection limit. NM – not measured. Note that individual field measurements and combined field measurements of emissions and concentration mass fractions may differ in time and number of measurements and therefore may not add up exactly.

Region	Oil & Gas field, survey year	Alkanes [kg/h]	BTEX [kg/h]	Benzene [kg/h]	CH ₄ [kg/h]
SJV	Lost Hills, 2019	522	BDL	BDL	224
	Lost Hills 2021	452	22	6.7	453
	Cymric & McKittrick, 2019	1377	BDL	BDL	2433
	Cymric & McKittrick, 2021	1209	BDL	BDL	2184
	Cymric & McKittrick & Belridge, 2019	2968	BDL	BDL	NM
	Cymric 2021	841	BDL	BDL	819
	McKittrick, 2021	242	BDL	BDL	1749
	Elk Hills, 2021	2246	101	BDL	4432
	Coles Levee - North, 2021	226	BDL	BDL	98
	Kern Front, 2021	143	BDL	BDL	501
	Kern River, 2021	243	11	1.5	714
	Kern Front & Kern River, 2021	385	18	2.4	1133
	Edison & Mountain View, 2021	112	BDL	BDL	104
South Coast	Inglewood, 2021	101	16	7.7	121

A few selected facilities that were accessible by road (to within a few hundred meters of the source) and showed evidence of emissions that could be isolated in measurements and were analyzed in more detail as area sources, Table ES 2. In the Buena Vista field, a site located just north of the Midway Rd and Taft Highway crossing showed recurrent emissions, with large variability. On average alkane emissions here were 153 kg/h. Corresponding emissions of methane, BTEX and benzene were 248 kg/h, 4.0 kg/h and 2.6 kg/h, respectively.

A site located within the Asphalto field, just north of Skyline Rd, was measured to have alkane emissions of 13 kg/h and methane emissions of 3.5 kg/h.

The Kern Oil refinery site is located at the western border of the Mountain View field, just north of Lamont. Emissions from the main refinery area as well as a tank farm to the east of the refinery were measured on multiple days, showing overall alkane emissions of 88 kg/h. Methane, BTEX and benzene emissions were 22 kg/h, 6.6 kg/h and 1.2 kg/h, respectively.

Four well sites, part of the Las Cienegas field in the South Coast region, were measured in June-July 2021 showing alkane emissions on the order of 6 kg/h in total. The Honor Rancho and Playa Del Rey gas storage facilities showed emissions of about 25 kg/h of alkanes all together. Corresponding methane emissions were 6 kg/h from the four Las Cienegas well sites and 107 kg/h from the Honor Rancho and Playa Del Rey gas storage sites.

Table ES 2. Summary of results from the 2019 and 2021 measurement surveys for Refineries, Processing and Well Sites. Note: only sites with sufficient statistics (>3 valid measurements) are presented here. BDL – **concentration** below detection limit.

Region	Site, survey year	Alkanes [kg/h]	BTEX [kg/h]	Benzene [kg/h]	CH ₄ [kg/h]
SJV	Lost Hills - Processing 1, 2019	54	2.0	0.2	18
	Lost Hills - Processing 1, 2021	58	1.6	0.3	41
	Kern Oil Refinery - Main Area, 2021	75	6.3	1.0	19
	Kern Oil Refinery - East Tank Park, 2021	13	0.3	0.2	2.9
	Buena Vista - Processing Site, 2021	153	4.0	2.6	248
	Asphalto - Facility Skyline Rd, 2021	13	0.5	0.1	3.5
South Coast	Las Cienegas - St. James Lease, 2021	0.5	0.03	BDL	0.7
	Las Cienegas - Jefferson, 2021	2.2	0.11	0.05	2.9
	Las Cienegas - Murphy, 2021	3.3	0.30	BDL	2.2
	Playa Del Rey - Gas Storage, 2021	12	0.80	0.22	15
	Honor Rancho - Gas Storage, 2021	13	0.45	0.30	92

In both the October 2019 and October 2021 surveys, a larger facility within the southern part of the Lost Hills field (Processing 1 in Table ES 2) was measured to have alkane emissions of 54 kg/h and 58 kg/h, respectively. Corresponding methane emissions here were 18 kg/h in 2019 and 41 kg/h in 2021. The BTEX emissions were measured in the range 1.6-2.0 kg/h both survey years and correspond to 0.2-0.3 kg/h benzene emissions.

In-field measurements at the Lost Hills oil field in October 2019 were screened into sub-sections of the field to identify specific sectors and facilities that had higher emissions relative to others. Sector measurements by SOF averaged alkane emissions from 100-200 well heads, to yield mean specific wellhead emission rates of 0.06-0.35 kg/h with the higher end estimate correlated with a sector that contained more production/treatment facilities. Complementary measurements of individual well units showed emissions in the 0.02 – 0.66 kg/h range. Normalizing the overall Lost Hill field emissions of 452 kg/h of alkanes

and 453 kg/h of methane to the number of active wells only (2397, October 2021) would give a specific average wellhead emission rate of 0.19 kg/h/wellhead each for alkanes and methane.

To put observed VOC emissions in context, another CARB study applying the same methodology (Mellqvist, 2021) showed alkane emissions from 5 refineries in the Bay area to be in the 140-330 kg/h range. Corresponding emission range for 6 South Coast refineries were 70-270 kg/h (Mellqvist, 2015a).

Dispersion modeling and plume tracing

Modeled dispersion results were validated with wind and alkane column measurements. Column measurements showed good reproducibility in terms of shape and integrated concentration. Both modeling and measurements confirmed that under strong daytime convective conditions, concentration dispersion occurred rapidly. Nighttime simulations were dominated by shallow inversion layers and minimal plume dispersion. This allowed modeled plume concentrations to continue for several kilometers without decreasing to less than half of initial concentrations. Compared to the simulation, evening plume tracing observations showed a more rapid initial decrease near the facility but also revealed occasions with transport of plumes over several kilometers.

Though not a target of the distance decay measurements, methane was also examined for plume tracing and dispersion purposes, however, the multitude of methane sources (industry, production, residential) hindered interpretation of methane plume decay over longer distances, especially for methane measurements in residential areas.

Concentration monitoring in communities

Concentration mapping was conducted in several communities in all three surveys October 2019 to October 2021. For San Joaquin Valley, the community areas are in Lost Hills, McKittrick, Derby Acres, Taft, Oildale (Bakersfield), Fuller Acres (Mountain View) and Arvin. In the South Coast region the community in proximity to the Inglewood oil field (Baldwin Hills) was monitored for enhanced VOC concentrations, as well as communities near four well sites within the Las Cienegas field in Los Angeles county.

Repeated concentration mapping on multiple days in the Lost Hills residential area showed enhanced alkane concentrations in the range from 200 to above 400 $\mu\text{g}/\text{m}^3$ during evenings when the wind direction transported emissions from the Lost Hills field. Corresponding BTEX enhancement was 2.5-7.5 ppb on average and benzene less than 1 ppb on average in the plume. Concentration mapping around Oildale in Bakersfield showed BTEX concentrations of 5-7.5 ppb about 800 m away from the nearest oil and gas source, and above 10 ppb closer by (200 – 400 m depending on exact source location). Benzene was on average 1 – 2 ppb for the nearer measurements. Mobile concentration mapping in Arvin detected a source in the western part of town, with alkane concentrations up to 400 $\mu\text{g}/\text{m}^3$ and above in the immediate nearby community (within 200 m) with corresponding BTEX enhancement of 2.5 – 5 ppb.

Stationary measurements, lasting 30-90 minutes each, were conducted with the mobile lab at four specific locations around Inglewood oil field and one location in Lost Hills residential area as directed by CARB in relation to the SNAPS program. Winds were blowing from west-south-west in all measurements at Inglewood oil field. The Sentinel Peak Resources site #1 and the

Hillcrest Dr site were the ones where highest concentrations were measured among the four Inglewood locations. Measurements at the Sentinel Peak Resources site #1 on the 26th and 28th of June showed several episodes of correlating alkane, methane and BTEX enhancements likely originating from upwind oil and gas wells and production/treatment facilities. Alkane peaks up to 40 ppb were observed, with corresponding BTEX and benzene peaks of about 7 ppb and 4 ppb respectively. Methane and ethane concentrations in the 400 ppb and 40 ppb ranges were observed here, respectively. At the Hillcrest Dr location about 30 ppb alkane enhancement (expressed as butane equivalents) and 4 ppb BTEX were detected. For the Lost Hills location (2019), alkanes reached up to 60 ppb, ethane and methane reached 100 ppb, while corresponding BTEX was about 10 ppb.

CONCLUSIONS

Cumulative emissions for the fields in Kern County in San Joaquin Valley, wholly or partially measured, amount to 6100 kg/h of alkanes and 10300 kg/h methane. This includes emissions from the Elk Hills, Asphalto, Belridge, Coles Levee North, Cymric, McKittrick, Kern Front, Kern River, Edison, Mountain View and Lost Hills fields.

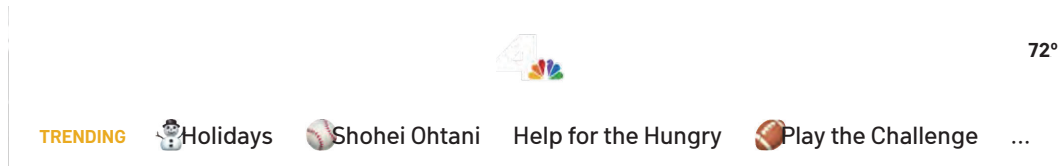
For the South Coast region, Inglewood was the only oil field included in its entirety, showing an alkane emission of 101 kg/h. Corresponding methane emissions were 121 kg/h. The Honor Rancho and Playa Del Rey gas storage facilities showed emissions of about 25 kg/h of alkanes and 107 kg/h of methane when combined.

Both modeling and plume tracing measurements in SJV confirmed that under strong daytime convective conditions, concentration dispersion occurred rapidly downwind the source. Nighttime model simulations showed plume concentrations to continue several kilometers downwind from source. Evening plume tracing measurements showed that concentrations comparably dropped off more rapidly near the source facility but also showed plumes being transported over long distances (kilometers) on numerous occasions.

Recommendations for further work include:

- Monitoring and characterization of emissions at all existing oil and gas fields.
- Performance of complementary measurements close to the sources (in-field) to identify sources and leakage processes to be able to provide recommendations how to abate the emissions.
- Improved emission measurements by complementary drone studies and modelling.
- Further WRF model development and streamlining for SOF and indirect concentration measurements.
- Running WRF model over longer time frames and combining with wind field assessment for SOF measurements.
- Combining mobile community monitoring with stationary 24/7 measurements to study temporal variability as well as spatial.

Residents in Belmont Shore concerned over mysterious smell – NBC L...

<https://www.nbclosangeles.com/news/local/residents-in-belmont-shore-...>CBD-94
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Neighbors in Belmont Shore complain about nauseating smell forcing some to stay indoors. Mekahlo Medina reports for the NBC4 News on July 17, 2023.

A mysterious smell is hovering over parts of Long Beach. Neighbors say it smells like gas while others say oil.

Residents in Belmont Shore concerned over mysterious smell – NBC L...

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One thing for sure, neighbors say it can be a stench.

Likely sources, the oil islands just off the beach, or barges anchored in the bay, or the port. At this point, the city says it's a mystery.

"I walked out and it kind of just hit me," Konrad Schreiber, a resident, said.

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Schreiber says it was a stiff smell that took him aback.

"Even now I can smell a hint of it," Carmen Smith, a Belmont Shores resident, said.

Smith has been smelling the stench for a while. "I'm very sensitive to smells, and it makes me nauseated. So I know the moment we get it."

Local

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2 HOURS AGO

DA exonerates 2 men wrongfully convicted in separate murders in Whittier and Culver City



4 HOURS AGO

LA County will lay to rest unclaimed dead from 2020

Neighbors on First and Glendora say they got it this weekend. They were among the first calls into the fire department when the smell was its strongest.

The fire department checked out the area and weren't able to pinpoint the source of the smell, but

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they don't think it was a gas leak.

Many thought it could come from the port, up the beach, but officials say they don't have any smells or reports of improper venting.

It could be the four oil islands off the coast. Neighbors say there have been smells from there before.

"We do, they call them burps from the oil islands, but this was not that," Barbara Long, a Belmont Shore resident, said. "It smelled different. I don't know if it was a little oily or a little fishy but it just didn't smell like it normally smells."

Neighbors say they have been dealing with this for years.

"About a month ago the gas smell was so bad that I had to shut my doors and I called the city and they said 'oh it's just passing through,'" Smith.

Neighbors think the smells could be coming from passing barges that anchor off the coast.

City officials say it's a possibility. In that case, the smells will pass. But it's been four days so far and it still stinks.

"For me that's concerning. I would like to know the origin of the smell. I know I would like to know what I'm inhaling," Schreiber said.

Certainly they are concerned about their health. The city says there doesn't appear to be a threat, but they are still searching for the source of that mysterious stench.

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Weather Forecast

LOS ANGELES, CA

72°

Sunny

0% Precip

TONIGHT

49°

TOMORROW

78°

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PART 2 OF 3

Fighting for justice in California's polluted places

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ENVIRONMENT

In the shadows of industry: LA County's port communities

BY PABLO UNZUETA FEBRUARY 1, 2022

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Nancy Gonzales, shown near her home in Wilmington, no longer opens her windows because of the noise, dirt and fumes from passing trucks. Heavy-duty trucks moving to and from port facilities emit diesel exhaust, which is a potent carcinogen, and fine particles that can damage lungs. The Marathon refinery also is just down the block.

Lea este artículo en [español](#).

Scarred by industrial landscapes but home to family neighborhoods and parks, Wilmington bears the weight of the [region's high-polluting oil and shipping economy](#).

About 89% Latino, Wilmington is a bustling mecca for vendors selling birria tacos, agua fresca and homemade tortillas on neighborhood streets as an oil refinery looms in the distance. One street merchant peddles uniforms and equipment to workers on their way to the refineries. Across the 710 freeway, young men play soccer in a park against a backdrop of rail lines, a freeway, smokestacks and industrial storage tanks.

Wilmington and two of its neighbors in southwestern Los Angeles County— West Long Beach and Carson — have been designated for clean-air priority under [California's landmark environmental justice law](#). About 300,000 people live there, exposed to tons of smog-forming gases and toxic fumes as well as noxious odors that permeate their homes. [More than half](#) are Latino, and more than a third are Asian American or African American.

The imbalance between the plight of people in these communities and the industries that thrive there is a hallmark of environmental injustice.

Even though they're next door to two prosperous ports that handle \$450 billion in cargo a year, people there face high rates of poverty and unemployment. Some work in high-paying jobs at the ports and refineries, but not everyone benefits from them: One of every five residents in Wilmington lives below the nation's poverty threshold.

Refineries, trucks, rail yards, freeways and the Los Angeles and Long Beach ports are the major sources of emissions there. Nearly 2 million pounds of toxic air contaminants a year are spewed by industrial plants located in these communities.

This is an up-close exploration of these places and people — portraits of daily life in one of the most polluted parts of the state, where the health and wellbeing of residents is shaped by the oil industry and the nation's two busiest ports.



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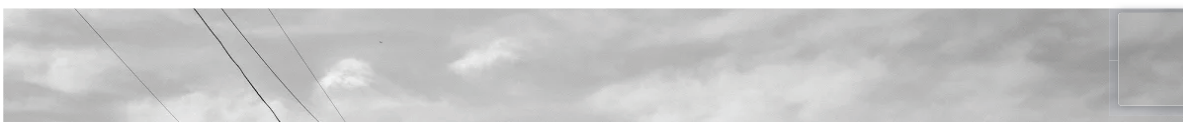
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A fading mural adorns a building in downtown Wilmington containing a Salvadoran restaurant, a pawn shop, a boutique outlet and other businesses.



A homeless man sits at a bus stop next to a gas station in downtown Wilmington. People line up for food outside the popular Mexican restaurant La Michoacana.



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This street in downtown Wilmington leads into one of the region's large oil refineries and the ports. Wilmington, a waterfront part of Los Angeles, was [founded in 1857](#). Wilmington had a booming tourism industry during the early 1900s, but now its economy relies on the ports and oil industry.



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Young athletes play soccer in Long Beach's Drake Park against a backdrop of the 710 freeway, industrial storage tanks and a refinery smokestack. The park is about half a mile from the Port of Long Beach and less than two miles from the Valero refinery in Wilmington.



A mechanic cleans out residue from a heavy-duty truck's engine at a shop on Pacific Coast Highway in Long Beach. He said work fixing a steady stream of industrial trucks in the area is never-ending. Diesel exhaust, largely from trucks, is responsible for about three-quarters of the cancer risk posed by air pollution in the area.



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Javier Beltrán, 66, who lives on Wilmington's Figueroa Place, worked at nearby refineries for much of his life. "It was a good job, obviously, but it also had its bad sides," Beltrán said. "The pollution and everything that exists inside (the refineries), the bad odors and all of the toxins that people are exposed to." Beltrán said he left his refinery job because he noticed a decline in his health. "Before I used to run, and over time I found myself not being able to do it anymore without breathing so heavily."



A roadside vendor sells industrial uniforms to refinery workers along the Pacific Coast Highway in Wilmington, across the street from a gas station. The community's economy revolves around the oil industry and the ports of LA and Long Beach.

Life beneath the smokestacks

Five pollution-spewing oil refineries loom over neighborhoods in Wilmington and Carson. Juan Perez can see

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the Phillips 66 refinery's smokestacks from the home on Figueroa Place where he's lived for 37 years.

Like many residents of Wilmington, Perez's wife has asthma. "Sometimes you can't breathe because the smell is so strong," Perez said.

Dulce Altamirano, who lives on King Avenue nearby, is a short walking distance from the refinery. Her youngest child struggles with irregular breathing, headaches and a persistent runny nose.

"At night when everyone is asleep, it's like they (refineries) open something up and you smell a strong gas," Altamirano said. "When I go outside, I smell it even more, and sometimes it is also a rotten smell."

Teresa Herrera, who also lives on Figueroa Place and works at a nearby McDonald's, doesn't have time to worry about the impacts of the refinery. "I work so much that I don't have time to think about refineries or my health," Herrera said. "But at night, I do notice a strong smell."

The Phillips 66 refinery in Wilmington is one of the largest industrial polluters in the Los Angeles basin, spewing more than 1,500 tons of smog-forming gases and 60 tons of toxic air contaminants in 2020, according to South Coast Air Quality Management District data.

The cancer risk from air toxics, particularly diesel exhaust, is high in Wilmington, Carson and West Long Beach. And residents need emergency room treatment for asthma attacks more frequently than their neighbors in the rest of Los Angeles County.



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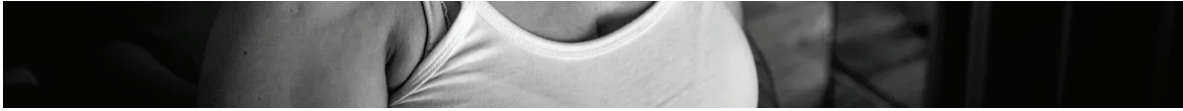
Juan Perez fixes his roof as fumes from the Phillips 66 refinery funnel into the air on Figueroa Place in Wilmington. Perez, who has lived there since 1985, says a “strong smell” has tainted the neighborhood for decades. The 90744 ZIP code including Figueroa Place ranks in the top 2% in the Los Angeles basin for cancer risk from air pollution, mainly from diesel exhaust, which also can trigger asthma attacks. “There are a lot of people here with asthma,” Perez said.



**CBD-94
(con't)**

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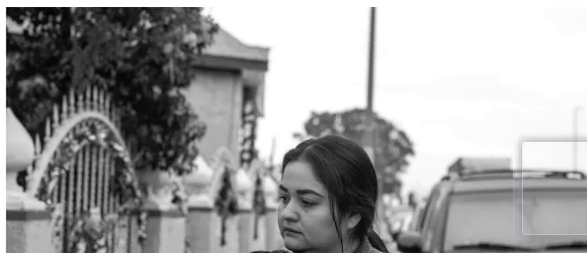


Dulce Altamirano washes dishes after cooking breakfast for her family in Wilmington, including her youngest son, Freddy Herrera, 12. Altamirano, who works at a local nonprofit organization, has lived in the home for 15 years. Herrera said he suffers from headaches and has trouble breathing while playing soccer at school.

**CBD-94
(con't)**



Teresa Herrera sits inside her bedroom, which has been converted into a small housing unit on Figueroa Place in Wilmington. Herrera, who works at McDonald's, has lived near the Phillips 66 refinery for a decade. She said she works so hard making a living that she doesn't have time to think about the effects of pollution on her health.



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Samuel Ortega (left), who has lived in a trailer in Wilmington for two years, said he was an ironworker for many years. He now collects scrap metal and car parts from junkyards to raise money. Esmeralda Acosta (right) hugs her 8-year-old daughter outside their home in Wilmington. The family lives on Drumm Avenue, which has been plagued with noise, dirt and exhaust from trucks traveling to and from the ports. "The kids go out for maybe half an hour, but they get dirty," Acosta said. "We have to keep all of the windows closed day and night with all of the noise."



Jose Ulloa holds inhalers that he uses for asthma emergencies. Ulloa also lives on Wilmington's Drumm Avenue, a street with heavy truck traffic. He said he developed bronchitis a year ago, and "even with this medicine, the cough doesn't go away. I have to be inside so I don't cough so much."

Industrial Landscapes

Trucks, smokestacks, freight train tracks, freeways, oil wells, ships, port industries, chemical facilities and

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<https://calmatters.org/environment/2022/02/environmental-justice-photo...>

warehouses dominate the landscape.

In addition to five oil refineries, residents in these communities live among nine rail yards, miles of freeways, several chemical plants, industrial storage tanks, port facilities and the [third largest oilfield](#) in the contiguous U.S.

CBD-94
(con't)



The Port of Long Beach is the second busiest port in the nation. Cargo containers (top) are transported on rail lines with a backdrop of downtown Long Beach. The region's two giant ports have struggled during the pandemic with a backlog

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of cargo that has caused a surge in emissions. The Dominguez Channel (bottom right) slices through the industrial landscape of Wilmington. A foul odor from the channel, linked to a fire at an industrial warehouse, began in the fall of 2021 and has lingered for months, sickening thousands of residents in Carson and parts of Long Beach.

CBD-94
(con't)



The Valero refinery as seen from Anaheim Street, a main artery that cuts through the industrial landscape of Wilmington.



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The Valero oil refinery (left) in Wilmington is next to the Dominguez Channel. Cargo containers (right) are lined up near Anaheim Street.



Throughout Wilmington, truck repair shops, warehouses and container facilities service the ports and refineries.



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A cyclist rides past the Valero refinery in Wilmington on Anaheim Street. The area's refineries, and their fumes, can be seen from almost every street in town.

**CBD-94
(con't)**

Up Next...

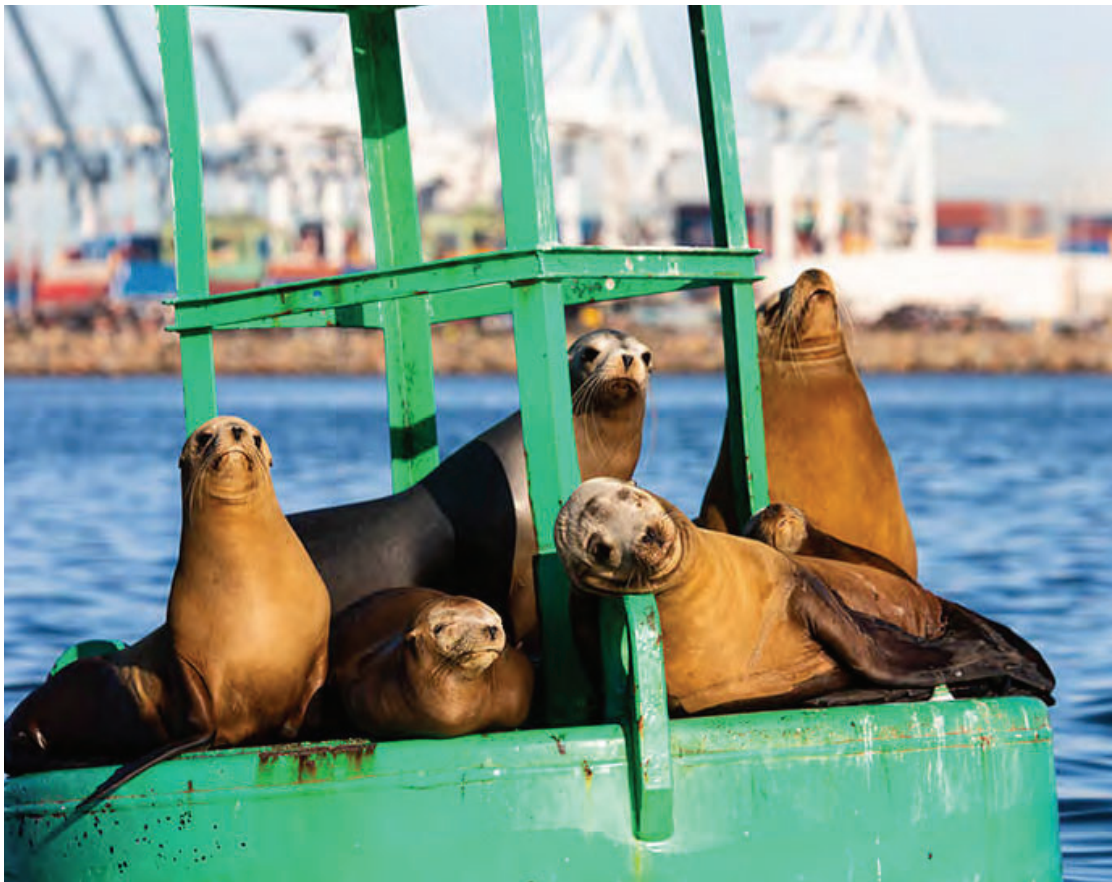
PART 3

A hot spot for polluted air: By the numbers

LEARN ABOUT OUR ENVIRONMENT

The Port of Long Beach has made tremendous improvements to the environment in recent years. Guided by our award-winning Green Port Policy, we are reducing harmful air emissions from port-related operations, improving water quality in the harbor, protecting marine wildlife and implementing environmentally sustainable practices throughout the Port.

View Map

CBD-94
(con't)

THE GREEN PORT

The Port of Long Beach is committed to improving the environment, as demonstrated by its 20-year record of environmental protection programs. The Green Port Policy is an aggressive, comprehensive and coordinated approach to reduce the negative impacts of Port operations. The Green Port Policy, which the Board adopted in January 2005, serves as a guide for decision making and established a framework for environmentally friendly Port operations. The policy's five guiding principles are:

- Protect the community from harmful environmental impacts of Port operations.
- Distinguish the Port as a leader in environmental stewardship and compliance.
- Promote sustainability.
-

- Employ best available technology to avoid or reduce environmental impacts.
- Engage and educate the community.

CBD-94
(con't)

91%

REDUCTION IN DIESEL
PARTICULATE
EMISSIONS

60%

INCREASE IN WILDLIFE
DIVERSITY

90%

REDUCTION IN TRUCK
POLLUTION

SINGAPORE, LONG BEACH, LOS ANGELES PORTS UNVEIL GREEN, DIGITAL SHIPPING CORRIDOR PARTNERSHIP STRATEGY

[View More](#)

PUBLIC INPUT SOUGHT FOR PIER WIND PROJECT AT PORT

The Port of Long Beach is hosting two events to provide information about and gather input for the environmental review for Pier Wind, a proposed 400-acre terminal to facilitate the assembly and deployment of offshore wind turbines.

Environment - Port of Long Beach

<https://polb.com/environment>

[View More](#)

CBD-94
(con't)

CHARGING STATION TO POWER ELECTRIC TRUCKS IN PORT

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CONTACT US

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ASSEMBLY BILL (AB) 617
COMMUNITY AIR INITIATIVES

COMMUNITY EMISSIONS REDUCTION PLAN

WILMINGTON, CARSON,
WEST LONG BEACH

SEPTEMBER 2019
FINAL

SOUTH COAST
AIR QUALITY MANAGEMENT DISTRICT



Chapter 5: Actions to Reduce Community Air Pollution

CBD-94
(con't)**Additional Information:**

- Requirements for 1180 (Refinery Fenceline and Community Air Monitoring): <http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1180.pdf>
- Optical Remote Sensing pilot project: http://www.aqmd.gov/docs/default-source/fenceline_monitoring/project_2/fluxsense_project2_2015_final_report.pdf?sfvrsn=6
- Smart Leak Detection and Repair: <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/appendix-iv-a.pdf>

Action 3: Initiate Rule Development to Amend Rule 1118 – Control of Emissions from Refinery Flares**Course of Action:**

- Compile the number of Rule 1118 flare events at each refinery from 2008 to 2018 and share results with CSC
- Evaluate additional methods and practices to further reduce flaring events (e.g., methods to reduce power failures), including the consideration of existing scoping documents submitted for Rule 1118 requirements
- Develop amendments to Rule 1118 to further reduce flaring, for example, consider additional provisions that require:
 - Lower performance targets and/or increased mitigation fees;
 - Increased capacity of vapor recovery systems to store gases during shutdowns;
 - Header modification for gas diversion with process controls;
 - Back-up power systems for key process units;
 - Remote optical sensing for flare emissions characterization;
 - Lower-emission flaring technologies; and
 - Additional flare minimization plans for all refineries
- Develop an improved system for refineries to submit flare emission data, and display data on South Coast AQMD's webpage for easy public access

Strategies:

- Rules and Regulations

Goal(s):*

- Reduce flaring events and/or emissions by 50%, if feasible
- Contribute to the overall refinery emission reduction goals of a 50% reduction in NOx, VOCs, and SOx by 2030 (approximately 19 tpy NOx, 11 tpy SOx, and 1 tpy VOC)

* Emission reduction goals are subject to future assessments and regulatory analyses.

5b-9

Wilmington, Carson, West Long Beach
Final

September 2019

Chapter 5: Actions to Reduce Community Air Pollution

Estimated Timeline:	
<ul style="list-style-type: none"> By first quarter 2020, begin compiling the number of Rule 1118 flare events at each refinery from 2008 to 2018 First half of 2020, initiate rule development activities 	
Implementing Agency, Organization, Business or Other Entity:	
Name:	Responsibilities:
South Coast AQMD	<ul style="list-style-type: none"> Evaluate the feasibility of requirements to reduce emissions from refinery flaring Conduct rule development
CSC Members	Participate in the South Coast AQMD rule development process (e.g., attending working group meetings, providing comments on draft rule materials)
Refineries and related facilities	Participate in the South Coast AQMD rule development process
Additional Information:	
Requirements for Rule 1118 (Refinery Flaring Activities): http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1118.pdf	

Action 4: Initiate Rule Development to Amend Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities

Course of Action:

- Compile storage tank information (e.g., universe, volume, content, etc.) and share results with CSC
- Based on results of the air monitoring conducted as part of Action #2, evaluate the feasibility of improving leak detection and repair programs using Smart LDAR, such as, infrared cameras and optical remote sensing for earlier detection and quicker repair of leaks from storage tanks at refineries through amendments to Rule 1178
- Develop proposed amendments to Rule 1178 that consider the following requirements to further VOC emission reductions from refinery storage tanks:
 - Increase frequency of visual inspections of seals and gaskets;
 - Require use of enhanced leak detection tools (e.g., forward-looking infrared (FLIR) cameras and optical remote sensing) to further identify more quickly and mitigate leak emissions from storage tanks at refineries;
 - Annual third party audits (to be selected by the South Coast AQMD); and
 - Other leak prevention and emission reduction technologies including domed roofs
- Explore opportunities to incorporate new, advanced tools to modernize and improve LDAR programs for storage tanks at refineries

5b-10

Wilmington, Carson, West Long Beach
Final

September 2019

CBD-94
(con't)

Chapter 5: Actions to Reduce Community Air Pollution

CBD-94
(con't)

Strategies:	
<ul style="list-style-type: none"> Rules and Regulations Air Monitoring Enforcement 	
Goal(s):*	
<ul style="list-style-type: none"> Contribute to the overall 50% VOC emission reduction goal 	
Estimated Timeline:	
<ul style="list-style-type: none"> First quarter of 2021 complete one year (2020) of refinery fenceline air quality monitoring (pursuant to Rule 1180) as well as advanced air monitoring pursuant to Action #2 <ul style="list-style-type: none"> 2020, begin assessment of sources, and identify additional tools for early detection and proactive measures 2021, establish baseline emissions based on air monitoring and initiate amendments to Rule 1178 	
Implementing Agency, Organization, Business or Other Entity:	
Name:	Responsibilities:
South Coast AQMD	<ul style="list-style-type: none"> Evaluate the feasibility of requirements to identify and mitigate fugitive VOC emissions from storage tanks at refineries Conduct rule development
CSC Members	Participate in the South Coast AQMD rule development process (e.g., attending working group meetings, providing comments on draft rule materials, etc.)
Refineries and related facilities	Participate in the South Coast AQMD rule development process
Additional Information:	
Requirements for Rule 1178 (Storage Tanks at Petroleum Facilities): http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1178.pdf	

Action 5: Achieve Further NO_x Emission Reductions from Refinery Equipment Through Adoption of Rule 1109.1 – Refinery Equipment

Course of Action:

- Evaluate the technical feasibility and cost-effectiveness of BARCT to reduce NO_x emissions from refinery equipment including existing boilers, heaters, gas turbines, fluid catalytic cracking units, sulfur recovery units, incinerators, and a coke calciner

* Emission reduction goals are subject to future assessments and regulatory analyses.

5b-11

Wilmington, Carson, West Long Beach
Final

September 2019

**Responses to Comments - Center for Biological Diversity, Coalition for Clean Air, Communities for a Better Environment, Earthjustice, East Yard Communities for Environmental Justice, Long Beach Environmental Alliance, Sierra Club (CBD)
December 15, 2023**

- CBD-1** The comment is an introductory statement expressing the commenter's concerns about the Draft EIR. Responses are provided in Responses to Comment CBD-23 through CBD-93.
- CBD-2** The comment contends that many of the core deficiencies voiced during the 2020 Draft Initial Study and Negative Declaration (IS/ND) public review process remain unaddressed in the EIR. Since the 2020 Draft IS/ND, air quality and greenhouse (GHG) emissions analyses have been substantially revised in the EIR and emission calculations updated in EIR Appendix C, Air Pollutant Emissions Data. Responses to specific comments incorporated by reference are provided in Responses to Comments CBD-23 through CBD-93.
- CBD-3** The comment asserts that the proposed Project would have significant environmental impacts relating to air quality, human health and safety, hazardous materials, disaster preparedness, and cumulative impacts due to the presence of sensitive receptors near the Project site. EIR Section 3.1 (*Air Quality and Health Risk*) identifies the nearest residential receptors and evaluates the Project's potential to expose sensitive receptors to substantial toxic air contaminants (TACs) during construction and operations (Impacts AQ-4 and AQ-9). The EIR analysis found that the Project's construction and operations impact of TACs would not expose sensitive receptors to substantial pollutant concentrations, and health impacts would be far below South Coast Air Quality Management District (SCAQMD) health risk thresholds. Impacts would be less than significant. A full response is provided in Responses to Comment CBD-11 through CBD-21. The comment also asserts the Project would be in contrast with California state objectives to reduce greenhouse gas emissions by 85 percent below 1990 levels by 2045. EIR Section 3.3, Impact GHG-3 discusses whether the proposed Project could introduce a potential conflict with applicable plan, policy, or regulation adopted for the purposes of GHG emissions reductions. A summary of Project compliance with all potentially applicable GHG emissions reductions plans, strategies, policies, and regulations appears in Table 3.3-2 at page 3.3-7. Impacts were determined to be less than significant with no mitigation measure required. Please also refer to CBD-18, CBD-38, CBD-86, and CBD-89.
- CBD-4** The comment contends that the Draft EIR fails to provide sufficient information and analysis. A full response is provided in Responses to Comment CBD-11 through CBD-14.
- CBD-5** The comment contends that the Project Description is vague and misleading. A full response is provided in Response to Comment CBD-12.
- CBD-6** The comment contends that the Draft EIR fails to adequately disclose or analyze the Project's impacts related to the disposal of hazardous materials. A full response is provided in Response to Comment CBD-14.
- CBD-7** The comment contends that the Draft EIR fails to adequately evaluate and mitigate disaster risks. A full response is provided in Response to Comment CBD-15.

- CBD-8** The comment contends that the Draft EIR fails to accurately disclose or evaluate the Project's cumulative impacts. A full response is provided in Response to Comment CBD-16.
- CBD-9** The comment contends that the Project conflicts with state, regional, and local strategies designed to protect communities' health and reduce greenhouse gas emissions. A full response is provided in Response to Comment CBD-20.
- CBD-10** The comment states the sources referenced to footnotes used throughout the comment letter are attached as appendices. No response is necessary.
- CBD-11** This is an introductory paragraph stating that the project description is flawed and the project objectives are narrow. A full response is provided in Response to Comment CBD-12 and CBD-13.
- CBD-12** This comment claims that the project description fails to include the expansion of operations and likely downstream effects of capacity expansion and therefore does not analyze these impacts. This comment references SCAQMD permits issued "in 2021" with an "additional total throughput of 150,000 bbl at the existing tank farm," with a footnote to SCAQMD analyses from early 2020. These permits were requested to be cancelled by the applicant in 2020. The EIR includes an updated Draft Engineering Evaluation from June 9, 2021, in Attachment 2 to EIR Appendix C, Air Pollutant Emissions Data, based on applications filed to SCAQMD in February 2021. No SCAQMD permits have been issued at this point for the proposed Project that is the subject of this EIR. As stated in EIR Section ES.3 (Summary Description of the Proposed Project), Ribost would obtain new Permits to Construct and Permits to Operate from SCAQMD for each of the two new storage tanks. The comment contends that Ribost facility's "actual throughput and throughput capacity will increase if the Project is approved." As outlined in EIR Section 1.5.2 (Project Operation and Maintenance) 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 customers 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. Permitted throughput limits are strictly enforced by SCAQMD.
- CBD-13** The comment claims the project objectives are too narrow to allow consideration of a reasonable range of alternative. Per CEQA Guidelines Section 15124(b), a statement of objectives sought by a proposed project shall include the underlying purpose of the project and may discuss project benefits. As such, the Project objectives are appropriately identified and discussed in the EIR. As described in EIR Section 1.6.2 (*Alternatives Considered but Not Carried Forward for Detailed Analysis*) at page 1-14, a reasonable range of alternatives were identified for the Project site, as well as one alternative that would construct the proposed Project offsite. These were eliminated from further analysis due to infeasibility and inability to meet the basic Project objectives. As described in EIR Section 5.3 (*Environmentally Superior Alternative*) at page 5-9, the Single Tank Alternative, constructing a single 25,000 bbl tank, was carried forward for further analysis as it would reduce potential impacts essentially by half. While the Single Tank Alternative was determined to be environmentally superior to the Proposed Project, it does not provide for enough of an efficiency improvement for Ribost to conduct business and severely limits opportunities to

lease tanks. It should be noted that there are no significant impacts associated with the construction and operation of the proposed Project even if incrementally higher than the Single Tank Alternative.

In addition, the comment claims the 2020 Draft IS/ND violated CEQA procedural requirements because it was issued after permits previously issued by the SCAQMD in January 2020. These SCAQMD permits were requested to be cancelled by the applicant in 2020. As described in the SCAQMD evaluation attached in the EIR, Appendix C (SCAQMD, 2021a), Ribost submitted new applications for a permit to construct/operate for the two new proposed tanks. The EIR clearly shows that Ribost would need to obtain new Permits to Construct and Permits to Operate from SCAQMD (EIR p. ES-3). The new permits to construct will not be issued by the SCAQMD until after the EIR is adopted, the Project is approved, and a Harbor Development Permit is issued by the Board of Harbor Commissioners. See Response to Comment CBD-24.

CBD-14 The comment contends that the Draft EIR fails to disclose or mitigate the Project's hazardous materials impacts, including those associated with sludge waste, and that the Draft EIR does not discuss the existing treatment load at permitted treatment, storage, and disposal facilities (TSDFs) such as US Ecology – Vernon. As described in EIR Section 1.4.2 (*Project Operation and Maintenance*), sludge tank bottom quantities are disposed of at TSDFs, which vary depending on the type of treatment required. EIR Section 3.4.1.2 (*Hazards and Hazardous Materials Setting*) discloses the anticipated destinations of the sludge tank bottom quantities. Regarding existing treatment loads at TSDFs, Patriot Wastewater – Bakersfield is estimated to process approximately 12 million gallons of sludge per year; Crosby & Overton, Inc., has a capacity of approximately 43,750 gallons per day of hazardous waste (Envirostor, 2024a); DeMenno/Kerdoon – Compton, California (now World Oil Recycling) has a maximum tank storage capacity of over 5.2 million gallons (Envirostor, 2024b); and US Ecology – Beatty, Nevada has a storage capacity of 1.5 million gallons and treats approximately 650,000 gallons per day (State of Nevada, 2022). The combined sludge tank bottom quantities for the new tanks are estimated to be approximately 1,500-bbl (47,250 gallons) every 10 years. Thus, the capacities at the TSDF are adequate to accommodate the sludge from the two new tanks. Vacuum trucks are typically hired to remove sludge tank bottom quantities as part of regular maintenance (see EIR Section 3.1 [Air Quality and Health Risk] Impact AQ-7). All TSDFs are required to handle waste in accordance with local, state, and federal regulations, such as the Comprehensive Environmental Response, Compensation, and Liability Act, and are required to ensure they have the adequate capacity for any hazardous waste they may receive. Compliance with all applicable regulatory standards helps to ensure that there will be no significant environmental impacts related to the processing of the sludge.

CBD-15 The comment asserts that the Draft EIR “fails to adequately evaluate flooding, tsunami, and climate risk” and questions the existing containment wall's ability to adequately account for the potential flooding of a multi-tank failure and sea-level rise impacts. EIR Section 3.5.6.1 (*Proposed Project*) at page 3.5-17, describes the existing containment wall as varying between approximately 12.5 to 13 feet in height that tapers from approximately 1.5 feet wide at the base to 1 foot wide at the top, with 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 to the wall to a depth of approximately 3 feet towards

the center of the facility. The existing containment wall and its footings form a large “L” shape that is continuous surrounding the site, which is designed to hold the volume of the largest tank on site (90,000 barrels) plus a 100-year storm surge event, which would prevent the wall from falling over in the event of a spill. Following implementation of the proposed Project, the existing containment wall would provide the same level of protection as it does for the existing number of tanks in the event of flooding, a tsunami, or a seiche. As discussed in EIR Section 3.5, the risks of tsunamis at the Project site are extremely low and risks are expected to be less than significant. While there would be a risk of inundation at the Project site during flood conditions in combination with potential future sea-level rise, the existing containment wall would protect assets from a projected sea-level rise up to 4-feet, as the containment wall is designed to protect from a 100-year storm event. In addition, the presence of air-driven pumps would divert water from the site should flooding occur during a potential high-end, medium-high risk sea-level rise scenario combined with a 100-year storm event.

The existing design basis of the containment wall includes a reasonable worst-case scenario of failure of the largest tank (94,000 bbl) plus a 100-year storm event based on the US Environmental Protection Agency’s (USEPA) Worst Case Discharge scenario, as required by the USEPA under 40 Code of Federal Regulations 112, Appendix D. The facility’s USEPA Worst Case Discharge is 89,884 bbl, which is based on the storage volume of the largest tank (94,000 bbl). The existing containment wall was designed to hold 90,000 bbl plus a 100-year storm event. Therefore, the existing containment wall is consistent with USEPA Worst Case Discharge regulations, as it would sufficiently contain the USEPA Worst Case Discharge volume.

Under current operations, containment walls are visually inspected four times daily to ensure the walls are sufficiently impervious, intact, and sized properly for the Spill Prevention, Control, and Countermeasure Plan. All operations would be halted during a major earthquake or other major natural disaster. Operations cannot restart until the entire facility is visually checked for evidence of damage or shifting to equipment, tanks, and containment, evidence of leaks or oil sloshing out of tanks, verification that floating roofs are not damaged or have sunken. Management would be consulted before resuming any operations after a major natural disaster. These protocols would continue to be followed during operation of the proposed Project. The likelihood of a multi-tank failure releasing all the contents of the tanks located at the facility is highly unlikely.

If water were to breach the containment wall, the two existing air driven pumps are adjustable and can pump approximately 85 to 130 barrels per hour. Water would be diverted over the containment wall and into the sump at the truck loading rack and then processed through the on-site Wastewater Treatment Plant (Impact HWQ-1). In an unlikely extreme scenario, additional pumps can be provided by Ribost’s Oil Spill Response Organization, Lunday-Thagard Refinery (World Oil Refining), or DeMenno-Kerdoon (World Oil Recycling) to sufficiently divert water during a 100-year storm event.

CBD-16 The comment asserts that the Draft EIR “minimizes or dismisses” the Project’s cumulative impacts and requests the radius for the EIR’s cumulative impact analysis be expanded to include the entire area designated by the Community Emissions Reduction Plan (CERP). As discussed in Section 3.1.6 (*Cumulative Impacts*), the EIR recognizes that the existing regional and localized cumulative air quality impact

is significant, and any activity that concurrently occurs near the proposed Project's construction within the South Coast Air Basin (SCAB) would contribute to regional cumulative impacts. In the regional and localized contexts, the Project's incremental impacts regarding criteria air pollutant emissions would be limited because projects that do not exceed the project-specific significance thresholds are considered by the SCAQMD to cause effects that are not cumulatively considerable. Localized impacts of criteria air pollutants and TACs would not exceed SCAQMD localized significance thresholds (LSTs) or SCAQMD significant thresholds for TACs; as such, these impacts would not be cumulatively considerable. Expanding the geographic extent of the localized cumulative impact evaluation to include the full CERP area would not change the significance thresholds or the project-specific effects in relation to those thresholds. As discussed in Section 3.1.6.1 at page 3.1-30, the regional air quality cumulative impacts analysis considers the SCAB as the geographic context. The SCAB consists of urbanized areas of Los Angeles, Riverside, San Bernardino, and Orange Counties (approximately 6,000 square miles), and covers a larger area than the CERP.

CBD-17 The comment references data from the California Office of Environmental Health Hazard Assessment's CalEnviroScreen 4.0 (CES) tool. The air quality analysis in the EIR uses the USEPA tool, EJScreen, instead of CES because, although both resources identify vulnerable communities and provide similar information, EJScreen creates separate "EJ indexes" for each environmental indicator by combining environmental condition data with demographic information. The EIR data from EJScreen may be used in conjunction with CES to understand the local conditions and EJ issues specific to the local area.

The environmental setting of the air quality analysis at page 3.1-1 discloses the demographic data for the area surrounding the Project site. Including additional information from CES would not change the Project emissions estimates, the significance thresholds, or the results of the health risk evaluation, which are derived using a conservative methodology. The analysis also quantifies under Impact AQ-9 (see also Tables 3.1-9 and 3.1-12) the Project's contribution to cumulative health risks in terms of the acute and chronic health hazards and maximum incremental cancer risk for the sensitive receptors identified by the comment. The total maximum incremental cancer risk during construction and operation, for the maximum residential receptor, would be fewer than 1.5 in one million, which is well below the significance level of greater than or equal to 10 in one million.

CBD-18 The comment states that the determination that the Project's contribution to regional criteria-pollutant emissions is not significant because the Project's construction and operations would not exceed SCAQMD significance thresholds is invalid because the geographic radius does not include the entire CERP area. Including the entire CERP area would not change the quantification of Project-related emissions or the thresholds against which they are compared. The air quality analysis in the EIR quantifies all Project-related emissions from on-site and off-site activity including mobile sources that would emit farther than one mile from the site. In the LST comparison, the analysis conservatively assumes that these on-site and off-site emissions could be concentrated at the Project site. Project-related effects of off-site emissions that are further than one mile from the site would be indistinguishable from background conditions, although the EIR fully includes these emissions in the comparison with the thresholds for the localized cumulative impact evaluation.

The analysis relies upon the thresholds of significance as they are recommended by the SCAQMD. The SCAQMD originally developed the LST methodology in response to EJ initiatives, and the methodology takes into consideration the cumulative background concentrations when defining the regional and localized thresholds (see SCAQMD 2003 Strategies to Address Cumulative Impacts; SCAQMD 2008 LST Methodology). The LST levels are developed based on the attainment status and ambient concentrations of that pollutant for each local area in the SCAQMD. By reflecting the baseline local conditions, the thresholds are designed to consider the effects of past, present, and future projects in conjunction with project-specific incremental emissions. Because the thresholds are designed to aid lead agencies in determining when emissions could become cumulatively significant, either regionally or locally, these emissions thresholds are indicators of the levels of emissions necessary to make existing air quality violations worse. Project-level emissions that do not exceed these thresholds would therefore not be cumulatively significant.

The comment also asserts that the Draft EIR underestimated the proposed Project's fugitive emissions, including VOC and benzene. These concerns are addressed in Response to comment CBD-27.

CBD-19 The commenter asserts that the Draft EIR findings that odors generated by the Project would disperse before reaching the nearest sensitive receptors are without evidence. The EIR considers whether the proposed Project could create objectionable odors during construction and operation affecting a substantial number of people. The analysis of odors during construction is qualitative (Impact AQ-5 at page 3.1-17), and a quantitative approach is used for long-term operational odors (Impact AQ-10 at page 3.1-22). Tables show how operation would contribute to downwind concentrations of odorous substances, in EIR Appendix C, Air Pollutant Emissions Data (Att. 1, p. 10 of 12). Both impacts were found to be less than significant.

CBD-20 The comment asserts the project is not consistent with the SCAQMD Air Quality Management Plan, the San Pedro Bay Ports Clean Air Action Plan, California's Climate Change Scoping Plan, the Community Emissions Reductions Plan, the Air Resources Board Scoping Plan and the Port of Long Beach Green Port Policy. The EIR analysis considers these programs and initiatives. While efforts are underway across California to reduce emissions and the consumption of fossil fuels, the regulatory programs adopted through these programs and initiatives ensure that the proposed Project would not conflict with any applicable air quality plan.

The comment contends that the Project would conflict with the Green Port Policy, which applies to Port operations. The comment suggests that the Project effects and the independent activities of Ribost during operation of its facility should be within the scope of the Green Port Policy when they are not. As discussed in Impact GHG-3, the activities allowed in the Harbor Development Permit would be in conformance with the Green Port Policy.

Consistency with air pollutant emissions reduction programs would occur through SCAQMD permit review. For example, new tanks and modified sources at the facility would be subject to SCAQMD requirements during permitting that ensure the air pollutant emissions are accounted for and included in inventories that make up the applicable air quality management plan (AQMP) (Impact AQ-1 at page 3.1-13 and Impact AQ-6 at page 3.1-17). Compliance with the CAAP and CERP are similarly described and evaluated in Impact AQ-1.

Analysis of GHG emissions reductions strategies (Impact GHG-3) includes the ARB Scoping Plan, and the analysis identifies Scoping Plan strategies to reduce the demand for conventional transportation fuels and improve the supplies of low carbon/renewable fuels. While the existing Ribost Terminal and Project features provides storage and bulk loading of petroleum liquids, the proposed Project would not cause any change in the overall demand for or supply of fuels. As a result, strategies to influence the demand or supplies are not directly applicable. Furthermore, all proposed Project activities would use California transportation fuels that are subject to the Low Carbon Fuel Standard which ensures GHG emissions from the use of these fuels are consistent with California's plans for reducing GHG emissions (Impact GHG-3 at page 3.3-2).

CBD-21 The comment states the Draft EIR must be revised and recirculated to address serious substantive and procedural deficiencies. The EIR sufficiently and adequately addresses the comments by providing a complete project description and analysis of environmental impacts. Per CEQA Guidelines Section 15088.5, an EIR is required to be recirculated when significant new information is added to the EIR after public review of the Draft EIR. No new significant environmental impacts, increase in severity of environmental impacts, or other new information has been added; therefore, the EIR is not required to be recirculated.

CBD-22 This comment is the introductory paragraph to Appendix A to CBD's comment letter. Appendix A, labeled as Comments CBD-22 through CBD-68, are attached as Appendix A to this comment letter. This appendix includes comments previously provided on November 20, 2020, pertaining to the 2020 Draft IS/ND. Since then, a new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. Nevertheless, the Port provides responses to Appendix A to this comment letter. Refer to Response to Comment CBD-22 through CBD-68.

This introductory comment asserts that the IS/ND is deficient and that the Port must prepare an EIR. The IS/ND was withdrawn and a new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR and responses to comments received on the 2020 IS/ND. Please see Responses to Comments CBD-23 through CBD-68 addressing the comments in Appendix A.

CBD-23 The comment references technical analysis and other evidence provided as appendices to the prior comment on the IS/ND and asserts issuance of an ND for the Project would be scientifically unsupported and in violation of CEQA. Note that, except for one, these appendices to this prior comment are not included in this CBD comment submission. The one prior appendix that is included is addressed with Comments and Responses to Comments CBD-43 through CBD-68. Since submission of this comment, a new Initial Study, a Draft EIR and this Final EIR have been prepared. Please see Responses to Comments CBD-23 through CBD-68.

CBD-24 The comment claims the 2020 Draft IS/ND violated CEQA procedural requirements because it was issued after permits previously issued by the SCAQMD in January 2020. These SCAQMD permits were requested to be cancelled by the applicant in 2020. As described in the SCAQMD evaluation attached in the EIR, Appendix C

(SCAQMD, 2021a), Ribost submitted new applications for a permit to construct/operate for the two new proposed tanks.

The EIR clearly shows that Ribost would need to obtain new Permits to Construct and Permits to Operate from SCAQMD (EIR p. ES-3). The new permits to construct will not be issued by the SCAQMD until after the EIR 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 (H₂S) emissions and health risk, and
- Benzene emissions and health risk

CBD-25 The comment refers to the 2020 Draft IS/ND and claims that it did not indicate whether the POLB consulted with SCAQMD, a responsible agency, or CDFW, a trustee agency. The IS/ND was withdrawn and a new Initial Study and a Draft EIR were prepared and released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR. State CEQA Guidelines Section 15088 requires lead agencies to evaluate and respond to comments on environmental issues received during the review of a Draft EIR, which this comment does not (the comment refers to the 2020 Draft IS/ND, which was withdrawn). Nevertheless, the Port provides the following.

In parallel with submitting the Application for Harbor Development Permit to the POLB, Ribost submitted an initial Permit to Construct/Permit to Operate Application for the two additional storage tanks at the existing Ribost Terminal to SCAQMD. See response to comment CBD-24 for a detailed response on the initial Permit to Construct/Permit to Operate applications. The POLB reviewed this information, including the air quality analysis methodology used by SCAQMD, as part of the Draft EIR process. On September 1, 2022, the POLB coordinated and consulted with the SCAQMD (a responsible agency under CEQA) as part of the Draft EIR process. Additional consultation with agencies, including CDFW, occurred through the publication and request for agencies, organizations, and the public to review the updated 2023 Initial Study, which occurred between January 30, 2023 and February 28, 2023, and Draft EIR, which occurred between October 25, 2023 and December 11, 2023. Public review of the Draft EIR was extended by four days, extending the public review period to December 15, 2023.

The Notice of Preparation and Notice of Availability of a Draft EIR were 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 15087. Furthermore, as shown in EIR Section 1.8.2 (Permits and Approvals Needed), Table 1-5, 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 via United Postal Service and email as part of the notification process for the Initial Study in 2023. 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 CDFW on the 2023 Initial Study or Draft EIR. A comment letter was received from the SCAQMD during the public comment and review period of the Draft EIR thanking Port staff for collaborating and identifying SCAQMD as a Responsible Agency and stated that they had no additional comments. See Comment and Response to Comment in AQMD-1.

As part of the process in preparing responses to comments on the 2020 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 Ribost completed additional consultation with SCAQMD prior to finalization of the 2020 Draft IS/ND. As a result of this consultation process, Ribost 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).¹ The permit applications submitted in February 2021 are currently under review by the SCAQMD; the EIR includes an updated air quality analysis (SCAQMD, 2021a) in EIR Appendix C.

CBD-26 The comment asserts it was unclear whether the 2020 Draft IS/ND properly identified and consulted with all responsible and trustee agencies. The IS/ND was withdrawn and a new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR. State CEQA Guidelines Section 15088 requires lead agencies to evaluate and respond to comments on environmental issues received during the review of a Draft EIR, which this comment does not (the comment refers to the 2020 Draft IS/ND which was withdrawn). Nevertheless, the Port provides the following.

Please refer to Response to Comment CBD-25 for a discussion of notice to and consultation with responsible and trustee agencies.

CBD-27 The comment asserts the 2020 Draft IS/ND underestimated the proposed Project's VOC and benzene emissions. The IS/ND was withdrawn and a new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR. State CEQA Guidelines Section 15088 requires lead agencies to evaluate and respond to comments on environmental issues received during the review of a Draft EIR, which this comment does not (the comment refers to the 2020 Draft IS/ND which was withdrawn). Nevertheless, the Port provides the following. The EIR provides an updated analysis of VOC emissions, including an updated analysis of incremental cancer risk and health hazards in Impact AQ-9 at page 3.1-21, which is supported by updated SCAQMD analysis (SCAQMD, 2021a).

The comment quoted information from the SCAQMD sponsored "FluxSense study" and Journal of Air & Waste Management (JAWM) article to indicate potential magnitudes of allegedly underestimated emissions. Because the comment refers to

¹ 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".

the 2020 Draft IS/ND, the comment does not take into account the updated discussions and analyses of the EIR.

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. The EIR is supported by an updated engineering review 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, 2021a). The USEPA TANKS model was not used by SCAQMD to estimate emissions for the proposed Project.

Because this and other comments regarding the "Fluxsense study" were made on the 2020 Draft IS/ND, which was withdrawn, and other previous permitting actions subject to SCAQMD review, the POLB provides the following response previously provided by SCAQMD. This response is still considered valid, relevant, and useful, and was originally drafted in relation to prior SCAQMD actions but has been slightly modified in the context of the proposed Project that is the subject of this EIR.

The permits will require that the crude oil storage tanks will be properly maintained and kept in good operating conditions at all times. Additionally, two 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 requires 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, NO₂, and SO₂ 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 USEPA-approved AP-42 Section 7.1 emissions calculations were used by SCAQMD to complete the operations emissions estimate for the proposed Project, as shown in EIR Appendix C (SCAQMD, 2021a). 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. The EIR provided detailed analysis and substantial evidence in support of the conclusions. This comment predates the EIR analysis. Furthermore, compliance with SCAQMD Rule 463 and Rule 1173 would address future operational issues relating to VOC emissions.

CBD-28 This comment asserts the 2020 Draft IS/ND analysis of VOC localized impacts on sensitive receptors was incomplete and flawed because it used incorrect emissions thresholds and an incomplete health risk assessment completed by SCAQMD that did not evaluate other significant health risks posed by VOC emissions including the formation of ground level ozone. Additionally, this comment claims that the POLB's estimates of the proposed Project's VOC emissions were underestimated in the 2020 Draft IS/ND due to use of an unreliable methodology. The IS/ND was withdrawn and a new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR. State CEQA Guidelines Section 15088 requires lead agencies to evaluate and respond to comments on environmental issues received during the review of a Draft EIR, which this comment does not (the comment refers to the 2020 Draft IS/ND which was withdrawn). Nevertheless, the Port provides the following.

The EIR provides an updated analysis of VOC emissions, including an updated analysis of incremental cancer risk and health hazards in Impact AQ-9 at page 3.1-21, which is supported by updated SCAQMD analysis (SCAQMD, 2021a). Please also see the Responses to Comments CBD-24 and CBD-27.

CBD-29 This comment asserts the 2020 Draft IS/ND did not analyze hydrogen sulfide (H₂S) emissions from the new crude oil tanks and did not evaluate the proposed Project's H₂S emissions impacts. The IS/ND was withdrawn and a new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR. State CEQA Guidelines Section 15088 requires lead agencies to evaluate and respond to comments on environmental issues received during the review of a Draft EIR, which this comment does not (the comment refers to the 2020 Draft IS/ND which was withdrawn). Nevertheless, the Port provides the following. The EIR provides an updated discussion of odors, including H₂S emissions calculations and downwind concentrations in EIR Appendix C, Air Pollutant Emissions Data: Attachment 1 (p. 10 of 12), supported by updated SCAQMD analysis (SCAQMD, 2021a). The proposed Project's H₂S emissions would be less than significant for project-level and cumulative impacts (Impact AQ-5 at page 3.1-17 and Impact AQ-10 at page 3.1-22).

CBD-30 The comment asserts the 2020 Draft IS/ND was unclear on the nature of an anticipated 10 percent increase in truck trips over baseline truck counts. The IS/ND was withdrawn and a new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR. State CEQA Guidelines Section 15088 requires lead agencies to evaluate and respond to comments on environmental issues received during the review of a Draft EIR, which this comment does not (the comment refers to the 2020 Draft IS/ND which was withdrawn). Nevertheless, the Port provides the following. The EIR (p.1-11, beginning at line 30) clarifies how the newly leased tanks may also ship product through the truck loading racks during atypical conditions such as when a pipeline is being serviced, as is currently done with existing leased tanks. This increase in truck trips has been analyzed as a worst-case effect of Project operations and represents an atypical operation condition when, for example, a pipeline is out of service. Pipelines go out of service typically every five years for hydrotesting or inspection. These planned

outages only last for a few days. Unplanned outages occur very rarely. The EIR fully evaluates anticipated truck trips under typical operating conditions of the Project.

CBD-31 This comment asserts that the 2020 Draft IS/ND failed to consider the link between the Project's direct and lifecycle 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. The IS/ND was withdrawn and a new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR. State CEQA Guidelines Section 15088 requires lead agencies to evaluate and respond to comments on environmental issues received during the review of a Draft EIR, which this comment does not (the comment refers to the 2020 Draft IS/ND which was withdrawn). Nevertheless, the Port provides the following.

An analysis of the potential project-specific health impacts from air pollution emissions is required under CEQA. The discussion of air quality and health effects in the EIR uses health protective standards and significance thresholds to assess the worst-case health impacts, including the SCAQMD LSTs 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. The EIR analysis of proposed Project individual and cumulative impacts is designed to be health protective and addresses potential worst-case project impacts and baseline receptor health conditions. Consistent with CEQA guidance for GHG emissions, analysis of the "life-cycle" consequences of a single, individual project is not normally within the scope of an EIR because of a lack of consensus methodologies. As discussed above, Section 3.1 (*Air Quality and Health Risk*) includes a health risk assessment of Project impacts to sensitive receptors with health conditions (Impacts AQ-4 and AQ-9); and impacts were found to be less than significant.

CBD-32 The comment asserts the 2020 Draft IS/ND did not fully address direct and indirect operation VOC emissions or potential emissions from the new pipeline pump, pipeline cleaning, and tank dewatering wastewater treatment VOC emissions. The IS/ND was withdrawn and a new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR. State CEQA Guidelines Section 15088 requires lead agencies to evaluate and respond to comments on environmental issues received during the review of a Draft EIR, which this comment does not (the comment refers to the 2020 Draft IS/ND which was withdrawn). Nevertheless, the Port provides the following.

The POLB, as the lead agency under CEQA, prepared the EIR with an updated analysis. 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. EIR Appendix C includes updated emission calculations to clarify how fugitive components, including pumps, tanks cleaning and degassing during dewatering, and pumping energy use are included in the overall emissions estimates. EIR Section 3.1 (*Air Quality and Health Risk*) Impact AQ-7 also discusses VOC emissions from fugitive leaks.

CBD-33 The comment previously made on the 2020 Draft IS/ND asserts that the analysis of the proposed Project's cumulative impacts was improper and incomplete because it did not consider the operation of the tanks or generation of tank sludge over the Project's lifetime.

Since then, a new Initial Study (2023), Draft EIR, and Final EIR have been prepared. As summarized in EIR Section ES.9 (*Environmental Impacts and Mitigation Measures*), 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 significance 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 Section 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 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.

The comment provided on the 2020 Draft IS/ND 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. The 15,000 bbl estimate is incorrect. The new tanks would generate approximately 7,500 bbl of tank sludge over the course of the 50-year operational life. The EIR has been updated to reflect the accurate number of barrels. EIR Section 3.4 (*Hazards and Hazardous Materials*) describes that sludge tank bottom quantities would be disposed of at a permitted TSDf such as US Ecology waste facility. This waste is regulated by the State of California (non-Resource Conservation and Recovery Act (RCRA) hazardous waste). The waste could be transported to the following TSDFs: Patriot Waste Water, LLC, Crosby & Overton, Inc.; DeMenno/Kerdoon, US Ecology, Beatty, Nevada; and World Oil Recycling (see

EIR Section 3.4.1.2 [Hazards and Hazardous Materials Setting]). Sludge tank bottom quantities are estimated to be approximately 1,500 bbl (63,000 gallons) per tank every 10 years. Over the approximate 50-year lifetime of the proposed Project, the sludge tank bottom quantities would be equal to 7,500 bbl. The amount of 1,500 bbl of sludge tank bottom quantity that is generated every 10 years accounts for approximately 4.5 percent of the overall capacity of the US Ecology Vernon facility, and other facilities exist that could also accept this material. This amount of sludge tank bottom accounts for a small percentage of the overall capacity of the nearest US Ecology waste facility. Thus, the proposed Project's contribution to cumulative impacts is determined to be less than significant.

CBD-34 The comment previously provided on the 2020 IS/ND asserts that the 2020 Draft IS/ND failed to consider the proposed Project's cumulative impacts in the context of the existing operations at the Ribost Terminal. As explained in Response to Comment CBD-33, 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. Please also refer to Response to Comment CBD-18. The cumulative analysis relies upon the thresholds of significance as they are recommended by the SCAQMD. The SCAQMD takes into consideration the cumulative background concentrations when defining the regional and localized thresholds (see SCAQMD 2003 Strategies to Address Cumulative Impacts; SCAQMD 2008 LST Methodology). Project-level emissions that do not exceed these thresholds would therefore not be cumulatively significant. The analysis in the EIR found no significant impacts. Therefore, the analysis in the EIR regarding cumulative impacts properly concluded that no significant adverse cumulative impacts would be expected as a result of the proposed Project.

CBD-35 The comment asserts that the 2020 Draft IS/ND failed to consider closely related refining operations in the region as part of the cumulative impact analysis. Please see Response to Comment CBD-33. 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 a proposed project's incremental effects are cumulatively considerable. As described in EIR Section 2.1 (*Related Projects Contributing to Cumulative Effects*) of the EIR, per CEQA Guidelines Section 15130 et seq., the analysis of cumulative impacts identified projects that have recently been completed or are reasonably foreseeable and could be constructed or commence operation during the timeframe of activity associated with the proposed Project. As described in Section ES.1 (*Introduction/Background*), the Ribost 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 2020 Draft 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. EIR Section 1.5.2 (*Project Operation and Maintenance*), clarifies that other storage tanks and petroleum refinery operations considered in the analysis include existing, ongoing operations, not new construction projects or major modifications.

CBD-36 The comment asserts the 2020 Draft IS/ND failed to consider the cumulative impacts from hundreds of other petroleum storage tanks projects in the region. The IS/ND was withdrawn and a new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR. State CEQA Guidelines Section 15088 requires lead agencies to evaluate and respond to comments on environmental issues received during the review of a Draft EIR, which this comment does not (the comment refers to the 2020 Draft IS/ND which was withdrawn). Nevertheless, the Port provides the following. The cumulative impact assessment for the EIR was completed in accordance with SCAQMD guidance. See Response to Comment CBD-33 and CBD-72.

While preparing the analysis for the Draft EIR, the POLB coordinated with the SCAQMD in the review of Ribost’s permit applications to ensure that the CEQA impact analysis complies with all SCAQMD methods, guidance, and requirements necessary for the SCAQMD to issue the air permits for the two proposed tanks. When POLB reviewed this comment on the 2020 Draft IS/ND, POLB acknowledged that a very large number of tank permit applications were submitted between 2010 and 2020 (1,010 total permit applications). POLB’s review of this information indicated very few of these applications were for construction of new petroleum product tanks. Most of these permit applications were 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. Although relatively few permit applications were for new construction, POLB investigated the Reactive Organic Gases (ROG) emissions from the petroleum production and marketing sector in SCAQMD emissions inventory data that form the basis for AQMP attainment planning (Appendix III of SCAQMD, 2022) and found emissions in this sector are declining.

Given the prior and ongoing emissions decreases occurring in this sector and the implementation of air permitting requirements for the proposed tanks consistent with SCAQMD air quality management planning for attainment, the emissions associated with the proposed Project would not be cumulatively considerable, as described in Impact AQ-2 at page 3.1-13 and Impact AQ-7 at page 3.1-18.

Also, please see Responses to Comment CBD-33 and CBD-35.

CBD-37 The comment asserts the 2020 Draft IS/ND’s Project Description failed to properly define the proposed Project because it did not account for the impacts of oil refining activities, which the comment asserts are a reasonably foreseeable consequence of the proposed Project.

A new IS, Draft EIR were prepared in 2023 and a Final EIR was prepared in 2024. EIR Section 1.5.2 (*Project Operation and Maintenance*) describes refinery activities such as those at the Marathon Petroleum Carson Refinery and at terminals such as

Glencore Long Beach Marine Terminal. These activities are separate from activities at the Ribost Terminal because their processing capabilities are limited to site-specific factors such as equipment design capacity, permit conditions, firing rates for combustion sources, and maintenance schedules of the various operating units within the refineries. The proposed Project would not improve or affect the processing capabilities at these refineries, and therefore, refinery processes would not be influenced by the proposed Project's storage capacity. EIR Section 1.5 (*Project Characteristics*) clarifies that the underutilized existing tanks would be made available to lease for storage of fuel oils, such as marine fuels and marine fuel blending components, as is currently done for four of the existing tanks at the facility. This would not affect crude oil throughput. Therefore, the EIR complies with CEQA requirements by accurately describing the proposed Project and explaining how fuel and crude oil throughput at refineries would not increase as a result of the installation of two new storage tanks at the Ribost Terminal.

CBD-38 The comment states that the 2020 Draft IS/ND asserted without evidence that the proposed Project would not allow greater actual crude oil throughput.

As noted in Response to Comment CBD-37, this Project would not increase the throughput capacity for World Oil Refining, which is constrained by many other factors, including air permit throughput, use limits, and site-specific constraints at other refineries. The proposed tanks provide storage only and would not improve or affect the processing capabilities at refineries. The proposed Project would not allow greater actual crude oil throughput.

CBD-39 This comment notes that the 2020 Draft IS/ND failed 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. Additionally, Ribost stores crude oil for World Oil Refining, a separate subsidiary of World Oil Corp. in South Gate, which produces asphalt roofing, paving products, and distillates used in motor fuels, but does not directly produce motor fuels (World Oil Corp, 2021c). 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 EIR Section 1.5.2 (*Project Operation and Maintenance*), as a worst-case assumption for the purposes of impact analysis, truck trips are estimated to increase 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. EIR Section 3.3

(*Greenhouse Gas Emissions*) Impact GHG-2 discusses GHG emissions during Project operations.

Please also see Responses to Comment CBD-31, CBD-33, and CBD-38.

CBD-40 The comment asserts the 2020 Draft IS/ND failed to consider GHG emissions in the context of California's emissions reduction goals, including AB 32, and the crisis of climate change and asserts that the 2020 Draft IS/ND failed to analyze the potentially significant impacts of GHGs during all stages of oil development, including lifecycle and cumulative impacts. The IS/ND was withdrawn and a new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR. State CEQA Guidelines Section 15088 requires lead agencies to evaluate and respond to comments on environmental issues received during the review of a Draft EIR, which this comment does not (the comment refers to the 2020 Draft IS/ND which was withdrawn). Nevertheless, the Port provides the following.

EIR Section 3.3 (*Greenhouse Gas Emissions*) 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 which is well below the significance threshold.

EIR Section 3.3 (*Greenhouse Gas Emissions*) also evaluates the proposed Project in terms of conformance with applicable agency adopted GHG emissions reduction plans, policies, or regulations, including AB 32. The analysis 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. Please see Responses to Comments CBD-31, CBD-32, CBD-37, CBD-38, CBD-39, and CBD-49 in relation to comments regarding life-cycle emissions and speculative analysis.

CBD-41 This comment asserts that the 2020 Draft IS/ND improperly relied on SCAQMD's outdated interim GHG threshold for significance. The IS/ND was withdrawn and a new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR.

The EIR used the appropriate GHG emissions significance threshold, as determined by the local responsible agency, 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, 2023). SCAQMD last revised its air quality significance thresholds list in 2023; therefore, it is not considered outdated for industrial sources.

CBD-42 The comment asserts the 2020 Draft IS/ND fails to provide substantial evidence that earthquakes would not pose a risk of significant environmental impact. The IS/ND was withdrawn and a new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR.

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. EIR Section 3.2 (*Geology and Soils*) clarifies 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. Geotechnical recommendations incorporated as part of the final Project design is not deferred mitigation, as they are incorporated to address safety requirements and building codes.

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 both into and onto a tank. The estimated response time of the Long Beach Fire Department would be less than 10 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. Ribost is not required to comply with California Accidental Release Prevention (CalARP) or any related risk reduction regulations. Ribost would continue to conduct annual trainings and quarterly/annual emergency drills, have evacuation plans, and shutdown procedures.

The 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 EIR Section ES.1 (*Introduction/Background*), 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 existing design basis of the containment wall includes a reasonable worst-case scenario of failure of the largest tank (94,000 bbl) plus a 100-year storm event based on the US Environmental Protection Agency’s (USEPA) Worst Case Discharge scenario, as required by the USEPA under 40 Code of Federal Regulations 112, Appendix D. The new tanks would be located within the containment wall such that any spills would be contained.

CBD-43

The comment asserts that the 2020 Draft IS/ND included 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. Additionally, 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 disadvantaged communities in the general harbor area and does not provide evidence of, or relate to, potential significant environmental impacts from a tsunami. Further, , the IS/ND was withdrawn and a new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR.

EIR Section 3.5 (*Hydrology, Water Quality and Sea-Level Rise*) has updated the discussion previously provided in the 2020 Draft IS/ND.

As discussed in EIR Section 3.5 (*Hydrology, Water Quality and Sea-Level Rise*), the 2007 Tsunami Hazard Assessment for the Port of Los Angeles and Port of Long Beach prepared by Moffat & 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, resulting in limited inundation (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 potentially

substantial impact on the POLB (i.e., worst case scenario tsunami) (Uslu et al., 2010).

The proposed Project would be constructed within the existing 12.5- to 13-foot-high concrete containment wall, which would provide the same level of protection to the new tanks as they do for the existing tanks, and the Project 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 Ribost 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.

In the event of an emergency, Ribost would comply with risk reduction requirements through implementation of existing emergency contingency plans, which include precautions to minimize potential hazards and actions to take. See EIR Section 3.4.1.2 (*Hazards and Hazardous Materials Setting*) for the full list of Ribost's existing emergency contingency plans. Also refer to Response to Comment CBD-40.

CBD-44 The comment previously provided on the 2020 Draft IS/ND states that the POLB must issue an EIR to comply with CEQA and that the Draft IS/ND ignored evidence that suggests that there are significant impacts. Since the certification of the 2020 IS/ND in 2021, the Port released an updated Initial Study and Draft EIR on January 30, 2023 and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR. As summarized in Section 3.5.6 (*Impacts and Mitigation Measures*), the proposed Project would not result in any significant impacts. All impacts were found to be less than significant.

The comment provides an appendix of footnote references used throughout this comment letter. These references were reviewed as they pertained to the specific comments in which they were referenced. As such, individual responses to Appendix sources are not necessary.

CBD-45 The comment states the commenter reviewed the IS/ND and associated Application Summary Report. The comment also refers to the 2020 SCAQMD's Engineering Evaluation. Ribost requested cancellation of the January 2020 permits later that year, and the EIR provides an updated analysis in EIR Appendix C, Air Pollutant Emissions Data. No further response is required.

CBD-46 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 CBD-46 through CBD-65 for specific responses to the stated deficiencies.

CBD-47 The comment asserts the 2020 Draft IS/ND "[made] unsupported conclusions, [failed] to include basic information necessary for public review, and [left] mitigation for later." This is introductory text, with detailed comments following this statement. Please see Responses to Comments CBD-46 through CBD-65.

- CBD-48** This comment is from the Technical Appendix to the Comment Letter that provides additional details to support Comments CBD-27 and CBD-28. The comment asserts that air emissions are underestimated based on certain studies, including the Fluxsense study. Please see Responses to Comments CBD-27 and CBD-28.
- CBD-49** This comment asserts the 2020 Draft IS/ND should have included an assessment of cancer risk from the use of portable equipment used at the site during tank maintenance.
- Portable equipment use does not occur regularly at the Project site, where energy requirements for all ongoing activities are provided by public utility supplied electricity or natural gas. Ribost 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. The EIR provides an updated discussion of maintenance events and emissions quantification in EIR Appendix C, Air Pollutant Emissions Data (p. 8 of 12).
- CBD-50** This comment is from the Technical Appendix to the Comment Letter that provides additional details to support Comment CBD-29 regarding H₂S emissions. Please see the Response to Comment CBD-29.
- CBD-51** The comment is from the Technical Appendix to the Comment Letter that provides additional details to support Comment CBD-43 and asserts that there is a significant risk of increased and severe tsunami hazards due to the proposed Project. Please refer to Response to Comment CBD-43.
- CBD-52** The comment is from the Technical Appendix to the Comment Letter that provides additional details to support Comment CBD-42 and asserts the 2020 Draft IS/ND failed to provide substantial evidence that earthquakes would not pose a risk of significant environmental impact. Please refer to Response to Comment CBD-42 and CBD -27.
- CBD-53** This is a statement summarizing the experience of Julie May, Senior Scientist, CBE. No response is required.
- CBD-54** This comment is from the Technical Appendix to the Comment Letter that provides additional details to support Comment CBD-27 regarding VOC emissions. Please see the response to Comment CBD-27.
- CBD-55** This comment is from the Technical Appendix to the Comment Letter that provides additional details to support Comment CBD-29 regarding H₂S emissions. Please see the response to Comment CBD-29.
- CBD-56** The comment is from the Technical Appendix to the Comment Letter that provides additional details to support Comment CBD-42 and CBD-43 and asserts the proposed Project would result in significant impacts due to a tsunami or earthquake. Please refer to Response to Comment CBD-40 and CBD-41. The significance of the

proposed Project's impacts is determined based on whether the additional tanks would substantially exacerbate existing conditions. As stated in EIR Section 3.5 (*Hydrology, Water Quality and Sea-Level Rise*), the proposed tanks would be constructed and installed within an 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 and operation of the new tanks would not change the level of protection that the containment wall provides. Furthermore, the existing containment wall, designed to withstand a 100-year storm surge event (approximately 7.61 feet), would protect against temporary inundation of up to an additional 4 feet. An inundation of 4.3 feet (based on a medium-high risk sea-level rise projection for the year 2080 based on the lifespan of Project assets) may overtop the containment wall in its lowest areas in the future (2080 – 56 years in the future). Existing air-driven pumps would be used to divert stormwater over the containment wall during a flood event into existing sumps that would drain to the on-site wastewater treatment plant.

CBD-57 The comment is from the Technical Appendix to the Comment Letter that provides additional details to support Comment CBD-42 and asserts that the 2020 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 CBD-42.

CBD-58 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 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 Ribost Terminal is not a refinery; rather, refineries which use crude oil lease tanks at the Ribost Terminal). The comment does not state a specific concern or question regarding the sufficiency of the analysis in the EIR released in October 2023. As such, no response is required.

CBD-59 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."

The IS/ND was withdrawn and a new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR. Because the 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 Section 15130. The POLB conducted a thorough review of the proposed Project in the EIR released in October 2023. As summarized in EIR Sections 3.1 (*Air Quality and Health Risk*), 3.2 (*Geology and Soils*), 3.3 (*Greenhouse Gas Emissions*), 3.4 (*Hazards and Hazardous Materials*), and 3.5 (*Hydrology, Water Quality and Sea-Level Rise*), no potentially significant impacts have been identified for the World Oil Tank Installation Project. All impacts were determined to be "Less than Significant" because they would not exceed any Project-specific significant thresholds (see EIR Section ES.9 [Environmental Impacts and Mitigation Measures] and Table ES-2). Furthermore, cumulative impacts were evaluated and discussed for each environmental resource area in EIR Sections 3.1.6, 3.2.6, 3.3.6, 3.4.6, and 3.5.7; none of the Project's impacts were identified as cumulatively considerable as defined by State CEQA Guidelines Section 15130. Therefore, the proposed Project has no potential for generating significant adverse cumulative impacts. Please also see Responses to Comments CBD-29 through CBD-32.

CBD-60

The comment provided on the 2020 Draft IS/ND 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 Ribost 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 Ribost's previously issued permits to construct for the two new tanks in January 2020 by the SCAQMD, as discussed in Response to Comment CBD-12, CBD-13, CBD-24, and CBD-45, since the issuance of the 2020 Draft IS/ND by the POLB, Ribost's permits to construct issued in January 2020 were requested to be cancelled. As a result, in consultation with SCAQMD, Ribost submitted a new permit application for the two proposed tanks in 2021. The POLB has coordinated and consulted with the SCAQMD as part of the EIR process in accordance with CEQA. The Harbor Development Permit will only be issued should the Board of Harbor Commissioners approve the Project and certify the EIR. As a responsible agency for issuance of permits to construct for the proposed Project, the SCAQMD would comply with CEQA by considering the EIR 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 EIR found no significant impacts. As described in Section 3.1 (*Air Quality and Health Risk*), 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 EIR 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 CBD-31 and CBD-33.

CBD-61 The comment asserts the project analysis of many specific cumulative impacts is not adequate, that the VOC and benzene emissions are already cumulatively significant in the area and the Project significantly adds to this cumulative impact. The analysis recognizes the baseline effects of past projects and identifies the regional and localized cumulative air quality impacts as significant (EIR Section 3.1.6.2). Please see Response to Comment CBD-27, CBD-32, and CBD-33.

CBD-62 This comment infers that the proposed Project's H₂S emissions impacts, both odor and health impacts, would be cumulatively significant, and the Project would add to cumulatively considerable impacts relating to the multiple releases of hazardous materials, including H₂S, due to earthquakes. Please see Responses to Comments CBD-29 and CBD-33. Please also refer to EIR Appendix B (Notice of Preparation/Initial Study) which states the Project is likely to experience ground shaking within its lifetime, but the ground improvement system and mat-raft foundation as part of the Project's design for the two new tanks would ensure that impacts from ground shaking would be less than significant.

CBD-63 This comment infers that the proposed Project's nominal increase in diesel truck trips and potential use of portable engines during tank maintenance events would create cumulatively significant health risk impacts. Please see Responses to Comments CBD-33 and CBD-49.

While the proposed Project would cause a small increase in diesel truck trips and any 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, as disclosed in Impact AQ-7 at page 3.1-18, Impact AQ-8 at page 3.1-20, and Impact AQ-9 at page 3.1-21. 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 diesel particulate matter (DPM) emissions during these events would be intermittent and zero the remainder of the time amounting to a negligible quantity in the context of daily average or annual regional DPM emissions and existing ambient air health risk impacts. The EIR discloses the reactive organic compounds likely to occur during cleaning and degassing in Appendix C (p. 8 of 12).

CBD-64 The comment asserts the proposed Project adds significantly to cumulative impacts resulting from fires, earthquakes, and tsunamis. Please refer to Responses to Comments CBD-33 regarding cumulative air quality impacts, CBD-42 for earthquake and fire hazards, and CBD-43 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 at the Ribost Terminal include fire extinguishing equipment, a deluge fire suppression system, and foam fire suppression system on the tanks. As discussed in EIR Section 3.4 (*Hazards and Hazardous Materials*), in the event of a fire, operators are trained to halt all ongoing operations, follow safety protocols, and notify emergency response agencies as necessary. Two Long Beach Fire Department stations are located within 2 miles of the Ribost Terminal. 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.

CBD-65 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 CBD-37.

CBD-66 The comment asserts the proposed Project's GHG emissions are cumulatively significant. Please see Response to Comment CBD-33.

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.

CBD-67 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 2020 IS/ND focused on construction impacts and minimized the significance of operation emissions.
- Compliance with existing regulations do not preclude causing significant emissions.

The IS/ND was withdrawn and a new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR. Please see Response to Comment CBD-33 regarding cumulative impacts associated with the proposed Project.

The proposed Project is located within the 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 EIR Section 3.1 (*Air Quality and Health Risk*), 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 2022.1.1. 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 EIR evaluated criteria pollutant emissions assuming construction year 2024 using the CalEEMod estimated fleet

average (unmitigated) emissions factors. 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 Ribost using the calculations in USEPA AP-42 Section 7.1 (also see Response to Comment CBD-25), as included in EIR Appendix C (SCAQMD, 2021a). The estimated increase in operation on-road criteria and GHG emissions using CalEEMod (version 2022.1.1), and the related increase in loading rack emissions were calculated, and both are presented in EIR Appendix C. The calculation of worst-case operation indirect GHG emissions increase from the use of the new tank pumps is provided in EIR Appendix C (p. 11 of 12). 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 nonattainment 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 EIR Section 3.1 (*Air Quality and Health Risk*), the proposed Project would not exceed project-specific emissions or health risk thresholds. Therefore, the project-level impacts would be less than significant and would not be considered cumulatively significant.

CBD-68 The conclusory comment asserts the proposed Project has the potential to result in significant impacts, and the 2020 Draft IS/ND is inadequate and requires further evaluation. Since then, the Port has released a Draft EIR in 2023 and this Final EIR in 2024 with environmental analyses updated in consideration of public comments received on the 2020 Draft IS/ND and 2023 Initial Study. As summarized in the EIR Executive Summary, the proposed Project would result in either less-than-significant or no impacts, and no mitigation measures are required.

CBD-69 Appendix B, labeled as Comments CBD-69 through CBD-87, includes comments previously provided on October 28, 2021, and November 11, 2021, pertaining to the 2021 Final IS/ND. This comment expresses the undersigned organizations' opposition to the Final IS/ND because they assert it fails to provide adequate review of project impacts and that impacts should be analyzed in an EIR. A new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments

received on the Draft EIR. Please see Responses to Comments CBD-69 through CBD-70.

CBD-70 This comment asserts the Port failed to properly consult with the required agencies, including the California Coastal Commission (CCC) and California Department of Fish and Wildlife (CDFW) in its preparation of the 2020 IS/ND. The comments also states that an EIR must be prepared where experts disagree on the significance of potential impacts.

On January 30, 2023, a Notice of Preparation (NOP) of a Draft Environmental Impact Report and Initial Study was distributed to responsible agencies, trustee agencies, interested parties, and organizations for a 30-day public review period. The NOP was sent to both the CCC and CDFW; one comment letter was received from the CCC during the public comment period, and Port staff met with CCC staff to discuss the submitted comments on July 29, 2021. No comments were received from CDFW.

The CCC submitted another letter on October 26, 2021, where CCC Staff clearly stated that the comments pertain to Chapter 5, specifically the discussion of the Port Master Plan (PMP) and Coastal Act. They have not made the claim that there is an error in the CEQA analysis. Furthermore, the current PMP does not include a requirement to conduct sea level rise or climate change analysis. Nevertheless, the Port did conduct these analyses in the EIR. Please also see response to Comment CBD-23.

CBD-71 This comment asserts the 2021 Final IS/ND defined the Project in an improperly narrow way, preventing meaningful examination of the Project's cumulative impacts. The IS/ND was withdrawn and a new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR. EIR Section 1.5.2 (*Project Operation and Maintenance*) clarifies 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. 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 Ribost 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 EIR 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 at the Ribost Terminal storage facility. See also Response to Comment CBD-11.

CBD-72 This comment asserts the 2021 Final IS/ND failed to investigate and adequately disclose existing conditions to properly understand the significance of this Project's impacts on nearby communities, and the Project would add to the cumulative burden created by 67 storage tanks approved for construction in the region in the past 10 years. The IS/ND was withdrawn and a new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR. See Response to Comment CBD-34 regarding the assessment of cumulative

impacts from other petroleum storage tank projects. Further the EIR describes the existing conditions at the site (see Section 1.2.2 (*Existing Project Site Conditions and Operations*)). The environmental analysis in the EIR uses current conditions as the baseline for determining the environmental impacts. Additionally, State CEQA Guidelines state 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.” Implementation of the proposed Project would result in less-than-significant impacts to all environmental issues areas, including those which may cause adverse effects on humans.

The air quality analysis identifies the Project-related increase in the number of petroleum storage tanks at the site, quantifies the potential emissions increases, and describes the impact in the context of the site within the Port and surrounding land uses. The analysis follows SCAQMD’s guidance regarding cumulative emissions, which 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. 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. A screening HRA prepared as part of the EIR estimated that peak construction and operation emissions would result in health risks well below the SCAQMD health risk CEQA significance thresholds. The screening-level cancer risk for 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. Also see Response to Comment CBD-33.

CBD-73 This comment asserts the 2021 Final IS/ND did not examine the environmental impacts of new uses that the Project would facilitate in the region. It claims the environmental impacts of the new storage tanks cannot be meaningfully separated from the environmental impacts of anticipated leases for those new tanks. The proposed Project would allow Ribost to lease an additional two new tanks to customers, who are unknown at this time. The newly leased tanks would be permitted to store and transport a variety of petroleum products via existing pipeline. The newly leased tanks would continue to primarily ship and receive the same or similar fuel oils through the existing pipelines. As explained in EIR Section 1.5.2 (*Project Operations and Maintenance*), activities at refineries are separate from activities at the Ribost Terminal because 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. See also Response to Comment CBD-37, CBD-38, and CBD-71.

- CBD-74** This comment asserts the 2021 Final IS/ND dismissed recent scientific studies that revealed dangerous underestimations of fugitive emissions from oil storage tanks. The comment references the SCAQMD-sponsored FluxSense Study. The FluxSense Study demonstrated the leak detection capabilities of Optical Remote Sensing (ORS) techniques by taking emission measurements of volatile organic compounds (VOCs), Sulfur Dioxide (SO₂), and Nitrogen Dioxide (NO₂) from six major refineries in the South Coast Air Basin over a limited time period of two and a half months, during which time the study also assessed emissions from a tank farm at a refinery over an eight-day period. The measurements were then compared to reported emissions inventories developed using USEPA AP-42 standard guidance for emissions estimation.
- The comment specifically identifies observed differences in fugitive VOC emissions between measured and inventory estimates, and the FluxSense Study describes this as a general issue for the petroleum industry worldwide. The FluxSense Study identifies a possible path forward would be to conduct ORS monitoring in parallel with continued AP-42 based reporting to guide and verify the efficiency of emission reduction efforts, such as those required by SCAQMD rules and regulations. The SCAQMD has acknowledged that the FluxSense technology 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. See also Response to Comment CBD-25.
- CBD-75** The comment asserts the 2021 Final IS/ND asserted that direct health impacts from ground-level ozone near the Project site would be “negligible”, but stated it lacked methods or procedures to address those impacts. The commenter is referring to the Port’s response to the previous comment from Earthjustice (see Response to Comment CBD-26) that the analysis of VOCs on sensitive receptors is incomplete. The comment misrepresents the treatment of health impacts of ground-level ozone. The analysis recognizes ozone as a baseline health concern throughout the region in the existing conditions. Ozone is formed across the entire region, downwind of VOC sources and sources of nitrogen oxides, over time, and in the presence of sunlight. Accordingly, the analysis quantifies the increase in ozone precursor emissions (including VOC) caused by the Project and finds the quantity of VOC emissions to be less than significant in a regional sense and also for nearby communities. Considering the region’s baseline ozone conditions, the Project’s minor quantity of ozone precursor emissions, and the secondary nature of possible ozone formation far from the Project’s sources, the analysis concludes that the proposed Project would have little potential to change ozone concentrations or ozone-related health risks near the Project site.
- CBD-76** This comment asserts the 2021 Final IS/ND ignored the rule amendments underway at SCAQMD, which the IS/ND wrongly cited as adequate VOC control measures. The commenter recommends that the Port hold the proposed Project in abeyance (temporary disuse or suspension) until the rulemaking has concluded. As noted by the commenter, the rule amendments to SCAQMD Rule 1178 for Storage Tanks at Petroleum Facilities were “underway”, with an estimated date of March 2022 for completion. As shown in EIR Section 3.1.2.3, SCAQMD Rule 1178 was amended in September 2023, and its requirements are not applicable to Ribost Terminal’s existing and proposed new storage tanks. No further response is required.

- CBD-77** This comment asserts the 2021 Final IS/ND used an improper baseline to analyze the Project's impacts and asserts the Port has not shown whether the proposed Project would result in actual increases in oil throughput above current levels, which is the baseline for comparison required by CEQA. The IS/ND was withdrawn and a new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR. The environmental analysis in the EIR uses current conditions as the baseline for determining the environmental impacts (see Section 1.2.2 [Existing Project Site Conditions and Operations]). The EIR also states that although the proposed Project would provide for additional storage capacity, there would be no increase in throughput of the storage facility due to limitations with the physical geometry of the site, physical limitations of the existing pipelines and truck loading racks, and permitted throughput limits, none of which are changing with the addition of the two proposed tanks. The air quality analysis conservatively includes the potential for incremental changes in site emissions from existing truck loading racks and truck transport by proportionally scaling up the 2019 emissions. No other infrastructure improvements are being proposed at the terminal or at World Oil Refining in South Gate. The intent of the proposed Project is to increase the efficiency of terminal operations by realigning storage capacity needs allowing for more existing tanks to be available for lease by customers.
- CBD-78** The comment asserts the 2021 Final IS/ND dismissed the risks that this Project poses in the event of a fire or earthquakes in the area and when there is a multiple tank failure. The IS/ND was withdrawn and a new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR. The EIR includes an evaluation of the potential adverse effects involving rupture of a known earthquake fault, seismic ground shaking or ground failure, including liquefaction (EIR Section 3.2 [Geology and Soils]). Impacts were determined to be less than significant. The proposed Project would be subject to similar levels of impacts as other development projects in Southern California and would not exacerbate seismic-related hazards relative to existing conditions. The tanks would be constructed in accordance with all applicable State and building code requirements—California and City of Long Beach Building Codes, and the Seismic Safety Element of the Long Beach Seismic Safety Element. The proposed Project site is in an industrial area, not an urban residential area or wildland area susceptible to wildfire. As discussed in EIR Section 3.4 (*Hazards and Hazardous Materials*), engineering controls such as fire extinguishing equipment, deluge fire suppression systems, and foam fire suppression systems are installed on all tanks. In addition, the tanks are protected by a containment wall designed to contain the contents of the largest tank plus a 100-year storm event. 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. See also Response to Comment CBD-40 for additional discussion on impacts related to earthquake and fire hazards.
- CBD-79** The comment asserts the 2021 Final IS/ND noted the Project would create 50,000 barrels of hazardous tank sludge over its lifetime and dismissed this impact as insignificant. This comment incorrectly states that the Project would create 50,000 barrels of hazardous tank sludge over its lifetime. The IS/ND was withdrawn and a new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to

all comments received on the Draft EIR. As discussed in EIR Section 3.4 (*Hazards and Hazardous Materials*), the proposed Project's combined sludge tank bottom quantities would be approximately 1,500 barrels (63,000 gallons) every 10 years, which equals approximately 7,500 barrels (315,000 gallons) over the approximate 50-year service life. The US Ecology Vernon Resource Conservation and Recovery Act (RCRA) Part B facility is the closest TSDF to the site and is approximately 17 miles away. The US Ecology Vernon facility's capacity is one million gallons with an additional 400,000-gallon equivalent of container storage, which is adequate for the Project's projected waste production quantity. The amount of 1,500 barrels or 63,000 gallons of sludge tank bottom quantity that is generated every 10 years accounts for approximately 4.5 percent of the overall capacity of the US Ecology Vernon facility every year. The existing US Ecology Vernon facility could accommodate the expected waste generated by the proposed Project, and other facilities exist that could also accept this material. Waste could also be transported to the following TSDFs: Patriot Waste Water, LLC, Crosby & Overton, Inc.; DeMenno/Kerdoon; US Ecology, Beatty, Nevada; and World Oil Recycling (see EIR Section 3.4.1.2, *Hazards and Hazardous Materials Setting*). As discussed in the EIR, the Project's contribution to the TSDF would not generate excessive amount of hazardous waste. As such, the Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Impacts are less than significant, and no mitigation is required.

CBD-80 This comment asserts the Project contravenes the Green Port Policy. The environmental impacts disclosed in the EIR include discussion of potential conflicts with the Green Port Policy (EIR Table 3.3-2 at page 3.3-7) and finds that the BMP's for construction activities established in the Harbor Development Permit would ensure conformance. See also Response to Comment CBD-89 and CBD-93.

This comment urges the Board of Harbor Commissioners to require the Port to produce an EIR and asserts the 2021 Final IS/ND is inadequate. As discussed in Response to Comment CBD-68, the Port released a Draft EIR in 2023 and the Final EIR in 2024 with environmental analyses updated in consideration of public comments received on the 2020 Draft IS/ND, 2021 Final IS/ND, and 2023 Initial Study. As summarized in the EIR Executive Summary, the Project would result in either less-than-significant or no impacts, and no mitigation measures are required.

CBD-81 This comment introduces Comments CBD-81 through CBD-87, which are included in Appendix B to this comment letter, and were previously provided on November 11, 2021 to appeal the Long Beach Board of Harbor Commissioners' approval of the 2021 Final IS/ND. A new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR. The introductory comment also refers to original comments submitted by the commenter on the 2021 Final IS/ND, which contended that an EIR was needed to evaluate potential environmental and public health impacts from the proposed Project. Please see Responses to Comments CBD-62 through CBD-68.

CBD-82 The comment claims the two new tanks would exacerbate environmental and public health problems and accuses the Port and World Oil of misleading the public and Commission by referring to World Oil as a recycling operation. Please refer to Section 1.2 (*Project Background*). World Oil Corp. is the parent company to Ribost and Lunday-Thagard Company dba World Oil Refining (World Oil Refining).

Operations at Ribost Terminal do not involve recycling activities, nor are on-site processing of material proposed. Operations under the proposed Project would continue to involve storage capacity for asphalt blending components, and additional storage would not affect refining operations at World Oil Refining. Please refer to Section 3.1 (*Air Quality and Health Risk*) Impacts AQ-4 and AQ-9 for discussions on the Project's less-than-significant construction and operations impacts related to cancer risk. Refer to Section 3.5 (*Hydrology, Water Quality and Sea-Level Rise*), Impact HWQ-1 for a discussion on the Project's less-than-significant impact related to exacerbating the risk of pollutant release from a flood or tsunami. Refer to Section 3.4 (*Hazards and Hazardous Materials*) Impact HAZ-3 for discussion on the Project's less-than-significant operations impact related to exposing communities to transported sludge waste.

CBD-83 The comment previously provided on the 2021 Final IS/ND claims that the Port failed to properly examine the Project's fugitive VOC emissions. A new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR. The EIR includes updated analyses in light of the comments received on the 2020 Draft IS/ND and 2021 Final IS/ND appeal. EIR Section ES.6 (*Public Involvement*) summarizes the public engagement process, including the Draft IS/ND, Final IS/ND, revised Initial Study (2023), and Draft EIR. Known issues from previously submitted comments on the Draft IS/ND, Final IS/ND, and revised Initial Study are summarized in EIR Section ES.7 (*Areas of Controversy*) and addressed in the EIR analyses.

The "FluxSense" Study referenced by The Coalition in this 2021 comment was prepared by FluxSense Inc. and finalized in 2017. Please refer to Response to Comment CBD-27.

As a result of comments received from The Coalition and others regarding the suitability of the USEPA TANKS 4.0 model that was originally used by the Applicant in advance of the 2020 Draft IS/ND, the analysis was updated in 2021. Additional updates appear in the EIR, which uses the USEPA-approved and recommended guidance for estimation of air pollutants, AP-42 Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, Section 7.1 Organic Liquid Storage Tanks (see EIR Section 3.1.4 [Assessment Methodology]). The revised air emissions estimates are presented in the EIR Section 3.1 (*Air Quality and Health Risk*) Table 3.1-10 at page 3.1-20. All air emissions estimates associated with operation of the Project would be below the SCAQMD significance thresholds and therefore, would be less than significant.

EIR Section 3.1 (*Air Quality and Health Risk*), Impact AQ-9 at page 3.1-21 further explains that the cancer risk analysis from operation of the new tanks was conducted by conservatively using TAC emission rates from gasoline—rather than crude oil—as recommended by the SCAQMD. TACs are defined by the State of California as pollutants which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health (Health and Safety Code Section 39655(a)). According to the SCAQMD, by assuming that gasoline is stored in the tanks, the use of the TAC profile of gasoline for the purposes of the health risk assessment, instead of the TAC profile of crude oil, is a "worst-case" conservative assumption because the true vapor pressure of crude oil is less than that for gasoline. Because Ribost anticipates storing crude oil

and not gasoline in the proposed new tanks, the results of Impact AQ-9 in this EIR reflect a “worst-case scenario” assumption.

This comment also referred to SCAQMD Rule 1178 and requested the Project be held in abeyance until that rulemaking is finished. The EIR as part of the Regulatory Setting (EIR Section 3.1.2.3) and as one of the actions identified in the CERP (EIR p. 3.1-9) that could potentially apply. The EIR shows that Rule 1178 was amended in September 2023, and the requirements of Rule 1178 are not applicable to Ribost Terminal’s existing and proposed new storage tanks. No further response is required.

CBD-84 This comment previously provided on the 2021 Final IS/ND asserted that the Port ignored cumulative impacts of emissions at the Ribost Terminal, “connected refineries,” and nearby storage tanks.

Projects that have impacts all below the SCAQMD significance criteria can be considered to have less-than-significant cumulative air quality impacts. The Project’s construction and operational emission would collectively be well below all SCAQMD emissions significance thresholds. The SCAQMD’s guidance regarding cumulative impact assessment states:

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.²

The incremental effects of the Project would be minor and, therefore not considered to be cumulatively considerable as defined by State CEQA Guidelines.

The Ribost Terminal facility is a petroleum product storage facility, not a refinery. Refining 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 Project would not affect local refinery operations. Please also refer to Response to Comment CBD-35.

The commenter also contends that the data and analysis do not account for the impacts the COVID-19 global pandemic had on data for the emissions in 2020. There is no requirement under CEQA to account for or to evaluate the impacts of the COVID-19 global pandemic on data referenced, used in an analysis for the purpose of determining a project’s impact on the environment, or on a proposed project.

CBD-85 This comment previously provided on the 2021 Final IS/ND asserted that the Port did not adequately consult with the CCC, leaving unresolved questions on storm and flood risks. This Final EIR includes responses to all comments received on the Draft EIR. The comment does not provide any specific factual finding that the Port did not adequately consult with the CCC, nor how the Port’s consultation with CCC is inadequate pursuant to CEQA. Contrary to the commenter’s assertion, the Port met with CCC staff on July 29, 2021 and on August 25, 2021 to discuss their November

² SCAQMD White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution. South Coast Air Quality Management District. August 2003.

20, 2020³ letter. In an August 27, 2021 letter from CCC staff to the Port regarding the Draft Port Master Plan Update, CCC staff thanked Port staff for “providing information regarding this project to our staff early in the process and allowing us time to review the details and provide feedback”.⁴ A new Initial Study and a Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. The Port met with CCC staff on September 6, 2022 to discuss the proposed Project ahead of the release of the NOP/IS for the EIR. In addition, the CCC submitted a letter dated December 27, 2023, acknowledging the opportunity to review and provide comments on the Draft EIR. CCC staff note that their comments address the Coastal Act and PMP Consistency Analysis included in the EIR. CCC staff also acknowledge the significant coordination that has taken place between the Port and CCC staff relating to the proposed Project. Refer to Comment and Response to Comment CCC-1 in the ASR.

While CEQA requires the evaluation of a project’s foreseeable incremental contribution of the project’s greenhouse gas emissions to climate change, CEQA does not require an evaluation of the localized effects of environmental impacts, such as sea level rise, on a project. Nevertheless, EIR Section 3.5 (*Hydrology, Water Quality and Sea-Level Rise*) incorporates a discussion of the potential effect of sea level rise and inundation, which is caused by global climate change, on the Project.

The Coalition also references the CCC staff letter submitted to the Port on October 26, 2021, two days prior to the Board’s consideration of the Final IS/ND⁵. That letter clearly states that CCC staff was not providing any comments pertaining to the CEQA analysis, but rather, provided comments to “address the Coastal Act and PMP (Port Master Plan) Consistency Analyses included in the IS/ND that begin on page 5-1 of the document.” The CCC staff is referring to the Application Summary Report prepared in conjunction with the environmental analyses prepared in the IS/ND for issuance of a Harbor Development Permit. In their October 26, 2021 letter, the CCC staff comments allege that there is no evidence that the Project is located or designed in such a way to avoid adverse impacts on the environment and port-adjacent communities where sea level and groundwater levels are higher and storm event are more frequent and severe. As previously discussed, this is incorrect as the Final IS/ND clearly includes discussion of the potential effect of sea level rise and inundation on the Project using “best available science” data provided in the Ocean Protection Council’s 2018 State of California Sea Level Rise Guidance, as requested by CCC staff.

On October 28, 2021, Port staff provided detailed oral responses to the CCC staff’s October 26, 2021 letter during the public hearing for the Board of Harbor Commissioner’s consideration of the IS/ND and Harbor Development Permit, followed by transmittal of the Port’s written responses to the CCC staff via electronic mail on November 10, 2021.

CBD-86 This comment previously provided on the 2021 Final IS/ND asserted that the Port did not properly address risks of disasters from earthquakes, fires, and tsunamis.

³ Email from Dani Ziff, Coastal Planner, California Coastal Commission to Port of Long Beach Environmental Planning <CEQA@polb.com>. Subject: World Oil Tank Installation Project. November 20, 2020.

⁴ Letter from Dani Ziff, Coastal Planner, California Coastal Commission to Tony Chan, PhD, Master Planning, Port of Long Beach. Subject: Draft Port Master Plan Update – CCC Staff Comments. August 27, 2021.

⁵ Letter from Dani Ziff, Coastal Planner, California Coastal Commission to Port of Long Beach Commissioners and Staff. RE: World Oil Tank Installation Project Coastal Commission Staff Comments on Final IS/ND. October 26, 2021.

Please refer to Response to Comment CBD-42 for earthquake and fire hazards and CBD-43 for tsunami hazards. The comment also asserts the Project did not properly consider the effects of climate change and sea level rise. Please refer to Responses to Comment CBD-15 and CBD-40.

CBD-87 This comment previously provided on the 2021 Final IS/ND asserted that the Port failed to adequately examine the risk posed by amount of hazardous sludge that the Project would produce. Please refer to Response to Comment CBD-79.

CBD-88 This comment previously provided on the 2021 Final IS/ND asserts the Port failed to address substantial evidence provided by the Coalition and other commenters that the Project would have significant environmental impacts and that CEQA requires the preparation of a full EIR when there is any “fair argument” of significant impacts. A new Initial Study and Draft EIR have been prepared and were released on January 30, 2023, and October 25, 2023, respectively. This Final EIR includes responses to all comments received on the Draft EIR.

The EIR was prepared in full compliance with CEQA, and its conclusions are amply supported by substantial evidence. The EIR specifically included analysis of potential environmental impacts associated with construction and operation of the proposed Project, in consideration of all comments received on the 2020 Draft IS/ND, 2021 Final IS/ND, 2023 Initial Study, and 2023 Draft EIR including those received from The Coalition and CCC staff.

CBD-89 Appendix C provides the comment letter dated February 24, 2023 submitted by Earthjustice on the 2023 Initial Study for the proposed Project. This comment and Comments CBD-90 to CBD-93 were provided to POLB in response to the January 2023 Initial Study that was released as part of the NOP of this EIR. Concerns raised by this comment are reflected in EIR Executive Summary, Section ES.7 (*Areas of Controversy*). Since this comment pertains to the scope of the EIR, prior to preparation of the EIR, this comment does not take into account the updated discussions and analyses of the EIR. The air quality and GHG emissions analyses that appear in the EIR were substantially revised for the EIR and emission calculations were updated, in EIR Appendix C, Air Pollutant Emissions Data.

This comment identifies the concerns of cumulative impacts to the surrounding communities, especially related to air quality, climate change, and consistency of the proposed project with existing plans and policies for reducing emissions. In response to this scoping comment, the analyses in the EIR include: whether net emission increases from construction and operation would be cumulatively considerable (Impacts AQ-2 at page 3.1-13 and AQ-7 at page 3.1-18); whether GHG emissions may have a significant impact on the environment (Impacts GHG-1 at page 3.3-4 and GHG-2 at page 3.3-5); and whether the proposed Project would conflict with an applicable plan, policy, or regulation adopted for reducing GHG emissions (Impact GHG-3 at page 3.3-6).

CBD-90 This comment asserts the Project would not align with the Green Port Policy (2005) and requests analysis of how the proposed Project would advance the Port’s objectives. The environmental impacts disclosed in the EIR include discussion of potential conflicts with the Green Port Policy (EIR Table 3.3-2 at page 3.3-7) and finds that the BMP’s for construction activities established in the Harbor Development Permit would ensure conformance. See also Response to Comment CBD-89.

- CBD-91** This comment refers to the most-recent AQMP (SCAQMD, 2022) and requests analysis of the compatibility of the proposed Project with increasing the deployment of electrification and zero-emissions technologies. The environmental impacts disclosed in the EIR include discussion of potential conflicts with the 2022 AQMP (Impacts AQ-1 at page 3.1-13 and AQ-6 at page 3.1-17), and the EIR finds that compliance with applicable SCAQMD rules and regulations, and air permit conditions, ensures that the proposed Project would not conflict with or obstruct implementation of the AQMP. See also Response to Comment CBD-89.
- CBD-92** This comment refers to the most-recent Climate Change Scoping Plan (CARB, 2022) and requests analysis of the compatibility of the proposed Project with statewide efforts to reduce demand for petroleum and fossil fuels. The environmental impacts disclosed in the EIR include analysis of compliance with Scoping Plan strategies (EIR Table 3.3-2 beginning at page 3.3-7). While efforts are underway across California to reduce emissions and the consumption of fossil fuels, the regulatory programs adopted through these programs and initiatives ensure that the proposed Project would not conflict with plans for GHG reductions. For example, all proposed Project activities would use California transportation fuels that are subject to the Low Carbon Fuel Standard that ensures GHG emissions from the use of these fuels are consistent with California's plans for reducing GHG emissions (Impact GHG-3 at page 3.3-6). See also Response to Comment CBD-89.
- CBD-93** This comment pertains to the scope of the EIR, prior to preparation of the EIR and recommends the Port fully evaluate, disclose, and mitigation the Project's environmental and health impacts. This comment appears in EIR Appendix A, and concerns raised by this comment are reflected in EIR Executive Summary, Section ES.7 (*Areas of Controversy*). See also Response to Comment CBD-89.
- CBD-94** This comment refers to Appendix D, containing sources cited in the commentor's Footnotes of the comment letter dated December 15, 2023. The sources comprise of websites, articles, Plans, studies, and copies of the lapsed 2020 SCAQMD Permit to Construct for the two new tanks, and as such do not constitute a comment. Appendix D sources were reviewed as they pertained to the comments in which they were referenced. As such, individual responses to Appendix D sources are not necessary, as this is similar to an administrative record or references list. Refer also to Comments and Response to Comment CBD-1 through CBD-21.

Comments from Downtown Long Beach Alliance (DLBA)



**DOWNTOWN
LONG BEACH
ALLIANCE**

100 West Broadway, Ste 120
Long Beach, CA 90802
T: 562.436.4259
F: 562.437.7850

December 15, 2023

Port of Long Beach
Board of Harbor Commissioners
415 W. Ocean Blvd
Long Beach, CA 90802

Subject: Letter of Support for World Ribost Terminal Project

Dear Long Beach Harbor Commissioners,

As you know, the Downtown Long Beach Alliance (DLBA) advocates for over 1,500 businesses and 4,000 commercial and residential property owners within our two business improvement districts in Downtown Long Beach (DTLB).

I am writing on behalf of DLBA to express our support for the World Oil Ribost Terminal Project. DLBA is dedicated to serving the tenants, commercial entities, and residential property owners in Long Beach's Downtown and surrounding areas while actively engaging in the management, marketing, security, maintenance, advocacy, and economic and community development. The Ribost Terminal Project Environmental Impact Report outlines less than significant impacts to the environment, while creating much-needed jobs just outside our downtown. We know that these workers will be close enough to patron our businesses and consider DTLB as a home.

We believe more, good-paying jobs near our urban center makes DTLB a more desirable place for people to live near, work and spend their free-time.

We appreciate your attention to this note and to the efforts to bring jobs to the area.

Sincerely,

Austin Metoyer
President and CEO
Downtown Long Beach Alliance

DLBA-1

DLBA-2

DLBA-3

DLBA-4

DOWNTOWNLONGBEACH.ORG

Responses to Comments of Downtown Long Beach Alliance (DLBA)**Austin Metoyer, President and CEO****December 15, 2023**

- DLBA-1** The comment describes the DLBA organization. No response is necessary.
- DLBA-2** The comment expresses support for the World Oil Tank Installation Project. No response is necessary.
- DLBA-3** The comment provides DLBA's mission to serving the tenants, commercial entities, and residential property owners in Long Beach's Downtown and surrounding areas while actively engaging in the management, marketing, security, maintenance, advocacy, and economic and community development. No response is necessary.
- DLBA-4** The commenter states the proposed Project outlines less-than-significant impacts while creating much needed jobs just outside downtown Long Beach. The comment expresses belief that these workers would patron downtown businesses and make downtown Long Beach a more desirable place for people to live near, work, and spend their free time. No response is necessary.

Comments from Long Beach Area Chamber of Commerce (LBACC)

December 15, 2023

Harbor Commissioners
Port of Long Beach
Long Beach CA 90802

Subject: Letter of Support for World Ribost Terminal Project

Dear Harbor Commissioners,

On behalf of the Long Beach Area Chamber of Commerce Board of Directors, I am writing in support of the World Oil Ribost Terminal Project at the Port of Long Beach. The Chamber represents the collective voice of over 800 esteemed members. We consistently advocate for projects that enhance our community and provide direct economic benefits.

The Ribost Terminal Project aligns seamlessly with the Chamber's values of creating jobs for our community and the EIR outlines less than significant impacts to our environment while creating jobs.

Thank you for your commitment to getting projects like this one through the approval process.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeremy Harris".

Jeremy Harris
President & CEO
Long Beach Area Chamber of Commerce

1 World Trade Center, Suite 1650, Long Beach, CA 90831-1650
Phone (562) 436-1251 • Fax (562) 436-7099 • info@lbchamber.com
[Catalyst](#) for business growth • [Convener](#) of leaders and influencers • [Champion](#) for a stronger community
[lbchamber.com](#) [fb lbchamber](#) [thelbchamber](#) [longbeachchamber](#)

LBACC-1**LBACC-2**

Responses to Comments of Long Beach Area Chamber of Commerce (LBACC)

Jeremy Harris, President and CEO

December 15, 2023

LBACC-1 The commenter expresses support for the Project and characterizes the Chamber as an organization. No further response is required.

LBACC-2 The commenter states the proposed Project aligns with their values of creating jobs for the community and that the EIR outlines less than significant impacts. No response is required.

Comments from The Polaris Group (TPG)**Email: World Oil Tank Installation Project**

From: Robert Rodine <polarisrlr@sbcglobal.net>
Sent: Friday, November 17, 2023 9:42 AM
To: Port of Long Beach Environmental Planning <CEQA@polb.com>
Cc: erin@futureports.com; Sonya Kay Blake <sblake@economicalliance.org>; Abby King <abby@vica.com>
Subject: World Oil Terminals Installation Project

TPG-1

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

Via Email

Dear Mr. Matthews -

I have received the Notice of Completion for the subject EIR and the advisory of extension, and I appreciate the opportunity to reply.

The text accompanying the Notice of Extension gave what I consider to be a very thorough explanation of the key factors to be considered in regard to the approval of the EIR and adoption of this project.

TPG-2

Without having to delve into the details of the EIR, I believe the Project Description, the description of Significant [Potential for] Environmental Impacts state very clearly what must be considered in rendering judgement about the desirability of this Project.

It is my pleasure to add my name to those of the persons supporting this project and encourage all parties to vote in favor of advancing this project without delay.

TPG-3

Sincerely,

Robert L. Rodine
Principal/Consultant
The Polaris Group
14649 Tustin Street
Sherman Oaks, California
818-789-7319

Responses to Comments from The Polaris Group (TPG)**Robert L. Rodine, Principal/Consultant****November 17, 2023**

- TPG-1** The comment confirms receipt of the Notice of Completion for the proposed Project Draft EIR (released on October 25, 2023) and the Notice of Extension of the Public Review Period (released on November 15, 2023). No response is necessary.
- TPG-2** The comment states that the Notice of Extension provides a thorough explanation of the key factors to be considered in approving the EIR and Project. In addition, the comment states that the Draft EIR's project description, description of potential significant environmental impacts clearly state what must be considered in rendering judgment about the desirability of the proposed Project. No response is necessary.
- TPG-3** The comment expresses support for the World Oil Tank Installation Project. No response is necessary.

Comments from Nancy Wallace (NW)**Email: World Oil Tank Installation Project**

From: nancy wallace <gourlaynancy@hotmail.com>

Sent: Thursday, December 14, 2023 9:00 AM

To: Port of Long Beach Environmental Planning <CEQA@polb.com>

Subject: World Oil Terminal Installation Project DEIR

Mr. Matthew Arms, Director of Environmental Planning

NW-1**Re: World Oil Terminal Installation Project DEIR**

As we stand on the precipice of Climate Collapse, it is of utmost importance that we immediately address the need to reduce fossil fuel use. The expansion of fossil fuel infrastructure is the antithesis of this goal.

The Port must reduce, not expand, fossil fuel storage in order to meet its Green Port goals.

COP28, just now ended, fell far short of what is needed to prevent our planet from breaching 1.5 degrees and may well have us breaching 2 or more degrees in our children's not so very distant future. But COP 28's failure does not need to be our community's failure as well. Let Long Beach be a leader in facing reality. I know it is particularly hard for us as an oil producing community. But let us take the lead of the President of Columbia, Gustavo Petro, who has vowed to phase out fossil fuel in his oil rich country. President Gustavo Petro made the statement below during COP28. I see, he too, must wake in the night terrified for his grandchildren and for all life on this planet.

"Some may ask: why would the president of this country want to commit suicide with an economy that relies on fossil fuels? Being here, we are trying to halt a suicide, the death of everything that is alive, everything that exists. This is not economic suicide. We are avoiding the omnicide of the world, of planet Earth. There is no other formula, no other path. Everything else is an illusion," he said.

=====

Here, below, are all the usual talking points one needs to include. I stand with the statement above.

Nancy Wallace
4184 Del Mar Ave
Long Beach, CA 90807

WE DEMAND that a NO PROJECT ALTERNATIVE be INCLUDED and PRIORITIZED in the Final EIR for the following reasons:

NW-2

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The

Project Description is vague and misleading.

The Project Description does not accurately describe the full scope of the Project, nor does it adequately disclose existing baseline conditions or project objectives.

NW-3

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The

DEIR fails to adequately disclose or analyze the Project's impacts related to the disposal of hazardous materials.

The DEIR does not disclose clearly, or at all, where or how hazardous waste from the Project will be transported for treatment and disposal.

NW-4

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The

DEIR fails to accurately disclose or evaluate the Project's cumulative impacts.

Despite the Project's presence in a severely overburdened community, largely due to the presence of Port-related industrial activity and sprawling fossil fuel infrastructure, the DEIR pays nearly no attention to the Project's contribution to significant, cumulative environmental impacts.

NW-5

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The

Project runs directly counter to statewide, regional, and local strategies designed to protect communities' health and reduce greenhouse gas emissions.

The Project runs directly counter to the policies and overall goals of the South Coast Air Quality Management Plan, the San Pedro Bay Ports Clean Air Action Plan, the A.B. 617 Community Emissions Reductions Plan, the 2022 California Scoping Plan, and the Port's Green Port Policy.

NW-6

Responses to Comments from Nancy Wallace (NW)
December 14, 2023

- NW-1** The comment is an introductory statement expressing the importance of reducing fossil fuel use and states that the Port must reduce, not expand, fossil fuel storage in order to meet Green Port goals. The comment also refers to COP28 and the President of Columbia's statements during COP28.
- NW-2** The comment demands that a No Project Alternative be included and prioritized in the Final EIR for reasons listed in RTC NW-3 through NW-6. The "No Project" alternative is evaluated in the EIR, as required by State CEQA Guidelines Section 15126.6(e).
- NW-3** The comment asserts that the EIR Project Description is vague and misleading and does not accurately describe the full scope of the Project, existing baseline conditions, or project objectives. The comment does not elaborate or specify the contents that are inadequate. Chapter 1 of the Draft EIR (*Introduction and Project Description*) provides a detailed project description including the project's objectives (Section 1.4) pursuant to State CEQA Guidelines Section 15124. A description of the baseline used in the environmental analysis can be found in Draft EIR Section 3.0.2 (*Environmental Analysis Procedures*) at page 3-2. The Draft EIR included a description of the physical environmental conditions at the time of the Notice of Preparation, which was released on January 30, 2023. A description of the baseline environmental setting for each issue area is presented in Draft EIR Sections 3.1 through 3.5 (3.1.1, 3.2.1, 3.3.1, 3.4.1, 3.5.1).
- NW-4** The comment asserts that the Draft EIR failed to adequately disclose or analyze the Project's impacts related to the disposal of hazardous materials and does not disclose clearly where or how hazardous waste will be transported for treatment and disposal. Treatment, storage, and disposal facilities (TSDF) may be in any number of locations in the US depending on the type of treatment required. Chapter 3.4 (*Hazards and Hazardous Materials*) discusses that all excavated soil would be disposed of in accordance with Federal and California waste disposal regulations after being analyzed and properly profiled. Sludge tank bottom quantities would be cleaned out every 10 years and disposed of at a permitted treatment, storage, and disposal facility. As described in EIR Section 3.4.1.2 (*Hazards and Hazardous Materials Setting*), in 2021 sludge tank bottom waste was delivered to Patriot Waste Water, LLC in Bakersfield, California. In addition, the 2017 to 2020 waste manifests indicated sludge tank bottom waste was disposed of at Crosby & Overton, Inc. in Long Beach, CA, DeMenno/Kerdoon in Compton, CA (now World Oil Recycling), US Ecology in Beatty, Nevada, and World Oil Recycling (formerly DeMenno/Kerdoon). On-site wastewater generated from tank dewatering would be discharged to the Los Angeles County Sanitary District's sanitary sewer system in compliance with existing water quality standards.
- NW-5** The comment states that the Draft EIR does not disclose or evaluate the Project's cumulative impacts, and that the Project would contribute to significant, cumulative environmental impacts. The comment does not specify which environmental impacts would be significant or cumulatively considerable. As summarized in the EIR Sections 3.1 (*Air Quality and Health Risk*), 3.2 (*Geology and Soils*), 3.3 (*Greenhouse Gas*

Emissions), 3.4 (*Hazards and Hazardous Materials*), and 3.5 (*Hydrology, Water Quality and Sea-Level Rise*), no potentially significant impacts have been identified for the World Oil Tank Installation Project. All impacts were determined to be “Less than Significant” because they would not exceed any Project-specific significant thresholds (see EIR Section ES.9, [*Environmental Impacts and Mitigation Measures*], and Table ES-2). Furthermore, cumulative impacts were evaluated and discussed for each environmental resource area in EIR Sections 3.1.6, 3.2.6, 3.3.6, 3.4.6, and 3.5.7; none of the Project’s impacts were identified as cumulatively considerable as defined by State CEQA Guidelines Section 15130. Therefore, the EIR adequately evaluated the Project’s potential to result in cumulative impacts.

NW-6

The comment contends that the Project runs counter to statewide, regional, and local strategies to protect communities’ health and reduce GHGs, including the South Coast Air Quality Management Plan, San Pedro Bay Ports Clean Air Action Plan, the AB 617 Community Emissions Reductions Plan, the 2022 California Scoping Plan, and the Port’s Green Port Policy. The Project’s compliance with these policies and plans is discussed in EIR Section 3.1 (*Air Quality and Health Risk*), Section 3.2 (*Greenhouse Gas Emissions*), and Appendix B (World Oil Initial Study) Section III (Air Quality) and Section VIII (Greenhouse Gas Emissions), Table 6.

The proposed Project would comply with SCAQMD’s rules and regulations consistent with the air quality management plan’s control strategies. As described in Impact AQ-1 and Impact AQ-6, the proposed Project would be consistent with the South Coast Air Quality Management Plan.

The proposed Project would comply with all applicable strategies of the San Pedro Bay Ports Clean Air Action Plan including construction Best Management Practices made enforceable through the Harbor Development Permit. As such, the proposed Project would comply with the San Pedro Bay Ports Clean Air Action Plan.

Draft EIR Section 3.1.2 (*Regulatory Setting*) at page 3.1-9 provides a discussion on Assembly Bill 617, Community Emissions Reductions Plan (CERP). The CERP identifies actions to reduce air pollution emissions from refineries, oil drilling and production, marine ports, trucks, and railyards. As discussed in Draft EIR Chapter 1 (*Introduction and Project Description*) the Ribost Terminal is a privately owned and operated petroleum storage facility. It is not a refinery, nor does oil drilling or production occur onsite. In addition, vessels trips and rail are not associated with existing or proposed operations of the facility, nor would they be associated with construction of the proposed Project. Construction of the proposed Project would support actions in the CERP for Wilmington, Carson, and West Long Beach, including Port’s Action 3 which includes supporting the implementation of the Clean Air Action Plan measures for trucks, and Neighborhood Traffic Action 2 to reduce emissions from heavy-duty trucks.

As described in EIR Section 3.3 for Impact GHG-3, Table 3.3-2 identifies applicable 2022 California Scoping Plan (California Assembly Bill 32 Scoping Plan) strategies. 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, consistent with the 2022 California Scoping Plan. 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.

Comments from Public Hearing #1

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WORLD OIL TANK INSTALLATION PROJECT
DRAFT ENVIRONMENTAL IMPACT REPORT
PUBLIC HEARING
Wednesday, November 8, 2023

Stenographically Reported By:
ERMINIA UVIEDO, CSR NO. 14495

Audio Transcription B
In Re: World Oil DEIR Meetings

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PUBLIC HEARING

November 8, 2023

MS. BLANCHARD: Thank you, everyone for being patient. We'll get started shortly.

Just a few more minutes. Thank you, everyone.

Okay. Sylvester, will you move the slide forward for me, please.

Hey, good afternoon, everyone. Just a couple of things to announce before we get started. This presentation will be recorded.

(Spanish being spoken.)

MS. BLANCHARD: If you require Spanish interpretation services to participate in today's meeting, please join the breakout session by clicking the link, located in the upper-right portion of the screen.

We will wait a few minutes to allow -- allow for guests to join the meeting.

Can you -- next slide.

If you require closed captioning, please click the closed captioning icon on the bottom left of the screen.

Rocio, do we have guests attending the breakout session?

SPANISH INTERPRETER-ROCIO: Hello, I am

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In Re: World Oil DEIR Meetings

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going to try to find out from Maya or if Maya can hear us, would you be able to unmute and let us know if somebody is in the breakout room.

MAYA: Hi. There's nobody in the breakout room so far.

MS. BLANCHARD: Okay. I'm going to continue with the presentation. Just send me a chat if someone jumps in and I'll slow down my speaking.

Next slide, please.

Again, please note that this meeting is being recorded. We may also have Spanish translation somewhere starting in the middle of this presentation. So I will be moving slowly through the slides to allow for translation to keep up.

With that said, good afternoon, everyone. My name is Jennifer Blanchard, Environmental Specialist, in the Environmental Planning Division of the Port of Long Beach. I'm the project manager for the proposed World Oil Tank installation project.

The intent of this draft, EIR Public Hearing, is to provide an overview of the draft EIR in accordance with the California Environmental Quality Act or CEQA, and provide an opportunity for the public to provide comments on the draft EIR -- draft EIR analysis.

In this presentation, I will be giving a

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project overview and objectives outlining the key environmental issues and alternatives evaluated in the EIR, presenting the results of the draft EIR, describing the environmental review process, and then we will be taking public comments.

Next slide.

If you are with us via Webex and would like to provide a comment on the proposed project, please click the hand icon on the bottom of your computer screen at any time during the public comment portion of this meeting. I will call speakers in the order of hands raised. When it is your turn to speak, you will be unmuted, and I will call you by name.

If you are providing comments by telephone, please press star 3 to raise and lower your hand. Once I call you by name, press star 6 to unmute yourself. After you have completed your comment, please press star 6 to mute yourself.

This slide and information will be repeated during the public comment portion of the meeting.

Next slide.

Ribost Terminal, doing business as World Oil Terminals, operates a petroleum storage facility on their privately-owned property on pier C in the northeast portion of the Long Beach Harbor District.

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1 petroleum tanks with a storage -- total storage capacity of
2 502,000 barrels, all contained within a 12.5 to 13-foot
3 tall containment wall. That is 1 and a half feet thick at
4 the base and tapers to 1 foot thick at the top.
5 Currently, three of the seven existing tanks store crude
6 oil and are dedicated to World Oil Refining, a paving and
7 roofing refinery in South Gate.
8
9 Crude oil is received via an existing
10 receive-only pipeline and transported to and from World Oil
11 Refinery via trucks. The other four existing tanks are
12 leased to customers for off-site storage of fuel oils, which
13 are transported to and from the storage tanks via existing
14 pipelines. No refining or -- of crude oil occurs at the
15 Ribost Terminal.

16 Next slide.

17 In August, 2019, the Port received a Harbor
18 Development permit application from Ribost proposing to
19 install two 25,000-barrel storage tanks at their facility
20 on pier C. The installation of the two new tanks would
21 involve new foundations, 25 horsepower pumps to pump crude
22 oil from existing pipelines to and from the new tanks and
23 approximately 40 linear feet of new piping to connect the
24 tanks to the existing truck loading racks. A short
25 electrical conduit connection would be required between

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1 Oil Refining and South Gate for production of paving and
2 roofing asphalts.

3 Leased tanks would continue to involve
4 pipeline transfers. However, in the environmental
5 analysis, overall truck trips to and from the site would
6 conservatively estimated to increase to capture atypical
7 situations, such as when a pipeline is being serviced.

8 Next slide.

9 According to CEQA guidelines, an EIR shall
10 describe a range of reasonable alternatives to the project
11 or to the location of the project which would feasibly
12 attain most of the basic objectives of the project but
13 would avoid or substantially lessen any of the significant
14 effects of the project.

15 Alternatives to the proposed project
16 considered in detail in the EIR include the no project
17 alternative required by CEQA and a single 25,000-barrel
18 tank alternative as opposed to two 25,000-barrel tanks.

19 Next slide.

20 This EIR evaluates the project's potential
21 impacts to air quality and health risk, geology and soils,
22 greenhouse gas emissions, hazards and hazardous materials,
23 and hydrology and water quality.

24 All were determined to have a less than
25 significant environmental impact. The air quality and

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1 the new tanks and the existing subpanel located just
2 outside the existing containment wall.

3 Next slide.

4 The project would realign and provide more
5 adequate storage capacity for Ribost operations by moving
6 the crude oil currently stored for World Oil Refinery from
7 two of the three existing larger tanks at the site.

8 The existing underutilized tanks would then
9 be removed from Ribost dedicated paving and roofing asphalt
10 refinery service and made available to lease by customers
11 for storage of fuel oils, such as marine fuels and marine
12 fuel blending components as is currently done at the
13 facility.

14 With the project, there would be no increase
15 in the terminal's overall throughput due to the physical
16 limitations of the existing pipelines and truck loading
17 racks, the geometry of the facility, and permitted
18 throughput limits imposed on the truck loading racks by the
19 South Coast Air Quality Management District.

20 Ribost is not proposing any additional
21 improvements to the existing pipelines and truck loading
22 racks. The terminal's overall operations will essentially
23 remain the same. Crude oil will continue to be transported
24 to the terminal by pipeline and daily truck trips will
25 continue to transport crude offsite to World

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1 health risk analysis shows that the project would not
2 conflict or obstruct implementation of an air quality plan
3 and would not result in a cumulatively considerable net
4 emissions increase exceeding SCAQMD significance thresholds
5 of significance.

6 Health risk screening shows emissions from
7 new tank operations would be well below SCAQMD health risk
8 thresholds and odors would disperse below objectionable
9 levels at the nearest sensitive receptors.

10 Geology and soils analysis shows that
11 impacts associated with earthquake faults, ground shaking,
12 seismic-related effects, unstable geological units, erosion
13 or expansive soils would be less than significant.

14 Greenhouse gas emission analysis shows the
15 project would not conflict with applicable GHG
16 emission-reduction plans, strategies, policies, regulations.
17 Construction emissions would not exceed SCAQMD GHG^{or}
18 threshold.

19 The project's impact associated with the
20 routine transport use disposal or accidental release of
21 hazards and hazardous materials would be less than
22 significant.

23 And, lastly, the draft EIR shows impacts
24 would be less than significant for hydrology and water
25 quality. Tanks are located behind a 12 and a half to

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1 13-foot tall containment wall designed for 100-year storm
2 surge event. Existing air-driven pumps are used to divert
3 water during storm events. Flood or tsunami inundation of
4 the site in combination with future sea level rise would
5 be controlled should water overtop the containment wall.

6 Next slide, please.

7 Under the California Environmental Quality
8 Act, the Port issued a notice of preparation for an EIR
9 and initial study on January 30th, beginning the CEQA
10 process. Scoping meetings were held in February and the
11 comments received are addressed in the draft EIR. The
12 draft EIR was issued on October 25th, 2023. We are
13 currently in the public review period for the draft EIR
14 and are holding two meetings, a virtual meeting on
15 November 8th, today, and an in-person meeting on
16 November 9th, tomorrow.

17 After the 45-day draft EIR public review
18 period, all comments received will be addressed and
19 responses to comments provided in the final EIR.
20 Following release of the final EIR, the Long Beach Board
21 of Harbor commissioners will hold a public hearing to
22 determine whether the final EIR was completed in
23 compliance with CEQA. And if so, whether or not to
24 approve the project and issue a harbor development permit.

25 Next slide.

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In Re: World Oil DEIR Meetings

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1 Again, you have three minutes to provide comment.
2 Who's -- who do we have? Let's see.
3 You-all -- see -- Ann Cantrell.

4 MS. CANTRELL: Yes. I just had a question.
5 Could you show the slide again that shows the current
6 tanks on the site?

7 And my question is: As I understand it,
8 there are now seven tanks there. You are not removing
9 any, but you're adding two more. So that will be nine
10 tanks. Where will the two new tanks be located?

11 MS. BLANCHARD: They're located in that
12 vacant corner that you see on the -- kind of northwest
13 corner there.

14 MS. CANTRELL: Up at the top of the slide?

15 MS. BLANCHARD: Correct?

16 MS. CANTRELL: Is what you're saying?

17 MS. BLANCHARD: Within the existing
18 containment wall.

19 MS. CANTRELL: And they will be the same
20 size as these two smaller ones.

21 MS. BLANCHARD: They're smaller. They're
22 25,000-barrel.

23 MS. CANTRELL: Yeah. And what -- what are
24 the size of these two that I see on here? The two smaller
25 ones on the right-hand side.

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In Re: World Oil DEIR Meetings

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1 We have come to the public comment portion
2 of today's meeting. Again, if you are with us via Webex
3 and would like to provide a comment on the proposed
4 project, please click the hand icon on the bottom of your
5 computer screen. When it is your turn to speak, you will
6 be unmuted, and then we'll call you by name.

7 If you are providing comments by telephone,
8 please press star 3 to raise and lower your hand. Once I
9 call you by name, press star 6 to unmute yourself. After
10 you have completed your comment, please press star 6 to
11 mute yourself. You will have three minutes to speak.

12 I just want to check in with our break-out
13 session. Do we -- do we have any Spanish translation in
14 progress?

15 I can't hear. Maya, can you hear me?

16 Okay. No one joined the breakout session.
17 Perfect.

18 We are here to listen and to gather public
19 comments on the environmental analysis provided in the
20 draft EIR. Your comments will become part of the record.

21 While we will not be responding to comments
22 today, we encourage you to also submit your comments in
23 writing. At the end of the presentation, I will provide
24 information on where to submit written comments.

25 I will now call on our first speaker.

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1 MS. BLANCHARD: I believe -- now, all this
2 information is within the draft EIR.

3 MS. CANTRELL: I understand that but I --
4 you are not able to answer that, I guess. Could you also
5 tell me why there's no cover on these two existing ones?

6 MS. BLANCHARD: They are all covered.

7 MS. CANTRELL: So it looks in the
8 picture -- they look very different.

9 MS. BLANCHARD: They are covered.

10 MS. CANTRELL: What is the difference
11 between the cover on them and the ones that are in the
12 other five? Can anybody answer that?

13 MS. BLANCHARD: I -- I -- I can't answer
14 that at the moment, no.

15 MS. CANTRELL: Is there anybody that can?

16 MS. BLANCHARD: If you -- we can answer
17 that for you if you provide written comment to --

18 MS. CANTRELL: All right. I will do that
19 then. Thank you.

20 MS. BLANCHARD: Okay. Thank you.

21 Okay. And we have Tyler Matthews.

22 Please be sure you mute yourself after --
23 when you're done making comment.

24 Tyler.

25 MR. MATTHEWS: Yes, hello.

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In Re: World Oil DEIR Meetings

1252905

TM-1
cont.

1 MS. BLANCHARD: Hello.

2 MR. MATTHEWS: You mentioned earlier about

3 how there may be some air quality concerns in regards to

4 truck -- excuse me -- truck trips and certain atypical

5 situations. Would you be able to speak to more detail

6 about what the situations might be?

7 Yeah. Thank you.

8 MS. BLANCHARD: As stated in the

9 presentation, atypical situations are when an existing

10 pipeline is down for service.

11 MR. MATTHEWS: Okay. So that would just be

12 where it would take the crude oil by truck to another

13 location then?

14 MS. BLANCHARD: Correct.

15 MR. MATTHEWS: Okay. All right. Thank you

16 very much.

17 MS. BLANCHARD: Okay. Do we have any other

18 hands raised? I don't see any other hands raised.

19 Oh, Jay, I see you.

20 MR. PAREPALLY: Hi. Should I start my

21 comment?

22 MS. BLANCHARD: Yes. Please.

23 MR. PAREPALLY: Okay. All right. My name

24 is Jay Parepally. I'm a legal fellow with Communities for

25 Better Environments. I've done some review of the draft

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In Re: World Oil DEIR Meetings

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JP-3

1 In addition, every single impact in the

2 draft EIR says that it's a less than significant impact

3 with no mitigation required. On odors, like, they're

4 going to dissipate, like, naturally, and not be

5 objectionable, conclusory. There's no real justification

6 for that conclusion.

JP-4

7 Everything that's framed in the draft EIR

8 is, like, yeah, we could do a single tank, but it wouldn't

9 be, like, as economically awesome for us, essentially.

10 So, therefore, we need two tanks. I mean, I would -- and

11 my organization would love to push for the no project

12 alternative; but even if we had to settle at the single

13 tank, this draft EIR does not adequately provide evidence

14 as to why the single tank is not some kind of balance of

15 economically feasible and/or marginally better for the

16 environment.

JP-5

17 So, I mean, this doesn't seem like it's

18 being done in good faith; it's being rushed before the

19 holidays. We would like to see a longer extension period

20 so that we can -- for the comment period to go into

21 January, 2023, and not end at December 11th, so that we

22 can actually have meaningful community input and not just

23 ram through another fossil fuel infrastructure project

24 saying that it's not a big deal, we're just moving some

25 oil around within our terminal. No biggie, nothing to see

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In Re: World Oil DEIR Meetings

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JP-1
cont.

1 EIR, but our general position is that this is being

2 released in late fall close to the holiday season with a

3 45-day comment period which kind of seems like it's

4 designed to not have adequate community input and to rush

5 this through.

JP-2

6 While we appreciate that a draft EIR has

7 come out instead of what this project initially started at

8 a couple of years ago with a negative declaration of no

9 impact, the project objectives are disingenuous. The

10 project objectives are increase efficiency of terminal

11 operations, realize storage capacity needs, and make more

12 existing tanks available for lease by customers. None of

13 those incorporate the fact that there's schools nearby,

14 that this is an already overly burdened environmentally

15 unjust set of circumstances at the World Oil Terminal, the

16 Port of Long Beach, the fact that there are tons of

17 neighborhoods nearby, that we're in 2023. We don't need

18 more fossil fuel infrastructure and it's also disingenuous

19 to say that even if the overall throughput is not

20 increased, you're adding 50,000 more barrels of capacity

21 so that you can lease out existing, quote, unquote,

22 underutilized tanks.

23 All that means is just more profit for

24 World Oil, Ribost Terminals, whatever it is. But, like,

25 this is not a necessary project.

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JP-5
cont.

1 here.

2 This needs to be done with -- in a fair

3 time frame and not just ram it through before the

4 holidays.

5 Thank you.

6 MS. BLANCHARD: Thank you. I see Anna

7 Christensen. You have your hand raised.

ACH1-1

8 MS. CHRISTENSEN: Okay. I'm -- I'm

9 speaking on behalf of Sierra Clubs Los Cerritos Wetlands

10 Task Force as a cochair. I did have one question. I

11 don't want to wait for your answer because I don't want to

12 use up my three minutes. You can answer it after that's

13 done.

14 What is the capacity of the existing tanks

15 that would become available for lease once these new tanks

16 are built? That's my question.

ACH1-2

17 We're really concerned about the -- your

18 description of the project location, which focuses on

19 what's in the Port but leaves out the fact that the

20 project is within 3200 feet of two schools, two public

21 parks, and a hospital. And this 3200 feet setback while

22 on hold is focused on the reality, which isn't on hold,

23 that people and sensitive receptors, all of which I just

24 named within the setback, are affected by oil -- fossil

25 fuel operations including tanks and transportation. The

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ACH1-2
cont.

1 public school has even commented on this as to increase
2 tank traffic. So we want to point that out.

ACH1-3

3 We're also concerned about the way the
4 less -- the less than significant determination is
5 measured. Although, it's standard, we know -- we get
6 it -- we get that it's all about existing plans,
7 strategies, policies, regulations and thresholds but --
8 but let's look at the actual reality.

9 Expanding fossil fuel operations is -- is
10 going to increase everything bad about fossil fuels,
11 right? And it is not supported of the Port's green --
12 green policy, even though you can say, Well, we'll make it
13 up elsewhere or the City can say, Well, we are -- we're
14 still going to hit our climate goal, even though we
15 continue as the City of Long Beach does to extract,
16 process, transport, and now expand the capacity for
17 storage in our Port.

18 So we can't support this project in any
19 way, and we don't appreciate the fact that the Port staff,
20 such as yourself, is framing it in terms of -- from a
21 fossil fuel perspective rather than from a public safety
22 perspective.

23 We -- the -- the City of Long Beach is
24 already being sued over framing their other plans, such as
25 their five-year plan for oil extraction in this manner,

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MH-1
cont.

1 Thank you for the presentation.

2 I have two questions and I'm pretty sure
3 they're in the EIR; but if you could answer them right
4 now, that would be helpful.

5 I just want to confirm that they are using
6 existing pipelines to transport the oil, right, they're
7 not going to expand pipelines? Like, they're not going to
8 create another pipeline or anything like that?

9 MS. BLANCHARD: Correct.

MH-1
cont.

10 MS. HERNANDEZ: Okay. And then do we know
11 how often these pipelines go out of order and require
12 truck transportation? Like, how often that happens?

13 MS. BLANCHARD: I -- I don't -- we don't
14 know that. At the time, I would suggest submitting that
15 in a written comment and we can address it there.

MH-2

16 MS. HERNANDEZ: Got it. Meanwhile, I do
17 like the written comment process. Is there any, like,
18 public data that I can access on that?

19 MS. BLANCHARD: Yes. We'll have some
20 slides I -- I show where you can find the draft EIR. It's
21 available at the libraries and on our website.

MH-2
cont.

22 MS. HERNANDEZ: Okay. Awesome. Thank you.

23 MS. BLANCHARD: Thank you.

24 Okay. I'm looking for additional hands. I
25 see two call-in users, but their hands are not raised.

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ACH1-3
cont.

1 leaving out the impacts to public health and safety which
2 are clearly there. So we wouldn't -- we want you to --
3 I'm not going to say "man up" because you're a woman but
4 we want you to be real about the fact that the goal -- the
5 overall goal, the plan that -- the absolute necessity of
6 getting off of fossil fuels includes not providing more
7 storage for fossil fuels.

8 This project is significant. It has
9 significant impacts, one of them being that the Port and
10 the City continue to think that they can be in denial
11 while they -- while they actually are increasing, you
12 know, health impacts of fossil fuels.

ACH1-4

13 So -- and we agree with the last speaker
14 that -- doing this during the holidays is -- is -- is not
15 a helpful and you can see that -- and we don't know what
16 your outreach is but only 26 people are on this call. So
17 you can't really consider this public hearing to be at all
18 adequate. So, please do more research and out -- out --
19 I'm sorry -- not research but do more outreach and get,
20 you know, more than 26 people attending your public
21 hearing.

22 Thank you very much.

23 MS. BLANCHARD: Thank you. We have Mia
24 Hernandez.

MH-1

25 MS. HERNANDEZ: Hello. Good afternoon.

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1 I'll wait just another minute to see if some last-minute
2 hands get raised.

3 Okay. Then, we'll move on.

4 Next slide, Sylvester.

5 Friendly reminder that you may also submit
6 your comments by mail or email to the address shown on the
7 slide, which is also provided in the Notice of
8 Availability. The 45-day draft EIR public comment period
9 will end at 4:00 pm on Monday, December 11th. Again,
10 please focus comments on the environmental analysis
11 provided in the draft EIR.

12 Next slide.

13 The Notice of Availability and draft EIR
14 are available for review on the Port's website,
15 www.polb.com/CEQA, as well as libraries in Long Beach, San
16 Pedro, and Wilmington. This information can be found on
17 the Notice of Availability.

18 Next slide.

19 This concludes today's draft EIR public
20 meeting for the proposed World Oil Tank Installation
21 Project. If you would like more information on the
22 proposed project, please contact me either via email at
23 jennifer.blanchard@polb.com or telephone at 562-283-7100.

24 Again, thank you for your participation in
25 today's draft EIR public meeting. Have a good rest of

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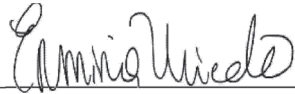
1 Thank you.
2 (End of recorded meeting.)
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2 COURT REPORTER'S CERTIFICATE
3 -----
4 I, the undersigned Certified Shorthand
5 Reporter holding a valid and current license issued by the
6 State of California, do hereby certify:
7 That said meeting was recorded via audio
8 recording and said recording was transcribed by me in
9 shorthand transcription.
10 I further certify that I am neither counsel
11 for nor related to any party to said action nor in any way
12 interested in the outcome thereof.
13 The dismantling, unsealing, or unbinding of
14 the original transcript will render the Reporter's
15 certificate null and void.
16 IN WITNESS WHEREOF, I have subscribed my
17 name on this date: March 19, 2024.
18
19 
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21 ERMINIA UVIEDO, RDR, CRR, CRC, CSR
22 Certified Shorthand Reporter #14495
23 Expires: 10-31-2025
24
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Responses to Comments - Ann Cantrell (AC)
November 8, 2023

AC-1 The comment requests information on where the two new tanks would be constructed, the size of the proposed and smaller existing tanks, and why the aerial imagery of the existing tanks appear to show uncovered tanks. EIR Section 1.3 (*Project Site and Vicinity*) at page 1-4 states that the two new tanks would be installed in the vacant northwest corner of the existing petroleum bulk station and terminal. As discussed in Section 1.2.2 (*Existing Project Site Conditions and Operations*) at page 1-2, the proposed two new tanks would each have a storage capacity of 25,000 barrels, each measuring 56 feet high and 60 feet wide (diameter), which is substantially smaller than the existing tanks. As shown in Figure 1-2. Project Site Plan, at page 1-3 and provided in Section 1.2.2 (*Existing Project Site Conditions and Operations*), the two smallest existing tanks each have a capacity of 43,000 barrels. The existing tanks are covered and the proposed two new tanks would also be covered.

Responses to Comments - Tyler Matthews (TM)
November 8, 2024

- TM-1** The comment requests clarification on “atypical situations” related to air quality concerns from truck trips. EIR Section 1.2.2 (*Existing Project Site Conditions and Operations*) at page 1-2 describes “atypical situations” as periods when the pipelines are being serviced. Marathon and Glencore pipelines go out of service approximately every 5 years for hydrotesting or inspection. These situations are planned and last for only a few days. Unplanned situations happen very rarely. Under these circumstances product may be transported to/from the leased tanks by on-road transport trucks via the existing truck loading rack. The proposed Project would not install new transfer pipelines, only connections from the existing transfer pipelines to the new tanks.

Responses to Comments - Communities for a Better Environment (JP)**Jay Parepally, Legal Fellow****November 8, 2023**

- JP-1** The comment introduces the commenter and asserts that the 45-day comment period, which started in late fall close to the holiday season, is rushed and designed to not have adequate community input. Per State CEQA Guidelines Section 15105(a), the public review period for a draft EIR shall not be less than 30 days nor should it be longer than 60 days except under unusual circumstances. The Port initially provided a 45-day public review (not including holidays) and comment period that started on October 25, 2023 and ended on December 11, 2023. A 4-day extension was provided extending the review period to December 15, 2023, thus exceeding the minimum required public review period and providing additional time to accommodate the Thanksgiving holiday.
- JP-2** The comment states that the Project objectives are disingenuous as they do not consider the nearby schools and neighborhoods located in an area already overly environmentally burdened. The commenter opines that more fossil fuel infrastructure is not needed in 2023 and the Project is only to financially benefit Ribost Terminals. Per State CEQA Guidelines Section 15124(b), a statement of objectives sought by a proposed project shall include the underlying purpose of the project. The Project objectives are described in EIR Section 1.4 (*Project Objectives*) and Section 1.5 (*Project Characteristics*) at page 1-5. The existing larger tanks currently dedicated to World Oil Refining, the paving/roofing asphalt refinery in South Gate, are under-utilized. The two proposed smaller tanks would provide more suitable storage capacity for Ribost's operations, while freeing up the larger tanks for lease to customers.
- EIR Section 3.1 (*Air Quality and Health Risk*) includes a discussion on environmental setting and CEQA baseline conditions and identifies the South Coast Air Basin (SCAB) attainment status for various criteria pollutants in the Los Angeles County portion of the SCAB. Several schools are identified in Section 3.1.1.3 (*Sensitive Receptors*) at page 3.1-5, and evaluated under Impacts AQ-4 at page 3.1-15 and AQ-10 at page 3.1-22. Impacts were determined to be less than significant.
- Lastly, CEQA does not require a discussion of need for a proposed project. Per State CEQA Guidelines Section 15124, only a project's statement of objectives is required to help the lead agency develop a reasonable range of alternatives and to aid decisionmakers in preparing findings or a statement of overriding considerations, if necessary.
- JP-3** The comment disagrees with the EIR's less-than-significant impact conclusions, and asserts, for example, that less-than-significant impacts related to odors are not justified. The EIR evaluates the Project's impacts to air quality and health risk; geology and soils; greenhouse gases; hazards and hazardous materials; and hydrology, water quality, and sea-level rise. EIR Chapter 3 (*Environmental Setting and Project Impacts*) Sections 3.1 through 3.5 include detailed discussions on existing conditions, applicable regulatory settings for each environmental topic, and thresholds established by the State CEQA Guidelines and/or regulatory agencies with regulatory oversight or jurisdiction (e.g., South Coast Air Quality Management District Rules and Regulations, national ambient air quality standards, and California ambient air quality

standards for air quality/health risk impacts). The analyses in this EIR provides substantial evidence to conclude that these impacts would be less than significant.

The EIR considers whether the proposed Project could create objectionable odors during construction and operation affecting a substantial number of people. The analysis of odors during construction is qualitative (Impact AQ-5 at page 3.1-17), and a quantitative approach is used for long-term operational odors (Impact AQ-10 at page 3.1-22). Tables show how operations would contribute to downwind concentrations of odorous substances, in EIR Appendix C, Air Pollutant Emissions Data (Attachment 1, page 10 of 12). Both impacts were found to be less than significant.

JP-4

The commenter supports the No Project Alternative and Single Tank Alternative and asserts the EIR does not discuss how the single tank is not a good balance between economic benefits and environmental impacts. EIR Section 1.6.2 (*Alternatives Considered but Not Carried Forward for Detailed Analysis*) at page 1-14 discusses the Single Large Tank Alternative. A single tank with a 50,000-barrel capacity would not be feasible at the Project site, as its height and diameter would not fit within the Project area. Therefore, due to the space limitations at the Project site, this alternative was eliminated from further consideration. Additionally, EIR Section 1.6.3 (*Alternatives Evaluated in this EIR*) at page 1-15 describes the Single Tank Alternative. Under this alternative, a single 25,000-barrel tank would be constructed. However, a single tank would reduce the terminal's crude dewatering capacity but would partially realign storage capacity needs and provide for some marginal improvement in the efficiency of terminal operations. This alternative was carried forward for analysis in the EIR (see EIR Sections 3.1 through 3.4). EIR Section 5.3 (*Environmentally Superior Alternative*) states that while the Single Tank Alternative (Alternative 1) is considered the environmentally superior alternative it is rejected because it does not fully meet the Project objectives, severely limits customer leasing, and would not be pursued by Ribost. There are no significant impacts associated with the construction and operation of the proposed Project even if incrementally higher than Alternative 1. The proposed Project better meets the objectives, and thus, there is no environmental basis or reason to adopt Alternative 1, which does not meet all the objectives.

JP-5

The comment restates the need for an extended public comment period. Please refer to RTC JP-1.

Responses to Comments – Sierra Clubs Los Cerritos Wetlands Task Force (ACH1)**Anna Christensen, Co-Chair****November 8, 2023**

- ACH1-1** The comment requests information on the capacity of the existing tanks that would become available for lease once the new tanks are built. EIR Section 1.5 (*Project Characteristics*) at page 1-5 states that two of the three existing tanks would be removed from Ribost's dedicated paving/roofing asphalt refinery service and made available to lease by customers. Of these three tanks, two have a capacity of 43,000 barrels each, and one has a capacity of 67,000 barrels (see Table 3.4-1 on page 3.4-4 in EIR Section 3.4, *Hazards and Hazardous Materials*).
- ACH1-2** The comment asserts that sensitive receptors are not discussed in the EIR. Please refer to EIR Section 3.1.1.3 (*Sensitive Receptors*) on page 3.1-5, which identifies the nearest sensitive receptors including residents, school, hospital, and childcare center. Please refer to Impacts AQ-4 and AQ-9, which address construction and operation impacts of toxic air contaminants (TACs) to sensitive receptors. Construction and operation impacts of TACs to sensitive receptors were found to be less than significant.
- ACH1-3** The comment expresses concern about how the EIR's less-than-significant determination is measured. Please refer to Response to Comment JP-3. The comment questions how the Project's GHG/air quality impacts are not cumulatively considerable, and states that the Project is directly in conflict with climate goals and Green Port Policy. Please refer to CBD-31 regarding cumulative impacts and CBD-87 regarding the Green Port Policy.
- ACH1-4** The comment is concerned about comment period occurring during the holidays. State CEQA Guidelines Section 15105(a) states in relevant part, the public review period for a draft EIR shall not be less than 30 days nor should it be longer than 60 days except under unusual circumstances. The Port provided a 45-day public review and comment period that started on October 25, 2023, and ended on December 11, 2023 (holidays not included), with an additional 4-day extension ending on December 15, 2023.

Responses to Comments - Mia Hernandez (MH)
November 8, 2023

- MH-1** The comment requests information about whether the Project would use existing pipelines; whether any pipelines would be expanded; and how often pipelines go out of service and require truck transportation. Pipelines go out of service typically every five years for hydrotesting or inspection. These planned outages only last for a few days. Unplanned outages occur very rarely. As discussed in EIR Section 1.1 (*Introduction*), there are no proposed improvements to the existing transfer pipelines, and no new transfer pipelines. The only pipeline work would be to provide connections to the new tanks from the existing pipelines within the facility.
- MH-2** The comment requests where information on the Project is publicly available. Information on the Project is publicly available on the POLB's website: <https://polb.com/documents/#ceqa-nepa>.

Comments from Public Hearing #2

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WORLD OIL TANK INSTALLATION PROJECT
DRAFT EIR PUBLIC MEETING
Thursday, November 9, 2023

Stenographically Reported By:
ERMINIA UVIEDO, CSR NO. 14495

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In Re: World Oil DEIR Meetings

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DRAFT EIR PUBLIC MEETING

November 9, 2023

MS. BLANCHARD: Everyone can hear me okay
out there?

Okay. So a little housekeeping before we
get into the presentation. If you require Spanish
interpretation services to participate in the public
meeting, please request a headset from staff over there on
the -- my right, the table.

It doesn't look like we need any Spanish
interpretation this evening.

So, continue.

Everyone, restrooms are down the hall to
your right. There's an emergency exit behind you to my
left.

With that said, we'll get going.

Next slide, please.

Please note that this meeting is being
recorded.

Good evening, everyone. My name is
Jennifer Blanchard, Environmental Specialist, in the
Environment -- Environmental Specialist in the
Environmental Planning Division of the Port of Long Beach.
I am the project manager for the proposed World Oil Tank
Installation Project.

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The intent of this draft EIR public hearing
is to provide an overview of the draft EIR in accordance
with the California Environmental Quality Act or CEQA and
provide an opportunity for the public to provide comments
on the draft EIR analysis.

In this presentation, I will be giving a
project overview and objectives outlining the key
environmental issues and alternatives evaluated in the EIR
presenting the results of the draft EIR, describing the
environmental review process and then we will be taking
public comments.

Next slide.

If you would like to provide a comment on
the proposed project, please submit a speaker card.
Speaker cards can be found at the table to my right in the
front. Please write your first name and last name and if
applicable, your organization, hand them back to one of
our staff members seated at the table.

When we come to the public comment portion
of the meeting, I will call you by name in order the
speaking cards were received.

Next slide.

Ribost Terminal, LLC, doing business as
World Oil Terminals, operates a petroleum storage facility
on their privately-owned property on pier C in the

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northeast portion of the Harbor District.

The terminal consists of seven petroleum
tanks with a total storage capacity of 502,000 barrels,
all contained with a 12-and-a-half to 13-foot tall
containment wall, that is 1-and-a-half-feet thick at the
base and tapers to 1-foot thick at the top.

Currently, three of the seven existing
tanks store crude oil and are dedicated to World Oil
Refining, a paving and roofing refinery in South Gate.
Crude oil is received via an existing receive-only
pipeline and transported to and from World Oil Refinery
via trucks. The other four existing tanks are leased to
customers for offsite storage of fuel oils which are
transported to and from the storage tanks via existing
pipelines. No refining of crude oil occurs at the Ribost
Terminal.

Next slide.

In August, 2019, the Port received a Harbor
Development Permit application from Ribost, proposing to
install two 25,000-barrel storage tanks at their facility
on pier C. The installation of the two new tanks would
involve new foundations, 25-horsepower pumps to pump crude
oil from existing pipelines to and from the new tanks and
approximately 40 linear feet of new piping to connect the
tanks to the existing truck-loading racks. A short

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1 electrical conduit connection would then be required
2 between the new tanks and the existing subpanel located
3 just outside the existing containment wall.
4
5 Next slide.
6
7 The project would realign and provide more
8 adequate storage capacity for Ribost operations by moving
9 the crude oil currently stored for World Oil Refinery from
10 two of the -- two of the three existing larger tanks at
11 the site. The existing tanks would then be removed from
12 Ribost' dedicated paving and roofing asphalt refinery
13 service and made available to lease by customers for
14 storage of fuel oils, such as marine fuels and marine fuel
15 blending components, as is currently done at the facility.
16
17 With the project, there would be no
18 increase in the Terminal's overall throughput due to the
19 physical limitations of existing pipelines and
20 truck-loading racks. The geometry of the facility and
21 permitted throughput limits imposed on the truck-loading
22 racks by the South Coast Air Quality Management District.
23
24 Ribost is not proposing any additional
25 improvements to the existing pipelines and truck-loading
racks. The Terminal's overall operations will essentially
remain the same. Crude oil will continue to be
transported to the Terminal by pipeline and daily truck
trips will continue to transport crude offsite to World

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1 exceeding SCAQMD significance thresholds.
2
3 Health risk screening shows emissions from
4 new tank operations would be well below SCAQMD health risk
5 thresholds, and odors would disperse below objectionable
6 levels at the nearest sensitive receptors.
7
8 Geology and soils analysis show that
9 impacts associated with earthquake faults, ground shaking,
10 seismic-related effects, unstable geological units,
11 erosion or expansive soil would be less than significant.
12
13 Greenhouse gas emissions analysis shows the project would
14 not conflict with applicable GHG emission reduction plans,
15 strategies, policies or regulations. Construction
16 emissions would not exceed a CAQMD GHG threshold.
17
18 The project impacts associated with routine
19 transport use disposal for accidental release of hazards
20 and hazardous materials would be less than significant.
21
22 And, lastly, the draft EIR shows the
23 impacts would be less than significant for hydrology and
24 water quality. Tanks are located behind a 12-and-a-half
25 to 13-foot tall containment wall designed for a
hundred-year storm surge event. Existing air-driven pumps
are used to divert water during storm events. Flood or
tsunami inundation of the site in combination with future
sea level rise would be controlled should water overtop
the containment wall.

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1 Oil Refining in South Gate for production of paving and
2 roofing asphalts. Lease tanks would continue to involve
3 pipeline transfers.
4
5 Next slide.
6
7 According to CEQA guidelines, an EIR shall
8 describe a range of reasonable alternatives to the project
9 or to the location of the project, which would feasibly
10 attain most of the basic objectives of the project but
11 would avoid or substantially lessen any of the significant
12 effects of the project.
13
14 Alternatives to the proposed project
15 considered in detail in the EIR include the no project
16 alternative required by CEQA and a single 25,000-barrel
17 tank alternative as opposed to two 25,000-barrel tanks.
18
19 Next slide.
20
21 This EIR evaluates the project's potential
22 impacts to air quality and health risks, geology and
23 soils, greenhouse gas emissions, hazards and hazardous
24 materials, and hydrology and water quality. All were
25 determined to have a less than significant environmental
impact.
The air quality and health risk analysis
shows that the project would not conflict or obstruct
implementation of an air quality plan and would not result
in a cumulatively considerable net emissions increase

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1 Next slide.
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3 Under the California Environmental Quality
4 Act, the Port issued a notice of preparation for an EIR
5 and initial study on January 30th beginning the CEQA
6 process. Scoping meetings were held in February, and the
7 comments received are addressed in the draft EIR. The
8 draft EIR was issued on October 25th, 2023.
9
10 We are currently in the public review
11 period for the draft EIR. We held a virtual meeting
12 yesterday on November 8th and tonight's in-person meeting,
13 November 9th. After the 45-day draft EIR public review
14 period, all comments received will be addressed and
15 responses to comments provided in the final EIR.
16
17 Following release of the final EIR, the
18 Long Beach Board of Harbor Commissioners will hold a
19 public hearing to determine whether the final EIR was
20 completed in compliance with CEQA, and if so, whether or
21 not to approve the project and issue a Harbor Development
22 Permit.
23
24 We have now come to the public comment
25 portion of tonight's meeting. As a reminder, we are here
to listen and to gather public comments on the
environmental analysis provided in the draft EIR, which
will become part of the record. We will not be responding
to comments tonight.

Kusar is now **LEXITAS** (800.282.3376)

8

Audio Transcription D
In Re: World Oil DEIR Meetings

1252905

1 We do encourage you to also submit your
2 comments in writing and at the end of the presentation, I
3 will provide information on where to do so.
4 Do we have speaker cards?
5 Anna can come up to the microphone.
6 MS. CHRISTENSEN: Let's see. Is that -- so
7 before my three minutes are up, I just like as a courtesy
8 say since there's only one speaker --
9 MS. BLANCHARD: I understand. Go ahead.
10 MS. CHRISTENSEN: All right. Thank you.
11 So -- am I being videotaped, like you said?
12 MS. BLANCHARD: Yeah, it's -- it's
13 recorded.
14 MS. CHRISTENSEN: So, I'm here tonight
15 representing the Los Cerritos Wetland's Task Force, which
16 is a local task force of Sierra Club California -- well,
17 Sierra Club in general.
18 So the -- I also commented online and our
19 group is opposed to this project. So we prefer the no
20 project alternative.
21 Reduction -- I'm going to kind of -- I have
22 some notes here. Reduction of fossil fuels including
23 extraction, production, transportation, and storage is
24 essential if we are going to reduce greenhouse gas
25 emissions and actually, you know, survive as a society.

ACH2-1

ACH2-2

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In Re: World Oil DEIR Meetings

1252905

1 from other agencies -- primarily from other agencies like
2 South Coast AQMD. Those agencies are also problematic and
3 that's why we have the worst air quality in California,
4 right. I mean, we have problems in part due to private
5 industry and this is a private project. This is not a
6 public -- there's no real public benefit. I mean, the
7 project goals themselves -- the project -- you know, what
8 is the -- wait a minute -- I've got it right here.
9 So the project benefits are -- are totally
10 private. They expand World Oil Company's capacity, right,
11 to make more money -- to do more business. So -- so we
12 don't see this as any kind of a public benefit. It's all
13 loss on the public side. We -- as I said last night, the
14 project location is described tonight by the speaker but
15 also in the -- further is the northwest portion of the
16 Harbor District.
17 What isn't in that description is what else
18 is within 3200 feet of the project? Two schools, two
19 public parks, one public playing field and a hospital.
20 Why do I say 3200 feet? Because 3200 feet
21 has been recognized by the State of California through its
22 legislature as an area in which sensitive receptors which
23 I just listed -- which include the residence are -- are
24 seriously affected by any emission.
25 So we already have a Port. And I looked it

ACH2-3
cont.

ACH2-4

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1252905

ACH2-2
cont.

ACH2-3

1 This has been acknowledged pretty much globally that --
2 and we do have plans in place and the Port is working
3 towards being a green port. The City has plans as well.
4 This project walks away from those plans
5 and counts on the other -- other things to make up for
6 that -- that reduction because it expands storage. It's
7 just simple. Adding two tanks, adding two tanks, adding
8 50,000 extra barrels of oil storage and leasing the other
9 storage areas out is just adding. I mean, it's not --
10 it's very, very simple.
11 So is this significant? So according to
12 the port EIR, it isn't significant. We disagree. First
13 of all, the Port Master Plan is -- was written in 1990.
14 So the Coastal Act production -- protections under Chapter
15 3 don't apply and -- and weren't even considered.
16 So -- so what we have is -- we have a
17 Master Plan that was written before people were looking at
18 sea rise, before people were looking at global warming
19 and -- and, you know, we're sorry that it got stalled but
20 we don't think it's adequate.
21 So we want to go beyond that. We want to
22 work towards a green Port. And -- and part of the problem
23 with this draft EIR is the analysis of less than
24 significant depends on -- and then kind of quoting here of
25 "existing plans, strategies, policies, and regulations"

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ACH2-4
cont.

ACH2-5

1 up today -- how many other storage facilities there are
2 for fossil fuels. There's the -- Marathon has them. The
3 Koch Brothers have a storage, right. The Port is
4 literally storing so much fossil fuel and storage tanks
5 leak. They just leak, the same way that oil pumps leak.
6 So this is not a matter of an accident.
7 This is a standard operating liability that they leak.
8 And so when we add all this together, we would like the
9 final EIR to consider the cumulative impacts of fuel in
10 the Port and how this increases that.
11 And we do believe it's -- it's a health
12 risk. So as far as the 100-year storm, I think we just
13 had one, didn't we? I mean, this whole idea that we're
14 just going to -- just pretend that calculations that
15 worked in 1990 were the least -- the least significant.
16 To get -- how do you get to that least
17 significance? So what I would say -- I probably have more
18 stuff here, in which we, of course, will be submitting
19 written comments, is that -- I -- I -- in looking at this
20 and in looking at the relationship between the Port and
21 the Coast line, which is really interesting overall is
22 that what we -- we see sometimes with staff reports and
23 this is basically a staff creation is that the staff seems
24 to be working to get the project to comply. And that's --
25 there's nothing wrong with that. We don't want projects

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ACH2-5
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1252905

1 that are illegal and don't comply.

2 But in doing so, they seem to be advocating

3 for the project and not be neutral enough. So we would

4 appreciate if the Port staff would advocate for the

5 community and for the community's health, and we don't see

6 any community benefit to helping World Oil people make

7 more money.

8 Thank you very much.

9 MS. BLANCHARD: Thank you, Anna.

10 And we don't have any more speakers.

11 So Sylvester, next slide.

12 Okay. A friendly reminder that you may

13 also submit your comments by mail or email to the address

14 as shown on the slide, which are also provided in the

15 notice of availability. The 45-day draft EIR public

16 comment period will end at 4:00 pm on Monday,

17 December 11th. Again, please focus comments on the

18 environmental analysis provided in the draft EIR.

19 Next slide.

20 The notice of availability and draft EIR

21 are available for review on the Port's website, as well as

22 libraries in Long Beach, San Pedro, and Wilmington. This

23 information can be found on the notice of availability.

24 Next slide.

25 This concludes this evening's draft EIR

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In Re: World Oil DEIR Meetings

1252905

1 COURT REPORTER'S CERTIFICATE

2 -----

3 I, the undersigned Certified Shorthand

4 Reporter holding a valid and current license issued by the

5 State of California, do hereby certify:

6 That said meeting was recorded via audio

7 recording and said recording was transcribed by me in

8 shorthand transcription.

9 I further certify that I am neither counsel

10 for nor related to any party to said action nor in any way

11 interested in the outcome thereof.

12 The dismantling, unsealing, or unbinding of

13 the original transcript will render the Reporter's

14 certificate null and void.

15 IN WITNESS WHEREOF, I have subscribed my

16 name on this date: March 19, 2024.

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In Re: World Oil DEIR Meetings

1252905

1 meeting for the proposed World Oil Tank Installation

2 Project. If you would like more information on the

3 proposed project, please contact me either via email at

4 jennifer.blanchard@polb.com or by telephone at

5 562-283-7100.

6 Again, thank you for your participation in

7 this evening's draft EIR public meeting. Have a good rest

8 of your evening.

9 (Meeting concluded)

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Responses to Comments – Sierra Clubs Los Cerritos Wetlands Task Force (ACH2)
Anna Christensen, Co-Chair
November 9, 2023

- ACH2-1** The comment supports the No Project Alternative. Per State CEQA Guidelines Section 15126.6, an EIR shall describe a range of reasonable alternatives to the project which would feasibly attain most of the basic objectives of the project but avoid or substantially lessen any significant effects of the project. EIR Section 5 (*Alternatives Comparison*) evaluates a range of reasonable alternatives to the Project, consistent with the requirements of State CEQA Guidelines Section 15126.6. Support for the No Project Alternative is noted; as stated in Section 5.2 (*Comparison of Alternatives*), the comparison of alternatives is intended to provide decision-makers with information about the merits and disadvantages of each alternative. This will assist decision-makers in the consideration of POLB's pending application for the proposed Project and to assist the public in understanding the differences between the alternatives.
- ACH2-2** The comment asserts that the Project conflicts with GHG reduction goals. The Project's compliance with GHG reduction policies and plans is discussed in EIR Section 3.1 (*Air Quality and Health Risk*), Section 3.2 (*Greenhouse Gas Emissions*), and Appendix B (World Oil Initial Study) Section III (*Air Quality*) and Section VIII (*Greenhouse Gas Emissions*), Table 6. Please refer to Response to Comment NW-6.
- ACH2-3** The comment disagrees with the EIR's less-than-significant conclusions and asserts the protections under Coastal Act Chapter 3 do not apply and were not considered in the 1990 Port Master Plan, as it was written before consideration of sea-level rise and climate change. The comment asserts that reliance on compliance with "existing plans, strategies, policies, and regulations" to reach less-than-significant conclusions is problematic. Then comment also states that the Project has no public benefit.
- As summarized in the EIR Sections 3.1 (*Air Quality and Health Risk*), 3.2 (*Geology and Soils*), 3.3 (*Greenhouse Gas Emissions*), 3.4 (*Hazards and Hazardous Materials*), and 3.5 (*Hydrology, Water Quality and Sea-Level Rise*), no potentially significant impacts have been identified for the World Oil Tank Installation Project. All impacts were determined to be "Less than Significant" because they would not exceed any Project-specific significant thresholds (see EIR Section ES.9, [*Environmental Impacts and Mitigation Measures*], and Table ES-2). Climate change is evaluated in EIR Section 3.3 (*Greenhouse Gas Emissions*), and sea-level rise is evaluated in EIR Section 3.5 (*Hydrology, Water Quality and Sea-Level Rise*). The commenter is unclear in how plans, strategies, policies, and regulations from other agencies like South Coast Air Quality Management District are problematic, as consistency with these reduces Project impacts. Per CEQA Guidelines Section 15124(b), a statement of objectives sought by a proposed project shall include the underlying purpose of the project and may discuss project benefits. However, project objectives are not required to solely benefit the public. The Project objectives were largely determined by the Applicant's goals and intended purpose of the Project.
- ACH2-4** The comment asserts that the EIR does not identify sensitive receptors within 3,200 feet of the Project, and states that 3,200 feet is recognized by the State as the distance in which sensitive receptors are affected by emissions. It is unclear what legislation identifies this distance in the context of air quality emissions analysis under

CEQA. It is presumed that the comment is referring to Senate Bill 1137, which creates a minimum health and safety distance of 3,200 feet between sensitive receptors and an oil and gas production well. Neither the proposed Project nor the Project site is an oil and gas production well, and therefore, this legislation is not applicable. EIR Section 3.1.1.3 (*Sensitive Receptors*) identifies the nearest residential receptors within 0.5 mile of the Project site as well as a school, hospital, and daycare center.

The comment states that the EIR should consider the cumulative impacts of the Project in the context of all the other existing petroleum storage facilities in the Port. Please refer to Response to Comment LCWTF-8.

ACH2-5 The comment states that reliance on the 1990 PMP regarding the risk of the 100-year storm event is insufficient because storm calculations/modeling have changed. EIR Section 3.5 (*Hydrology, Water Quality and Sea-Level Rise*) evaluates the Project's location in relation to flood zones identified by the Federal Emergency Management Agency (FEMA), not the 1990 PMP. Impact HWQ-1 discusses the Project's impacts related to inundation by flooding, tsunami, and sea-level rise.

The comment disagrees with the EIR's less-than-significant conclusion and asserts that analysis of Project compliance with existing regulations and policies appears to be advocating for projects. The EIR explains how compliance with existing policies and regulations reduces potential impacts. Furthermore, all impacts were determined to be "Less than Significant" because they would not exceed any Project-specific significant thresholds (see EIR Section ES.9, *Environmental Impacts and Mitigation Measures*, and Table ES-2). Section ES.1 (*Introduction/Background*) states that the EIR serves as an informational document to inform the decision-makers and the public of the significant environmental effect of a project, identify possible ways to minimize significant effects, and describe reasonable alternatives to the project (State CEQA Guidelines Section 15121[a]). The EIR does not conclude with a decision on the Project.

Appendix A

SCOPING DOCUMENTATION

1. Notice of Preparation and Proofs of Publication
2. Scoping Meeting Presentation
3. Scoping Comments Summary
4. Scoping Comments

ATTACHMENT 1
Notice of Preparation and Proofs of Publication



**NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT AND INITIAL STUDY
NOTICE OF PUBLIC SCOPING MEETINGS**

Date: January 30, 2023
Lead Agency: Port of Long Beach
Lead Agency Contact Person: Jennifer Blanchard **Phone Number:** (562) 283-7100
Project Title: World Oil Tank Installation Project
Project Applicant: Ribost Terminal, LLC (World Oil Terminals)
Harbor Development Permit Application No.: 19-066
Project Location: 1405 Pier C Street, Long Beach, California 90813
Northeast Long Beach Harbor District (District 2); Los Angeles County

In accordance with the California Environmental Quality Act (CEQA), the City of Long Beach Harbor Department (Port of Long Beach or Port), as the Lead Agency, has prepared this Notice of Preparation (NOP) and an Initial Study to seek input on the scope and content of the Environmental Impact Report (EIR) for the proposed World Oil Tank Installation Project. The Initial Study describes the proposed project and provides initial evaluation of the Project's potential environmental impacts.

This NOP initiates a 30-day public review and comment period starting on January 30, 2023 and ending on February 28, 2023 at 4 p.m.

Project Description: Ribost Terminal, LLC, doing business as World Oil Terminals (World Oil) proposes to construct and operate two additional, new 25,000-barrel petroleum storage tanks with internal floating roofs with new tank foundations and piping connections to existing facility infrastructure, including the truck loading racks. Crude oil currently stored by World Oil in two existing larger, underutilized tanks at the site would be moved to the two new, smaller tanks, which would provide more adequate storage for World Oil's operations. The two existing larger tanks would then be removed from World Oil's dedicated paving/roofing asphalt refinery service and made available to lease by third-party customers for storage of marine fuels and marine fuel blending components, as is currently done for four of the existing tanks at the facility. No new pipelines, truck loading racks, or other facility modifications are proposed at World Oil's Pier C Terminal, World Oil's paving/roofing asphalt refinery in South Gate, or third-party facilities.

Potential Environmental Impacts: The Initial Study, available as provided below, describes the proposed project and provides an initial evaluation of the Project's potential environmental impacts. Based on the Initial Study, it is anticipated that the following environmental resource areas, including related cumulative effects, will be addressed in the EIR: Air Quality and Health Risk, Green House Gas Emissions, Hazards and Hazardous Materials, and Hydrology and Water Quality.

Document Availability: The NOP and Initial Study can electronically be accessed on the Port of Long Beach website at: <https://www.polb.com/ceqa>. A physical copy of the NOP and Initial Study will be available for viewing at the following locations:

Port of Long Beach Administration Building
Environmental Planning Division, 7th Floor
415 West Ocean Boulevard
Long Beach, California 90802

Billie Jean King Main Library
200 West Broadway
Long Beach, California 90802

Bret Harte Neighborhood Library
1595 West Willow Street
Long Beach, California 90810

San Pedro Regional Branch Library
931 Gaffey Street
San Pedro, California 90731

Wilmington Branch Library
1300 North Avalon Boulevard
Wilmington, California 90744

Public Review Period: 30 days – **Begins:** Monday, January 30, 2023 – **Ends:** 4 p.m., Tuesday, February 28, 2023

Written Comments: Please send comments to Mr. Matthew Arms, Director of Environmental Planning, either electronically *via* email to ceqa@polb.com or by standard U.S. mail to Port of Long Beach, 415 West Ocean Boulevard, Long Beach, California 90802.

Public Scoping Meetings: The Port will host two public scoping meetings, one on-line virtual meeting and one in-person meeting, each providing the same content. During each meeting, a presentation on the proposed Project will be provided and comments will be solicited relative to the appropriate scope and content of the EIR.

Scoping Meeting #1 (Virtual)

Date: Wednesday, February 8, 2023

Time: 2:00 p.m.

Place: Virtual Meeting

Join Webex Meeting:

<https://polb.webex.com/polb/j.php?MTID=m17830079adecae1c72eca528d6dd0311>

Webex Number: 2489 744 3687

Webex Password: SMvzyPct472
(76899728 from phones)

Join by Telephone:

Call-in Number: (408) 418-9388

Webinar Access code: 248 974 43687

Scoping Meeting #2 (In-Person)

Date: Wednesday, February 15, 2023

Time: 6:00 p.m.

Place: Port of Long Beach Administration Building
Multi-Purpose Room, First Floor
415 West Ocean Boulevard
Long Beach, California 90802

**Please note there is no public parking available at the Port Administration Building. There are two public parking garages nearby at 101 Magnolia Avenue and 332 West Broadway. The Port does not provide parking validation at this time.*

Interpretation Services: If you require special accommodations or interpretation services to participate in the public scoping meeting, please contact the Environmental Planning Division at (562) 283-7100 or *via* email at ceqa@polb.com at least three working days (72 hours) prior to the public scoping meeting to ensure that reasonable arrangements can be made to provide interpretation services during the meeting

Americans with Disabilities Act: The Port of Long Beach provides reasonable accommodations in accordance with the Americans with Disabilities Act of 1990. If special accommodations are needed to participate in the public scoping meeting, please contact the Environmental Planning Division at (562) 283-7100 or *via* email at ceqa@polb.com at least three full working days (72 hours) prior to the meeting to ensure that reasonable arrangements can be made.

For More Information: Please contact the project manager, Jennifer Blanchard, Environmental Specialist at jennifer.blanchard@polb.com or (562) 283-7100.

Signed: _____



Matthew Arms
Director of Environmental Planning

Date: 1/30/2023

AVISO DE PREPARACION DE UN REPORTE DE IMPACTO AMBIENTAL Y ESTUDIO INICIAL
AVISO DE JUNTAS PÚBLICAS DE ALCANCE

Fecha: 30 de enero de 2023
Agencia principal: Puerto De Long Beach
Persona de contacto de la agencia principal: Jennifer Blanchard **Número de teléfono:** (562) 283-7100
Título del Proyecto: World Oil Tank Installation Project
Solicitante del proyecto: Ribost Terminal, LLC (World Oil Terminals)
Número de solicitud de permiso de desarrollo portuario: 19-066
Localización del proyecto: 1405 Pier C Street, Long Beach, California 90813
Distrito Portuario del Noreste de Long Beach (Distrito 2); Condado de Los Ángeles

De acuerdo con la Ley de Calidad Ambiental de California (CEQA), el Departamento del Puerto de la Ciudad de Long Beach (Puerto de Long Beach o Puerto), como Agencia Principal, ha preparado este Aviso de Preparación (NOP) y un Estudio Inicial para buscar información sobre el alcance y contenido del Informe de Impacto Ambiental (EIR) para el Proyecto de Instalación de Tanque Mundial de Petróleo propuesto. El Estudio Inicial describe el proyecto propuesto y proporciona una evaluación inicial de los impactos ambientales potenciales del Proyecto.

Este NOP inicia un período de comentarios y revisión pública de 30 días que comienza el 30 de enero de 2023 y termina el 28 de febrero de 2023 a las 4 p.m.

Descripción del Proyecto: Ribost Terminal, LLC, que opera como World Oil Terminals (World Oil), propone construir y operar dos nuevos tanques adicionales de almacenamiento de petróleo de 25,000 barriles con techos flotantes internos con nuevos cimientos de tanques y conexiones de tuberías a la infraestructura de las instalaciones existentes, incluida la carga de camiones bastidores. El petróleo crudo actualmente almacenado por World Oil en dos tanques subutilizados más grandes existentes en el sitio se trasladaría a los dos tanques nuevos y más pequeños, que proporcionarían un almacenamiento más adecuado para las operaciones de World Oil. Luego, los dos tanques más grandes existentes se retirarían del servicio de refinería de asfalto de pavimentación/techado dedicado de World Oil y se pondrían a disposición de clientes externos para el arrendamiento para el almacenamiento de combustibles marinos y componentes de mezcla de combustibles marinos, como se hace actualmente para cuatro de los tanques existentes en la instalación. No se proponen nuevos oleoductos, estantes de carga de camiones ni otras modificaciones en las instalaciones de la terminal Pier C de World Oil, la refinería de asfalto para pavimentación/techos de World Oil en South Gate o las instalaciones de terceros.

Ambiental potencial Impactos: El estudio inicial, disponible como se indica a continuación, describe el proyecto propuesto y proporciona una evaluación inicial de los impactos ambientales potenciales del Proyecto. Según el estudio inicial, se anticipa que las siguientes áreas de recursos ambientales se abordarán en el EIR: calidad del aire y riesgos para la salud, emisiones de gases de efecto invernadero, peligros y materiales peligrosos e hidrología y calidad del agua.

Disponibilidad de documentos: se puede acceder electrónicamente al NOP y al Estudio inicial en el sitio web del Puerto de Long Beach en: <https://www.polb.com/ceqa>. Una copia física del NOP y el estudio inicial estarán disponibles para su visualización en los siguientes lugares:

Edificio de administración del puerto de Long Beach
División de Planificación Ambiental, ^{Piso 7}
415 West Ocean Boulevard
Long Beach, California 90802

Biblioteca principal Billie Jean King
200 West Broadway
Long Beach, California 90802

Biblioteca del vecindario Bret Harte
1595 West Willow Street
Long Beach, California 90810

Biblioteca Sucursal Regional de San Pedro
931 Gaffey Street
San Pedro, California 90731

Sucursal de la biblioteca de Wilmington
1300 North Avalon Boulevard
Wilmington, California 90744

Período de revisión pública: 30 días – A partir del lunes 30 de enero de 2023 – terminando a las 4 p. m. del martes 28 de febrero de 2023

Comentarios por escrito: envíe sus comentarios al Sr. Matthew Arms, Director de Planificación Ambiental, ya sea electrónicamente por correo electrónico a: ceqa@polb.com o por correo postal al Puerto de Long Beach, 415 West Ocean Boulevard, Long Beach, California 90802.

Reuniones públicas de alcance: El puerto albergará dos reuniones públicas de alcance, una reunión virtual en línea y una reunión en persona, cada una con el mismo contenido. Durante cada reunión, se proporcionará una presentación sobre el Proyecto propuesto y se solicitarán comentarios en relación con el alcance y el contenido apropiados del EIR.

Junta de alcance # 1 (virtual)

Fecha: miércoles, 8 de febrero de 2023

Hora: 2:00 p.m.

Lugar: Reunión virtual

Únase a la reunión de Webex :

<https://polb.webex.com/polb/j.php?MTID=m17830079adecae1c72eca528d6dd0311>

Webex : 2489 744 3687

de Webex : SMvzyPct472

(76899728 desde teléfonos)

Únase por teléfono:

Número de llamada: (408) 418-9388

Código de acceso al seminario web: 248 974 43687

Junta de alcance #2 (en persona)

Fecha: miércoles, 15 de febrero de 2023

Hora: 6:00 p.m.

Lugar: Edificio de administración del Puerto de Long Beach
Salón de Usos Múltiples, Primer Piso
415 West Ocean Boulevard
Playa larga, California 90802

**Tenga en cuenta que no hay estacionamiento público disponible en el edificio de administración del puerto. Hay dos estacionamientos públicos cerca en 101 Magnolia Avenue y 332 West Broadway. El puerto no proporciona validación de estacionamiento en este momento.*

Servicios de interpretación: Si necesita adaptaciones especiales o servicios de interpretación para participar en la reunión pública de alcance, comuníquese con la Environmental Planning Division al (562) 283-7100 o por correo electrónico a ceqa@polb.com al menos tres días (72 horas) antes de la junta pública de alcance para garantizar que se puedan hacer arreglos razonables para proporcionar servicios de interpretación durante la reunión

Ley de Estadounidenses con Discapacidades: El Puerto de Long Beach proporciona adaptaciones razonables de acuerdo con la Ley de Estadounidenses con Discapacidades de 1990. Si se necesitan adaptaciones especiales para participar en la reunión pública de alcance, comuníquese con la Environmental Planning Division al (562) 283-7100 o por correo electrónico a ceqa@polb.com al menos tres días hábiles completos (72 horas) antes de la reunión para garantizar que se puedan hacer arreglos razonables.

Para obtener más información: Comuníquese con la gerente del proyecto, Jennifer Blanchard, especialista ambiental en jennifer.blanchard@polb.com o (562) 283-7100.

Firmado:



Matthew Arms
Director de Planificación Ambiental

Fecha:

1/30/2023



NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT AND INITIAL STUDY NOTICE OF PUBLIC SCOPING MEETINGS Date: January 30, 2023 Lead Agency: Port of Long Beach Lead Agency Contact Person: Jennifer Blanchard Phone Number: (562) 283-7100 Project Title: World Oil Tank Installation Project Project Applicant: Ribost Terminal, LLC (World Oil Terminals) Harbor Development Permit Application No.: 19-066 Project Location: 1405 Pier C Street, Long Beach, California 90813 Northeast Long Beach Harbor District (District 2); Los Angeles County In accordance with the California Environmental Quality Act (CEQA), the City of Long Beach Harbor Department (Port of Long Beach or Port), as the Lead Agency, has prepared this Notice of Preparation (NOP) and an Initial Study to seek input on the scope and content of the Environmental Impact Report (EIR) for the proposed World Oil Tank Installation Project. The Initial Study describes the proposed project and provides initial evaluation of the Project's potential environmental impacts. This NOP initiates a 30-day public review and comment period starting on January 30, 2023 and ending on February 28, 2023 at 4 p.m. Project Description: Ribost Terminal, LLC, doing business as World Oil Terminals (World Oil) proposes to construct and operate two additional, new 25,000-barrel petroleum storage tanks with internal floating roofs with new tank foundations and piping connections to existing facility infrastructure, including the truck loading racks. Crude oil currently stored by World Oil in two existing larger, underutilized tanks at the site would be moved to the two new, smaller tanks, which would provide more adequate storage for World Oil's operations. The two existing larger tanks would then be removed from World Oil's dedicated paving/roofing asphalt refinery service and made available to lease by third-party customers for storage of marine fuels and marine fuel blending components, as is currently done for four of the existing tanks at the facility. No new pipelines, truck loading racks, or other facility modifications are proposed at World Oil's Pier C Terminal, World Oil's paving/roofing asphalt refinery in South Gate, or third-party facilities. Potential Environmental Impacts: The Initial Study, available as provided below, describes the proposed project and provides an initial evaluation of the Project's potential environmental impacts. Based on the Initial Study, it is anticipated that the following environmental resource areas, including related cumulative effects, will be addressed in the EIR: Air Quality and Health Risk, Green House Gas Emissions, Hazards and Hazardous Materials, and Hydrology and Water Quality. Document Availability: The NOP and Initial Study can electronically be accessed on the Port of Long Beach website at: <https://www.polb.com/ceqa>. A physical copy of the NOP and Initial Study will be available for viewing at the following locations: Public Review Period: 30 days Begins: Monday, January 30, 2023 Ends: 4 p.m., Tuesday, February 28, 2023 Written Comments: Please send comments to Mr. Matthew Arms, Director of Environmental Planning, either electronically via email to ceqa@polb.com or by standard U.S. mail to Port of Long Beach, 415 West Ocean Boulevard, Long Beach, California 90802. Public Scoping Meetings: The Port will host two public scoping meetings, one on-line virtual meeting and one in-person meeting, each providing the same content. During each meeting, a presentation on the proposed Project will be provided and comments will be solicited relative to the appropriate scope and content of the EIR. Port of Long Beach Administration Building Billie Jean King Main Library Bret Harte Neighborhood Library Environmental Planning Division, 7th Floor 200 West Broadway 1595 West Willow Street 415 West Ocean Boulevard Long Beach, California 90802 Long Beach, California 90810 Long Beach, California 90802 San Pedro Regional Branch Library Wilmington Branch Library 931 Gaffey Street 1300 North Avalon Boulevard San Pedro, California 90731 Wilmington, California 90744 Public Review Period: 30 days Begins: Monday, January 30, 2023 Ends: 4 p.m., Tuesday, February 28, 2023 Written Comments: Please send comments to Mr. Matthew Arms, Director of Environmental Planning, either electronically via email to ceqa@polb.com or by standard U.S. mail to Port of Long Beach, 415 West Ocean Boulevard, Long Beach, California 90802. Public Scoping Meetings: The Port will host two public scoping meetings, one on-line virtual meeting and one in-person meeting, each providing the same content. During each meeting, a presentation on the proposed Project will be provided and comments will be solicited relative to the appropriate scope and content of the EIR. Scoping Meeting #1 (Virtual) Scoping Meeting #2 (In-Person) Date: Wednesday, February 8, 2023 Date: Wednesday, February 15, 2023 Time: 2:00 p.m. Time: 6:00 p.m. Place: Virtual Meeting Place: Port of Long Beach Administration Building Multi-Purpose Room, First Floor Join Webex Meeting: 415 West Ocean Boulevard Long Beach, California 90802 <https://polb.webex.com/polb/j.php?MTID=m17830079adecae1c72eca528d6dd0311> Webex Number: 2489 744 3687 (76899728 from phones) *Please note there is no public parking available at the Port Administration Building. There are two public parking garages nearby at 101 Magnolia Avenue and Join by Telephone: 332 West Broadway. The Port does not provide parking Call-in Number: (408) 418-9388 validation at this time. Webinar Access code: 248 974 43687 Interpretation Services: If you require special accommodations or interpretation services to participate in the public scoping meeting, please contact the Environmental Planning Division at (562) 283-7100 or via email at ceqa@polb.com at least three working days (72 hours) prior to the public scoping meeting to ensure that reasonable arrangements can be made to provide interpretation services during the meeting Americans with Disabilities Act: The Port of Long Beach provides reasonable accommodations in accordance with the Americans with Disabilities Act of 1990. If special accommodations are needed to participate in the public scoping meeting, please contact the Environmental Planning Division at (562) 283-7100 or via email at ceqa@polb.com at least three full working days (72 hours) prior to the meeting to ensure that reasonable arrangements can be made. For More Information: Please contact the project manager, Jennifer Blanchard, Environmental Specialist at jennifer.blanchard@polb.com or (562) 283-7100. Pub Jan 30, 2023 PT Ad# 11583386

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<u>Order Taker</u> Tammy Butikofer	<u>Customer Address</u> 415 WEST OCEAN BLVD PO BOX 570 LONG BEACH, CA 90802	<u>Payor Address</u> 415 WEST OCEAN BLVD PO BOX 570 LONG BEACH, CA 90802	<u>Customer Fax</u>
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NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT AND INITIAL STUDY NOTICE OF PUBLIC SCOPING MEETINGS

Date: January 30, 2023

Lead Agency: Port of Long Beach

Lead Agency Contact Person: Jennifer Blanchard

Phone Number: (562) 283-7100

Project Title: World Oil Tank Installation Project

Project Applicant: Ribost Terminal, LLC (World Oil Terminals)

Harbor Development Permit Application No. : 19-066

Project Location: 1 405 Pier C Street, Long Beach, California 90813
Northeast Long Beach Harbor District (District 2); Los Angeles County

In accordance with the California Environmental Quality Act (CEQA), the City of Long Beach Harbor Department (Port of Long Beach or Port), as the Lead Agency, has prepared this Notice of Preparation (NOP) and an Initial Study to seek input on the scope and content of the Environmental Impact Report (EIR) for the proposed World Oil Tank Installation Project. The Initial Study describes the proposed project and provides initial evaluation of the Project's potential environmental impacts.

This NOP initiates a 30-day public review and comment period starting on January 30, 2023 and ending on February 28, 2023 at 4 p.m.

Project Description: Ribost Terminal, LLC, doing business as World Oil Terminals (World Oil) proposes to construct and operate two additional, new 25,000-barrel petroleum storage tanks with internal floating roofs with new tank foundations and piping connections to existing facility infrastructure, including the truck loading racks. Crude oil currently stored by World Oil in two existing larger, underutilized tanks at the site would be moved to the two new, smaller tanks, which would provide more adequate storage for World Oil's operations. The two existing larger tanks would then be removed from World Oil's dedicated paving/roofing asphalt refinery service and made available to lease by third-party customers for storage of marine fuels and marine fuel blending components, as is currently done for four of the existing tanks at the facility. No new pipelines, truck loading racks, or other facility modifications are proposed at World Oil's Pier C Terminal, World Oil's paving/roofing asphalt refinery in South Gate, or third-party facilities.

Potential Environmental Impacts: The Initial Study, available as provided below, describes the proposed project and provides an initial evaluation of the Project's potential environmental impacts. Based on the Initial Study, it is anticipated that the following environmental resource areas, including related cumulative effects, will be addressed in the EIR: Air Quality and Health Risk, Green House Gas Emissions, Hazards and Hazardous Materials, and Hydrology and Water Quality.

Document Availability: The NOP and Initial Study can electronically be accessed on the Port of Long Beach website at: <https://www.polb.com/ceqa>. A physical copy of the NOP and Initial Study will be available for viewing at the following locations:

Public Review Period: 30 days – Begins: Monday, January 30, 2023 – Ends: 4 p.m., Tuesday, February 28, 2023
Written Comments: Please send comments to Mr. Matthew Arms, Director of Environmental Planning, either electronically via email to ceqa@polb.com or by standard U.S. mail to Port of Long Beach, 415 West Ocean Boulevard, Long Beach, California 90802.

Public Scoping Meetings: The Port will host two public scoping meetings, one on-line virtual meeting and one in-person meeting, each providing the same content. During each meeting, a presentation on the proposed Project will be provided and comments will be solicited relative to the appropriate scope and content of the EIR.

Port of Long Beach Administration Building
Environmental Planning Division, 7 th Floor
415 West Ocean Boulevard
Long Beach, California 90802

Billie Jean King Main Library
200 West Broadway
Long Beach, California 90802

Bret Harfe Neighborhood Library
1595 West Willow Street
Long Beach, California 90810

San Pedro Regional Branch Library
931 Gaffey Street
San Pedro, California 90731

Wilmington Branch Library
1300 North Avalon Boulevard
Wilmington, California 90744

Public Review Period : 30 days – **Begins :** Monday, January 30, 2023 – **Ends :** 4 p.m., Tuesday, February 28, 2023
Written Comments: Please send comments to Mr. Matthew Arms, Director of Environmental Planning, either electronically via email to ceqa@polb.com or by standard U.S. mail to Port of Long Beach, 415 West Ocean Boulevard, Long Beach, California 90802.

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Scoping Meeting #1 (Virtual)

Date : Wednesday, February 8, 2023

Time: 2:00 p.m.

Place: Virtual Meeting

Join Webex Meeting:

<https://polb.webex.com/polb/jl.php?MTID=m17830079adecae1c72eca528d6dd0311>
Webex Number: 2489 744 3687
(76899728 from phones)

Join by Telephone:
Call-in Number: (408) 418-9388
Webinar Access code: 248 974 43687

Scoping Meeting #2 (In-Person)

Date: Wednesday, February 15, 2023

Time: 6:00 p.m.

Place: Port of Long Beach Administration Building
Multi-Purpose Room, First Floor
415 West Ocean Boulevard
Long Beach, California 90802

*Please note there is no public parking available at the Port Administration Building. There are two public parking garages nearby at 101 Magnolia Avenue and 332 West Broadway. The Port does not provide parking validation at this time.

Interpretation Services: If you require special accommodations or interpretation services to participate in the public scoping meeting, please contact the Environmental Planning Division at (562) 283-7100 or via email at ceqa@polb.com at least three working days (72 hours) prior to the public scoping meeting to ensure that reasonable arrangements can be made to provide interpretation services during the meeting

Americans with Disabilities Act: The Port of Long Beach provides reasonable accommodations in accordance with the Americans with Disabilities Act of 1990. If special accommodations are needed to participate in the public scoping meeting, please contact the Environmental Planning Division at (562) 283-7100 or via email at ceqa@polb.com at least three full working days (72 hours) prior to the meeting to ensure that reasonable arrangements can be made.

For More Information: Please contact the project manager, Jennifer Blanchard, Environmental Specialist at jennifer.blanchard@polb.com or (562) 283-7100.

Pub Jan 30, 2023 PT Ad# 11583386

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ATTACHMENT 2
Scoping Meeting Presentation



Public Scoping Meeting

In-Person Meeting • Wednesday, February 15, 2023 • 6 p.m.

Reunión de Alcance Público

Reunión en Persona • Miércoles, 15 de Febrero de 2023 • 6 p.m.

The meeting will begin shortly
la reunión comenzará en breve

This meeting is being recorded
Esta reunion esta siendo grabada

Spanish Interpretation

Interpretación en Español

- For Spanish Interpretation of today's meeting, request a headset from staff seated at the table.

Para la interpretación en español de la reunión de hoy, solicite unos auriculares al personal sentado en la mesa.



Public Scoping Meeting

In-Person Meeting • Wednesday, February 15, 2023 • 6 p.m.

Reunión de Alcance Público

Reunión en persona • Miércoles, 15 de Febrero de 2023 • 6 p.m.



Public Comments

Comentarios Públicos

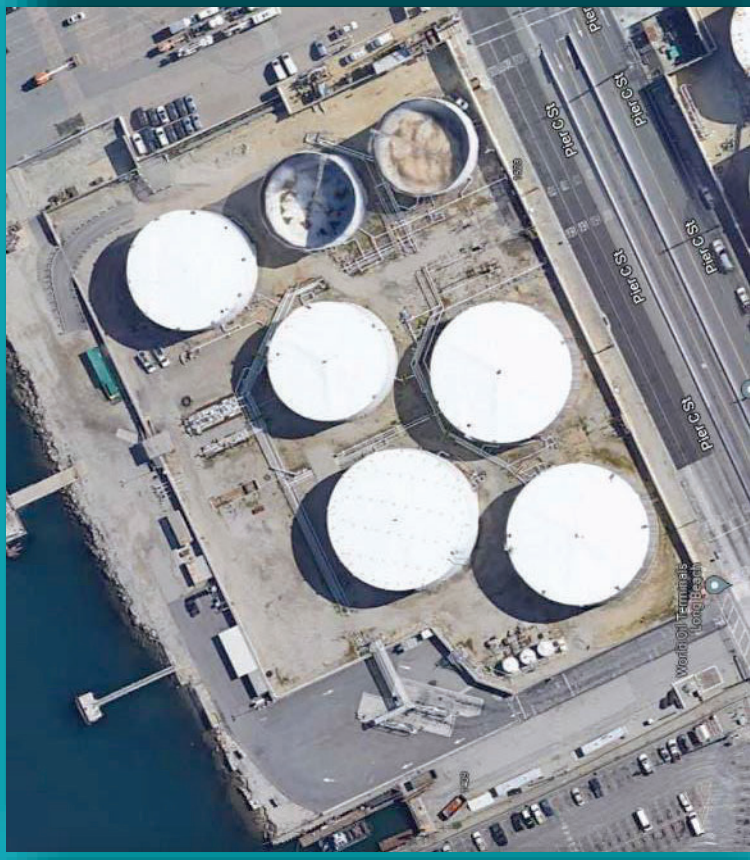
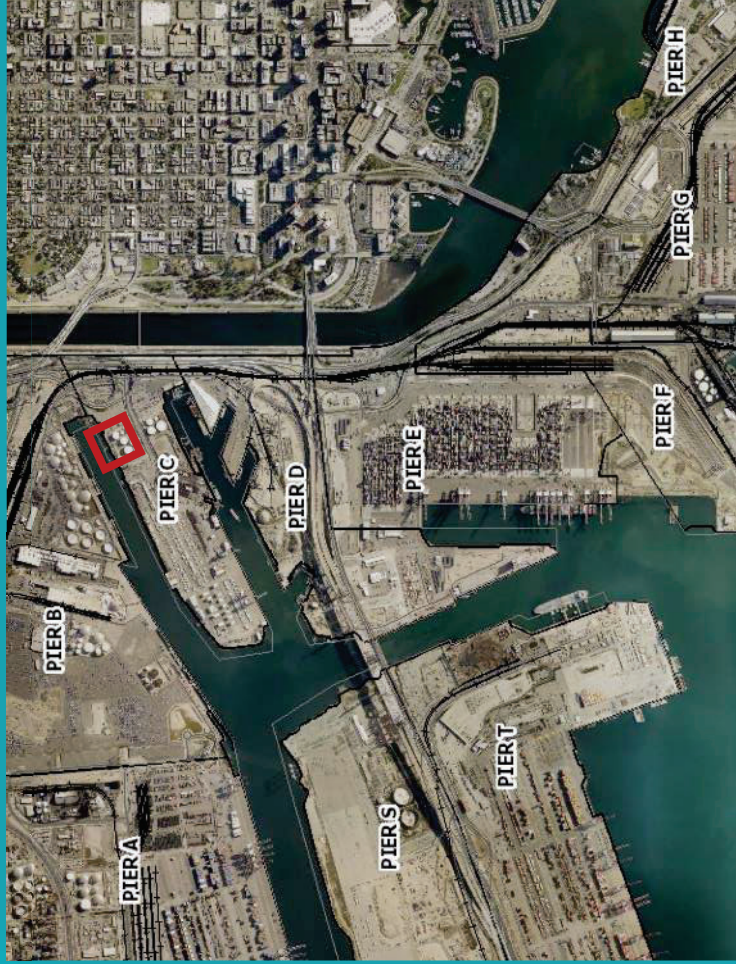
- If you would like to provide comment please submit a Speaker Card

Si desea proporcionar un comentario, envíe una Tarjeta de orador

- Please wait for your name to be called
Por favor espere a que llamen su nombre

Project Location

Localización del Proyecto



World Oil Tank Installation Project

Proposed Project

Proyecto Propuesto

Truck Racks
*Bastidores de
Camiones*

Main Gate
*Puerta
Principal*

- **Two New 25,000-Barrel Storage Tanks and Foundations**
Dos Nuevos Tanques de Almacenamiento de 25,000 Barriles y Cimentaciones
- **Tank Pumps**
Bombas de tanque
- **Pipeline connections to existing facility infrastructure**
Conexiones de tuberías a la infraestructura de las instalaciones existentes
- **Electrical conduit connections**
Conexiones de conductos electricos

Project Objectives

Objetivos del Proyecto

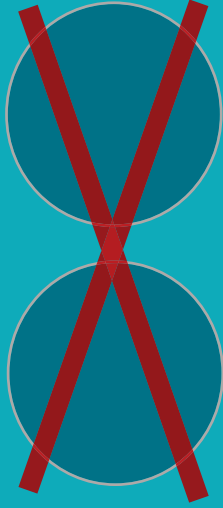
The two new 25,000-Barrel storage tanks would:

Los dos nuevos tanques de almacenamiento de 25,000 barriles:

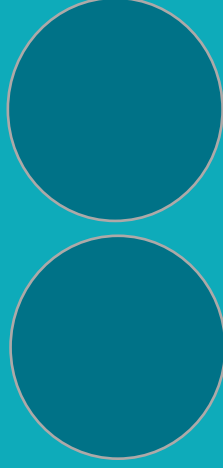
- Increase the efficiency of World Oil Terminals' operations;
Aumentar la eficiencia de las operaciones de World Oil Terminals;
- Realign World Oil's storage capacity needs; and
Realignar las necesidades de capacidad de almacenamiento de World Oil Terminals; y
- Make existing tanks available for lease.
Hacer que los tanques existentes estén disponibles para arrendamiento.

Project Alternatives

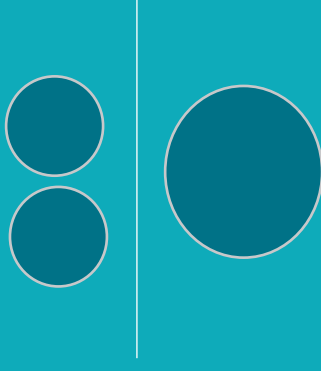
Alternativas de Proyecto



No Project
Sin Proyecto



**Proposed
Project**
Proyecto Propuesto



Reduced Tank Capacity
Capacidad del tanque reducida

Environmental Issues

Cuestiones Ambientales

Air Quality & Health Risk

Calidad del aire y riesgo para la salud

Geology & Soils

Geología y suelos

Greenhouse Gas Emissions

Gases de invernadero

Hazards & Hazardous Materials

Peligros y materiales peligrosos

Hydrology & Water Quality

Hidrología y calidad del agua

Aesthetics

Estética

Agriculture & Forestry Resources

Recursos Agrícolas y Forestales

Biological Resources

Recursos Biológicos

Cultural Resources

Recursos Culturales

Energy

Energía

Land Use & Planning

Ordenamiento y Ordenamiento Territorial

Mineral Resources

Recursos Minerales

Noise

Ruido

Population & Housing

Población y Vivienda

Public Services

Servicios públicos

Recreation

Recreación

Transportation

Transporte

Tribal Cultural Resources

Recursos Culturales Tribales

Utilities & Service Systems

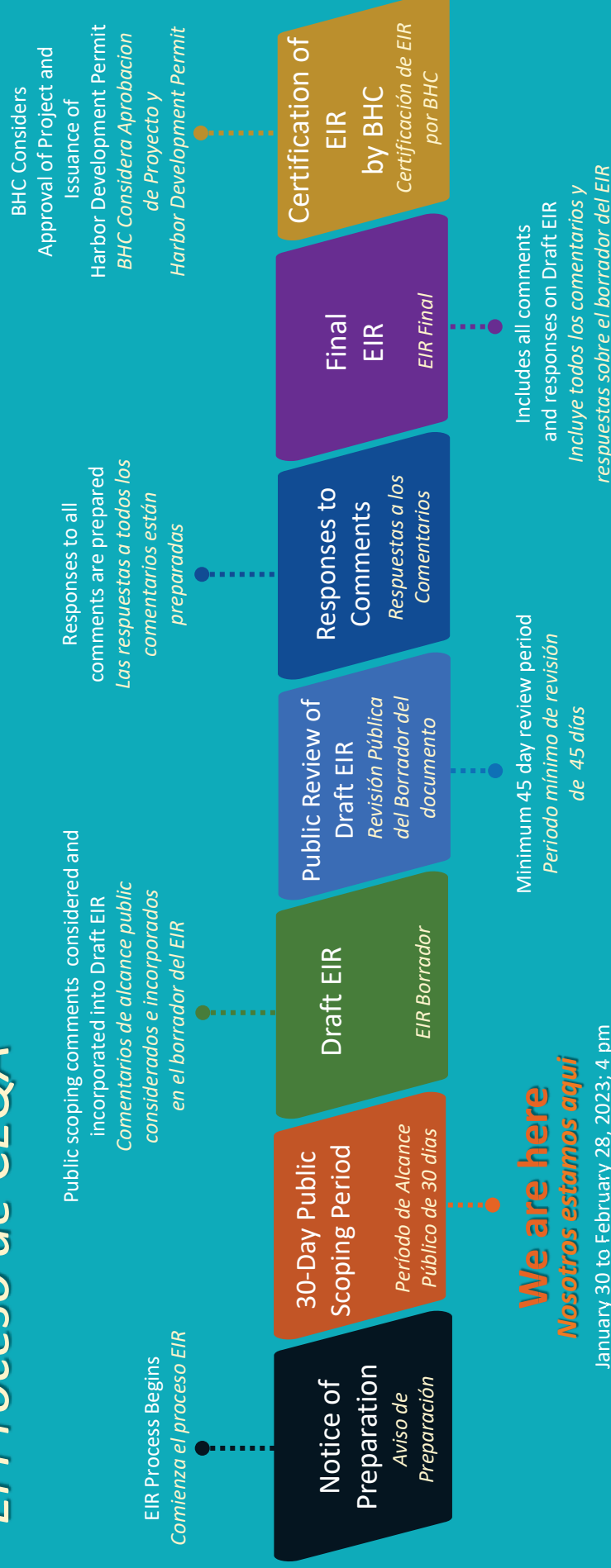
Utilidades y Sistemas de Servicio

Wildfire

Incendio Forestal

The CEQA Process

El Proceso de CEQA



We are here
Nosotros estamos aquí
January 30 to February 28, 2023; 4 pm
30 de Enero al 28 de Febrero de 2023; 4pm

Public Comments

Comentarios Públicos

Please wait for your name to be called

Por favor espere a que llamen su nombre

This meeting is being recorded
Esta reunion esta siendo grabada

Written Comments

Comentarios Escritos

Via U.S. Mail or Delivery Service:
*a través del correo de U.S. Mail o servicio
de entrega:*

Mr. Matthew Arms
Director of Environmental Planning
Port of Long Beach
415 W. Ocean Blvd., 7th Floor
Long Beach, CA 90802

via email:
vía correo electrónico:
ceqa@polb.com

Document Availability

Disponibilidad de Documentos

Notice of Preparation and Initial Study are available at:

Aviso de Preparación y Estudio Inicial disponible en:

Port of Long Beach

415 W. Ocean Boulevard, 7th Floor
Long Beach

Billie Jean King Main Library

200 W. Broadway
Long Beach

Bret Harte Neighborhood Library

1595 Willow Street
Long Beach

San Pedro Regional Branch Library

931 S. Gaffey Street
San Pedro

Wilmington Branch Library

1300 N. Avalon Boulevard
Wilmington

Thank You

Gracias

Send comments to:

Enviar comentarios a:

Mr. Matthew Arms
Director of Environmental Planning
Port of Long Beach
415 W. Ocean Blvd., 7th Floor
Long Beach, CA 90802

via email:
vía correo electrónico:
ceqa@polb.com

Comment period closes Tuesday,
February 28, 2023 at 4 p.m.
El período de comentarios Cierra
el Martes 28 de Febrero de 2023, 4 p.m.

For more information on the proposed project, please contact:

Para mas informacion sobre el Proyecto, comuníquese con:

Jennifer Blanchard, Environmental Specialist
jennifer.Blanchard@polb.com or (562) 283-7100

ATTACHMENT 3
Scoping Comments Summary

Scoping Comments Summary

Commenter	Comment Summary	EIR Section Addressing Comment
Native American Heritage Commission (NAHC) – Andrew Green, Cultural Resources Analyst	The NAHC notes that CEQA has been amended to add a separate category for “tribal cultural resources.” Also, Assembly Bill 52 (AB 52) applies to any project for which a NOP or notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015. Senate Bill 18 (SB 18) applies if the project involves adoption of or amendment to a general plan or specific plan. The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project as early as possible. Additional requirements of AB 52 and SB 18 were provided. NAHC outlines recommendations for cultural resources assessments.	Section 1.7 (Environmental Resources Not Affected by the Proposed Project) Appendix B, Initial Study, Section 2-XVIII (Tribal Cultural Resources)
Russ McCurdy	Mr. McCurdy asserts that an increased number of storage tanks would result in more tanker truck traffic on highways already experiencing heavy traffic (I-170, CA-47, I-110, and CA-103), as well as more air pollution. Mr. McCurdy recommends that World Oil Terminals contribute to highway improvements to reduce impacts.	Section 1.7 (Environmental Resources Not Affected by the Proposed Project) Section 3.1 (Air Quality and Health Risk) Appendix B, Initial Study, Section 2-XVII (Transportation)
Long Beach Area Chamber of Commerce – Kate Lomas Gutierrez/Jeremy Harris	Letter of Support – Project will support the Port’s goals related to the reduction of emissions, creation of employment opportunities, and increased Port productivity. The Project will provide storage and efficiency benefits, as well as contribute to employment by maintaining existing jobs at terminals and supporting the creation of more jobs during the construction phase. The new storage tanks would meet or exceed all Federal and Air Quality Management District (AQMD) emission reduction requirements.	N/A
FuturePorts – Kat Janowicz, Chair, Board of Directors	Letter of Support – Project will provide storage and efficiency benefits; contribute to employment; and provide surge capacity for blending and storage of marine fuels to meet cleaner IMO 2020 standards, which will directly benefit Port tenants who use these fuels. The new storage tanks would meet or exceed all Federal and Air Quality Management District (AQMD) emission reduction requirements.	N/A
South Bay Association of Chambers of Commerce – Mark Waronek, SBACC Board Chair	Letter of Support – Reiterates the same points as the Long Beach Chamber of Commerce.	N/A
Gabrieleno Band of Mission Indians – Kizh Nation – Andrew Salas, Chairman	The Gabrieleno Band of Mission Indians – Kizh Nation’s Tribal Government requests consultation with the Port to discuss the Project and the surrounding location, as the World Oil Terminal is within their Ancestral Tribal Territory.	Section 1.7 (Environmental Resources Not Affected by the Proposed Project) Appendix B, Initial Study, Section 2-XVIII (Tribal Cultural Resources)
California Department of Transportation (Caltrans)– Miya Edmonson, LDR/CEQA Branch Chief	Caltrans notes that the Project would result in less-than-significant impacts on transportation facilities during construction and operation. Caltrans states that any transportation of heavy construction equipment and/or materials that requires the use of oversized-transport vehicles on State highways would need a Caltrans transportation permit. Caltrans recommends that large-size truck trips be limited to off-peak commute periods.	Section 1.7 (Environmental Resources Not Affected by the Proposed Project) Appendix B, Initial Study, Section 2-XVII (Transportation)

Commenter	Comment Summary	EIR Section Addressing Comment
Earthjustice – Oscar Espino-Padron, Senior Attorney/Shana Emile, Senior Associate Attorney	Earthjustice notes that the Project would add to the cumulative air and climate change impacts that fossil fuel infrastructure and other polluting operations currently place on surrounding communities, and as such, the EIR should disclose critical information about the health and environmental impacts of the Project. It is also noted that the Initial Study underestimates potential environmental impacts and should be analyzed in detail in the EIR, including how the Project would impact air quality, climate, and the Port's environmental commitments. The commitments that were described as in conflict with the Project include the Port's Green Port Policy, the South Coast AQMD's 2022 Air Quality Management Plan, and the California State Air Resources Board's 2022 Scoping Plan to reduce GHG emissions.	Section 3.1 (Air Quality and Health Risk) Section 3.2 (Greenhouse Gas Emissions (Global Climate Change))
Dr. Clyde T. (Tom) Williams, President Emeritus Citizens Coalition for A Safe Community, Sierra Club Angeles Water and Transportation Committees	Dr. Williams requests details regarding the proposed Project, site, and operations, for example inventories of onsite liquids. Past annual uses, modes of transport, historic aerial photos and satellite images of the site, and existing physical limitations. Requests the provision of alternatives, specific mitigation measures, and other measures to be implemented, such as alternatives that would not be subject to tsunami inundation risk and mitigation for all construction activities, including 100 percent impervious surfaces at the Project site. Dr. Williams notes concerns specific to geology, air quality, hazardous materials, and historic resources and requests the revision and recirculation of the Initial Study.	Section 1 (Introduction and Project Description) Section 3.1 (Air Quality and Health Risk) Section 3.3 (Geology and Soils) Section 3.4 (Hazards and Hazardous Materials) Section 4 (Alternatives Comparison) Appendix B, Initial Study, Section 2-V (Cultural Resources)
Long Beach Unified School District, Business Services Department Facilities Development & Planning – David Miranda, Executive Director	The District requests that the Port provide truck routes and construction vehicles to avoid streets adjacent to schools (Edison and Chavez Elementary Schools) and detailed information regarding how the increase in emissions would not impact school age children nearby. The District also requests that the Port ensure the established safe walking routes are not impeded in relation to nearby schools and clarify if the 10% truck traffic increase includes additional traffic from the leased portion of the property.	Section 1.7 (Environmental Resources Not Affected by the Proposed Project) Section 3.1 (Air Quality and Health Risk) Appendix B, Initial Study, Section 2-XVII (Transportation)
BizFed – John Musella, Chair Santa Clarita Valley Chamber/ David Fleming, Founding Chair/Tracy Hernandez, Founding CEO/David Englin, President	Letter of Support – With the addition of the two smaller tanks, the Project will be able to provide surge capacity for blending and storage of marine fuels to meet cleaner IMO 2020 standards, and support industries who help our state become more resilient by utilizing recycled materials and using already existing infrastructure to meet our economy's critical infrastructure demands. Adding storage capacity to the World Oil facilities is in the best interest of California policies.	N/A
World Oil Employees	Letter of Support – Petition signed by 19 employees stating the Project will reduce marine emissions from ships and can be used for renewable fuels in the future. The new storage tanks would meet or exceed all Federal and AQMD emission reduction requirements. The Project will contribute to a cleaner and more sustainable future and secure jobs.	N/A

ATTACHMENT 4
Scoping Comments



NATIVE AMERICAN HERITAGE COMMISSION

February 1, 2023

Jennifer Blanchard
Port of Long Beach
415 W. Ocean Blvd.
Long Beach, CA 90802

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
Sara Dutschke
Miwok

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Buffy McQuillen
Yokayo Pomo, Yuki,
Nomlaki

COMMISSIONER
Wayne Nelson
Luiseño

COMMISSIONER
Stanley Rodriguez
Kumeyaay

COMMISSIONER
[Vacant]

COMMISSIONER
[Vacant]

EXECUTIVE SECRETARY
**Raymond C.
Hitchcock**
Miwok/Nisenan

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

Re: 2020100119, World Oil Tank Installation Project, Los Angeles County

Dear Ms. Blanchard:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

- 1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project:** Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

 - a. A brief description of the project.
 - b. The lead agency contact information.
 - c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
 - d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).
- 2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report:** A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

 - a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).
- 3. Mandatory Topics of Consultation If Requested by a Tribe:** The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

 - a. Alternatives to the project.
 - b. Recommended mitigation measures.
 - c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).
- 4. Discretionary Topics of Consultation:** The following topics are discretionary topics of consultation:

 - a. Type of environmental review necessary.
 - b. Significance of the tribal cultural resources.
 - c. Significance of the project's impacts on tribal cultural resources.
 - d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).
- 5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process:** With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).
- 6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document:** If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

 - a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
 - b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

- 7. Conclusion of Consultation:** Consultation with a tribe shall be considered concluded when either of the following occurs:
- The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
 - A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).
- 8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document:** Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).
- 9. Required Consideration of Feasible Mitigation:** If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).
- 10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:**
- Avoidance and preservation of the resources in place, including, but not limited to:
 - Planning and construction to avoid the resources and protect the cultural and natural context.
 - Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
 - Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - Protecting the cultural character and integrity of the resource.
 - Protecting the traditional use of the resource.
 - Protecting the confidentiality of the resource.
 - Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
 - Protecting the resource. (Pub. Resource Code §21084.3 (b)).
 - Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
 - Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).
- 11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource:** An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
- The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
 - The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
 - The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. **Tribal Consultation:** If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. **No Statutory Time Limit on SB 18 Tribal Consultation.** There is no statutory time limit on SB 18 tribal consultation.
3. **Confidentiality:** Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. **Conclusion of SB 18 Tribal Consultation:** Consultation should be concluded at the point in which:
 - a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
 - b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:
 - a. If part or all of the APE has been previously surveyed for cultural resources.
 - b. If any known cultural resources have already been recorded on or adjacent to the APE.
 - c. If the probability is low, moderate, or high that cultural resources are located in the APE.
 - d. If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
 - b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:

- a.** A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
- b.** A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

- a.** Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
- b.** Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
- c.** Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address:

Andrew.Green@nahc.ca.gov

Sincerely,



Andrew Green
Cultural Resources Analyst

cc: State Clearinghouse

From: [Russ McCurdy](#)
To: [Port of Long Beach Environmental Planning](#)
Subject: Comments to Petroleum Tanks Project
Date: Wednesday, February 1, 2023 9:18:00 AM

Installation of more petroleum storage tanks will bring more tanker truck traffic on the I-710, CA-47, I-110 and the CA-103. These highways already experience daily severe congestion. With more trucks there will be more and longer periods of severe congestion. More congestion will bring more air pollution not only from the new trucks, but also from the existing traffic travelling slower and thus polluting our atmosphere for longer periods of time.

The environmental impact statement should include the increased truck and auto pollution created by the increased severe congestion.

The World Oil Terminals should be required to contribute to the widening and efficiency improvements of the impacted highways to reduce the congestion and minimize the impact on pollution.

Best regards,
Russ McCurdy

From: [Sarah Wiltfong](#)
To: [Port of Long Beach Environmental Planning](#)
Subject: BizFed Comments re: World Oil Expansion
Date: Tuesday, February 7, 2023 10:33:27 AM
Attachments: [We found suspicious links.msg](#)

Dear Matthew Arms,

Please find attached BizFed's support for the World Oil Expansion Project at the Port of Long Beach. If you have any questions, please let me know.

Sincerely,



Sarah Wiltfong, Director of Advocacy & Policy
(310) 213-8742 - sarah.wiltfong@bizfed.org
Los Angeles County Business Federation
A grassroots alliance of 235 diverse business groups
mobilizing 410,000 employers with 5 million employees
[#BusinessMakesCAWork](#)

1/02/2023

Mayor Rex Richardson
Members of City Council
City of Long Beach
411 W. Ocean Blvd.
Long Beach, CA 90802

Via email

RE: World Oil Terminals - Ribost Terminal, LLC Project – SUPPORT

Dear Honorable Mayor Richardson and Honorable City Councilmembers:

We are contacting you on behalf of BizFed, the Los Angeles County Business Federation, an alliance of over 236 business organizations with over 410,000 employers in Los Angeles County, to write in of the World Oil Tank Installation Project. This project would provide additional storage capacity at their Port facility to increase the efficiency of their terminal operations.

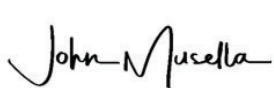
World Oil is principally a recycler of used oils and waste antifreeze. The company collects, transports, and recycles used waste oil products from over 20,000 auto repair and auto servicing sites in CA, NV, AZ and NM. At its facility in South Gate, World Oil makes asphalts for paving and roofing applications. Its facility at the Port has 7 tanks that store feed for the asphalt plant and leases tanks for bunker fuel.

The proposed project will add two smaller tanks to add flexibility and increase the efficiency of its operations. With the addition of the two smaller tanks, the project will be able to provide surge capacity for blending and storage of marine fuels to meet cleaner IMO 2020 standards, which will directly benefit Port tenants who use these fuels. What's more, this Project will have no significant environmental impact, will not cause or contribute to new odors, and all neighbors are approximately 1/2-mile from the Terminal.

As California pushes towards our clean energy goals, it is important that we support industries who help our state become more resilient by utilizing recycled materials and using already existing infrastructure to meet our economy's critical infrastructure demands. We believe adding storage capacity to the World Oil facilities is a reasonable request and is working in the best interest of California policies.

We hope that you will support this project. If you have any questions, please contact sarah.wiltfong@bizfed.org.

Sincerely,



John Musella
BizFed Chair
Santa Clarita Valley Chamber



David Fleming
BizFed Founding Chair



Tracy Hernandez
BizFed Founding CEO



David Englin
BizFed President

BizFed Association Members

7-11 Franchise Owners Association for SoCal
Action Apartment Association
Alhambra Chamber
American Beverage Association
Antelope Valley Chamber formerly Lancaster Chamber of Commerce
Apartment Association of Greater Los Angeles
Apartment Association, CA Southern Cities, Inc .
Arcadia Association of Realtors
AREAA North Los Angeles SFV SCV
Armenian Trade & Labor Association
Arts District Los Angeles
Associated Builders & Contractors SoCal (ABC SoCal)
Association of Club Executives
Association of Independent Commercial Producers
AV Edge California
Azusa Chamber
Beverly Hills Bar Association
Beverly Hills Chamber
BioCom
Black Business Association
BNI4SUCCESS
Bowling Centers of SoCal
Boyle Heights Chamber of Commerce
Building Industry Association - LA/Ventura Counties
Building Industry Association of Southern California
Building Industry Association- Baldyview
Building Owners & Managers Association of Greater Los Angeles
Burbank Association of Realtors
Burbank Chamber of Commerce
Business and Industry Council for Emergency Planning and Preparedness
Business Resource Group
CABIA California Business and Industrial Alliance
Calabasas Chamber of Commerce
CalAsian Chamber
CalChamber
California Apartment Association- Los Angeles
California Asphalt Pavement Association
California Bankers Association
California Business Properties
California Business Roundtable
California Cannabis Industry Association
California Cleaners Association
California Contract Cities Association
California Fashion Association
California Gaming Association
California Grocers Association
California Hispanic Chamber
California Hotel & Lodging Association
California Independent Oil Marketers Association (CIOMA)
California Independent Petroleum Association
California Life Sciences Association
California Manufacturers & Technology Association
California Metals Coalition
California Natural Gas Producers Association
California Restaurant Association
California Retailers Association
California Self Storage Association
California Small Business Alliance
California Society of CPAs - Los Angeles Chapter
California Trucking Association+
Carson Chamber of Commerce
Carson Dominguez Employers Alliance
Central City Association
Century City Chamber of Commerce
Cerritos Regional Chamber of Commerce
Chatsworth Porter Ranch Chamber of Commerce
Citrus Valley Association of Realtors
Claremont Chamber of Commerce
Commercial Industrial Council/Chamber of Commerce
Compton Chamber of Commerce
Construction Industry Air Quality Coalition
Construction Industry Coalition on Water Quality
Council on Infil Builders
Crenshaw Chamber of Commerce

Culver City Chamber of Commerce
Downey Association of REALTORS
Downey Chamber of Commerce
Downtown Alhambra Business Association
Downtown Center Business Improvement District
Downtown Long Beach Alliance
El Monte/South El Monte Chamber
El Segundo Chamber of Commerce
Employers Group
Encino Chamber of Commerce
Energy Independence Now EIN
Engineering Contractor's Association
FastLink DTLA
Filipino American Chamber of Commerce
Friends of Hollywood Central Park
FuturePorts
Gardena Valley Chamber
Gateway to LA
Glendale Association of Realtors
Glendale Chamber
Glendora Chamber
Greater Antelope Valley AOR
Greater Bakersfield Chamber of Commerce
Greater Lakewood Chamber of Commerce
Greater Leimert Park Crenshaw Corridor BID
Greater Los Angeles African American Chamber
Greater Los Angeles Association of Realtors
Greater Los Angeles New Car Dealers Association
Greater San Fernando Valley Chamber
Harbor Association of Industry and Commerce
Harbor Trucking Association
Historic Core BID of Downtown Los Angeles
Hollywood Chamber
Hong Kong Trade Development Council
Hospital Association of Southern California
Hotel Association of Los Angeles
Huntington Park Area Chamber of Commerce
ICBWA- International Cannabis Women Business Association
Independent Cities Association
Industrial Environmental Association
Industry Business Council
Inglewood Board of Real Estate
Inland Empire Economic Partnership
International Franchise Association
Irwindale Chamber of Commerce
Kombucha Brewers International
La Cañada Flintridge Chamber
LA Coalition
LA Fashion District BID
LA South Chamber of Commerce
Larchmont Boulevard Association
Latin Business Association
Latino Food Industry Association
Latino Restaurant Association
LAX Coastal Area Chamber
League of California Cities
Long Beach Area Chamber
Long Beach Economic Partnership
Los Angeles Area Chamber
Los Angeles Economic Development Center
Los Angeles Gateway Chamber of Commerce
Los Angeles Latino Chamber
Los Angeles LGBTQ Chamber of Commerce
Los Angeles Parking Association
Los Angeles World Affairs Council/Town Hall
Los Angeles
MADIA
Malibu Chamber of Commerce
Manhattan Beach Chamber of Commerce
Marketplace Industry Association
Monrovia Chamber
Motion Picture Association of America, Inc.
MoveLA
MultiCultural Business Alliance
NAIOP Southern California Chapter
NAREIT
National Association of Minority Contractors
National Association of Tobacco Outlets
National Association of Women Business Owners
National Association of Women Business Owners - LA
National Association of Women Business Owners- California

National Federation of Independent Business Owners California
National Hookah
National Latina Business Women's Association
Orange County Business Council
Orange County Hispanic Chamber of Commerce
Pacific Merchant Shipping Association
Panorama City Chamber of Commerce
Paramount Chamber of Commerce
Pasadena Chamber
Pasadena Foothills Association of Realtors
PGA
PhRMA
Pico Rivera Chamber of Commerce
Planned Parenthood Affiliates of California
Pomona Chamber
Rancho Southeast REALTORS
ReadyNation California
Recording Industry Association of America
Regional CAL Black Chamber, SVF
Regional Hispanic Chambers
San Dimas Chamber of Commerce
San Gabriel Chamber of Commerce
San Gabriel Valley Economic Partnership
San Pedro Peninsula Chamber
Santa Clarita Valley Chamber
Santa Clarita Valley Economic Development Corp.
Santa Monica Chamber of Commerce
Sherman Oaks Chamber
South Bay Association of Chambers
South Bay Association of Realtors
South Gate Chamber of Commerce
South Pasadena Chamber of Commerce
Southern California Contractors Association
Southern California Golf Association
Southern California Grantmakers
Southern California Leadership Council
Southern California Minority Suppliers Development Council Inc.
Southern California Water Coalition
Southland Regional Association of Realtors
Sportfishing Association of California
Structural Engineers Association of Southern California
Sunland/Tujunga Chamber
Sunset Strip Business Improvement District
Torrance Area Chamber
Tri-Counties Association of Realtors
United Cannabis Business Association
United Chambers - San Fernando Valley & Region
United States-Mexico Chamber
Unmanned Autonomous Vehicle Systems Association
US Green Building Council
US Resiliency Council
Valley Economic Alliance, The
Valley Industry & Commerce Association
Venice Chamber of Commerce
Vermont Slauson Economic Development Corporation
Veterans in Business
Vietnamese American Chamber
Warner Center Association
West Hollywood Chamber
West Hollywood Design District
West Los Angeles Chamber
West San Gabriel Valley Association of Realtors
West Valley/Warner Center Chamber
Western Electrical Contractors Association
Western Manufactured Housing Association
Western States Petroleum Association
Westside Council of Chambers
Whittier Chamber of Commerce
Wilmington Chamber
Women's Business Enterprise Council
World Trade Center

From: [Kate Lomas Gutierrez](#)
To: [Port of Long Beach Environmental Planning](#)
Cc: [Alexandra Lakatos](#)
Subject: Ribost Terminal, LLC Project - SUPPORT - Long Beach Area Chamber of Commerce
Date: Tuesday, February 7, 2023 3:40:01 PM
Attachments: [LBACC WorldOilSupportLetter.pdf](#)

Good afternoon Matthew,

On behalf of the Long Beach Area Chamber of Commerce, we would like to relay our support for the Ribost Terminal, LLC project being brought forward by World Oil Terminals. Attached below is our letter of support.

Thank you for taking the Long Beach Chamber's views into consideration.

Best,

--

Kate Lomas Gutierrez
Government Affairs Associate
Edmond Group, LLC
562-527-2626



February 7, 2023

Mayor Rex Richardson
Members of City Council
City of Long Beach
411 W. Ocean Blvd.
Long Beach, CA 90802

Subject: World Oil Terminals - Ribost Terminal, LLC Project - SUPPORT

Dear Honorable Mayor Richardson and Honorable City Councilmembers:

On behalf of our approximately 800 members from across the greater Long Beach area, I would like to offer my SUPPORT for the Ribost Terminal, LLC project being brought forward by World Oil Terminals. The project would help the Port of Long Beach pursue emission goals by adhering to emission standards and decreasing ship emissions.

The project would install and operate two additional, new 25,000-barrel petroleum storage tanks to increase World Oil's oil storage capacity, thereby improving the Terminal's efficiency. Besides storage and efficiency benefits, the project will contribute to employment by maintaining existing jobs at terminals and supporting the creation of more jobs during the construction phase.

The new storage tanks are designed to meet or exceed all Federal and Air Quality Management District (AQMD) emission reduction requirements. The project will mitigate any severe environmental impacts by continuing current crude oil operations that impede increased crude oil throughput beyond the permitted limits. To further adhere to safety and environmental standards, the Terminal would use a tank maintenance schedule that includes cleaning sludge from the bottom, dewatering, routine visual inspections, and standard quarterly inspections.

By supporting this project, you will also be supporting the Port of Long Beach's goals related to the reduction of emissions, creation of employment opportunities, and increased port productivity.

Thank you in advance for your consideration of my comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeremy Harris".

Jeremy Harris
President & CEO
Long Beach Area Chamber of Commerce

1 World Trade Center, Suite 1650, Long Beach, CA 90831-1650

Phone (562) 436-1251 • Fax (562) 436-7099 • info@lbchamber.com

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From: [Alexandra Lakatos](#)
To: [Blanchard, Jennifer](#)
Cc: [Port of Long Beach Environmental Planning](#); [Arms, Matthew](#); [Board of Harbor Commissioners](#)
Subject: Re: World Oil Public Comment Period - Petition of Support
Date: Wednesday, February 15, 2023 2:23:28 PM
Attachments: [World Oil FuturePorts Support Letter Final.pdf](#)

Hi Jennifer -

Please see an additional letter of support from FuturePorts for this meeting upcoming.

Best,

On Wed, Feb 15, 2023 at 2:18 PM Blanchard, Jennifer <jennifer.blanchard@polb.com> wrote:

Thank you! The petitions in support of the World Oil Tank Installation project have been received.

Jennifer Blanchard

Environmental Specialist

Environmental Planning Division

Port of Long Beach

Mobile (562) 743-6297

Office Direct (562) 283-7107

HDP Desk (562) 283-7102

415 W. Ocean Blvd, Long Beach, CA 90802

jennifer.blanchard@polb.com

www.polb.com/hdp



From: Alexandra Lakatos <alexandra@edmondgroupllc.com>

Sent: Wednesday, February 15, 2023 1:56 PM

To: Port of Long Beach Environmental Planning <CEQA@polb.com>

Cc: Arms, Matthew <matthew.arms@polb.com>; Board of Harbor Commissioners <bhc@polb.com>

Subject: World Oil Public Comment Period - Petition of Support

Hello Mr. Arms -

Please accept into the record the following files, a petition from World Oil employees in support of the EIR in the comment period. There are 19 signatures of the attached petition in support of the project from employees of World Oil.

Best,

--

Alexandra Lakatos

Vice President

Edmond Group LLC

503-961-4783

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February 14, 2023

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

RE: World Oil Terminals - Ribost Terminal, LLC Project - SUPPORT

Dear Mr. Arms:

On behalf of FuturePorts, I am once again offering our support for the Ribost Terminal, LLC Project ("Project") being brought forward by World Oil Terminals.

FuturePorts is a 501(c)(6) nonprofit advocacy coalition founded in 2005 to help coalesce the Southern California supply chain around the need to both grow the ports and to address the environmental, air quality, and quality of life issues that come with that growth. FuturePorts believes that a vibrant and healthy economic and environmental future for the ports is vital to us all.

The Project would install and operate two additional, new 25,000-barrel petroleum storage tanks to increase World Oil's oil storage capacity, thereby improving the Terminal's efficiency. Besides storage and efficiency benefits, the Project will contribute to employment by maintaining existing jobs at terminals and supporting the creation of more jobs during the construction phase.

With the addition of the two smaller tanks, the RIBOST Terminal Project could provide surge capacity for blending and storage of marine fuels to meet cleaner IMO 2020 standards, which will directly benefit Port tenants who use these fuels.

The new storage tanks are designed to meet or exceed all Federal and South Coast Air Quality Management District (AQMD) emission reduction requirements. The Project will mitigate any severe environmental impacts by continuing current crude oil operations that impede increased crude oil throughput beyond the permitted limits. To further adhere to safety and environmental standards, the Terminal would use a tank maintenance schedule that includes cleaning sludge from the bottom, dewatering, routine visual inspections, and standard quarterly inspections.



PO Box 15624
Long Beach CA 90815
office: **310.982.1323**
email: **info@futureports.org**
www.futureports.org

By supporting this Project, FuturePorts also supports the Port of Long Beach's goals related to the creation of employment opportunities and increased port productivity.

Thank you in advance for your consideration of my comments.

Sincerely,

Kat Janowicz
Chair, Board of Directors
FuturePorts

From: [Alexandra Lakatos](#)
To: [Port of Long Beach Environmental Planning](#)
Subject: Letter of Support - World Oil EIR Public Comment Period
Date: Wednesday, February 15, 2023 1:05:54 PM
Attachments: [WorldOil_SupportLetter_1.30.2023.pdf](#)

Hello Mr. Arms,

Please see the attached letter of support for the World Oil EIR presentation that will be in public comment period tonight, February 15 at 6 pm.

This letter is from the South Bay Area Chamber of Commerce. Please include it into the record.

Best,

--

Alexandra Lakatos
Vice President
Edmond Group LLC
503-961-4783



February 15, 2023

Mayor Rex Richardson
Members of City Council
City of Long Beach
411 W. Ocean Blvd.
Long Beach, CA 90802

RE: World Oil Terminals - Ribost Terminal, LLC Project - SUPPORT

Dear Honorable Mayor Richardson and Honorable City Councilmembers:

On behalf of South Bay Association of Chambers of Commerce (SBACC), I would like to offer my SUPPORT for the Ribost Terminal, LLC project being brought forward by World Oil Terminals. The project would help the Port of Long Beach pursue emission goals by adhering to emission standards and decreasing ship emissions.

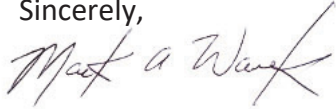
The project would install and operate two additional, new 25,000-barrel petroleum storage tanks to increase World Oil's oil storage capacity, thereby improving the Terminal's efficiency. Besides storage and efficiency benefits, the project will contribute to employment by maintaining existing jobs at terminals and supporting the creation of more jobs during the construction phase.

The new storage tanks are designed to meet or exceed all Federal and Air Quality Management District (AQMD) emission reduction requirements. The project will mitigate any severe environmental impacts by continuing current crude oil operations that impede increased crude oil throughput beyond the permitted limits. To further adhere to safety and environmental standards, the Terminal would use a tank maintenance schedule that includes cleaning sludge from the bottom, dewatering, routine visual inspections, and standard quarterly inspections.

By supporting this project, you will also be supporting the Port of Long Beach's goals related to the reduction of emissions, creation of employment opportunities, and increased port productivity.

Thank you in advance for your consideration of my comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Waronek". The signature is fluid and cursive, with the first name "Mark" and last name "Waronek" clearly distinguishable.

Mark Waronek
SBACC Board Chair

From: [Alexandra Lakatos](#)
To: [Port of Long Beach Environmental Planning](#)
Cc: [Arms, Matthew](#); [Board of Harbor Commissioners](#)
Subject: World Oil Public Comment Period - Petition of Support
Date: Wednesday, February 15, 2023 1:58:11 PM
Attachments: [Petition 15FEB23.zip](#)

Hello Mr. Arms -

Please accept into the record the following files, a petition from World Oil employees in support of the EIR in the comment period. There are 19 signatures of the attached petition in support of the project from employees of World Oil.

Best,

--

Alexandra Lakatos
Vice President
Edmond Group LLC
503-961-4783

We Support the Ribost Terminal Project!

The men and women of World Oil Recycling stand united to support the Ribost Terminal Project. We are proud to be a part of an 80-year-old family-owned business. The average employee has worked for the company for more than ten years. Our careers at World Oil provide for our families. This project will help reduce marine emissions from ships and can be used for renewable fuels as we grow into the future. This project will meet or exceed all Federal and Air Quality Management District (AQMD) emission reduction requirements.

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Please print it legibly.

Print Name: <i>Heriberto Cabrera</i>	Signature: <i>[Signature]</i>	Phone: <i>(562) 413-2037</i>
Zip Code: <i>90805</i>	Email: <i>ecabrera@worldoilcorp.com</i>	
Print Name:	Signature:	Phone
Zip Code:	Email:	
Print Name:	Signature:	Phone
Zip Code:	Email:	
Print Name:	Signature:	Phone
Zip Code:	Email:	
Print Name:	Signature:	Phone
Zip Code:	Email:	
Print Name:	Signature:	Phone
Zip Code:	Email:	
Print Name:	Signature:	Phone
Zip Code:	Email:	

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Please print it legibly.

Print Name: <i>Billy Malabanan</i>	Signature: <i>[Signature]</i>	Phone: <i>310-628-4244</i>
Zip Code: <i>90745</i>	Email: <i>BMALABANAN@WORLD-OIL-CORP.COM</i>	
Print Name: <i>Jeff Baxter</i>	Signature: <i>[Signature]</i>	Phone: <i>734 846 1669</i>
Zip Code: <i>90803</i>	Email: <i>jbxter@worldoilcorp.com</i>	
Print Name:	Signature:	Phone
Zip Code:	Email:	
Print Name:	Signature:	Phone
Zip Code:	Email:	
Print Name:	Signature:	Phone
Zip Code:	Email:	
Print Name:	Signature:	Phone
Zip Code:	Email:	
Print Name:	Signature:	Phone
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Please print it legibly.

Print Name: Christina Rubottom	Signature: C Rubottom	Phone 310/918-3624
Zip Code: 90731	Email: Christina.stetter@gmail.com	
Print Name: Thomas Hines Dyle	Signature: THD	Phone 310-293-8834
Zip Code: 90755	Email: tmdilex@worldoilcorp.com	
Print Name: DANDAUER	Signature: D. D.	Phone 310 9622869
Zip Code: 90501	Email: DANRDAUER@GMAIL	
Print Name: Mike Rike	Signature: M Rike	Phone 310 892 5584
Zip Code: 90744	Email: mike@mike.rike.com	
Print Name: John Hundley	Signature: J Hundley	Phone 562 900 8809
Zip Code: 90505	Email: jmoegh@yahoo.com	
Print Name:	Signature:	Phone
Zip Code:	Email:	
Print Name:	Signature:	Phone
Zip Code:	Email:	

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Once you sign the petition below, it will be a public comment to the Director of Environmental Planning, Matthew Arms.

We appreciate your hard work and dedication to World Oil and hope you can help by adding your name to the petition to advance the Ribost Terminal Project at the Port of Long Beach. We will send you email updates as to the progress of the project.

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Please print it legibly.

Print Name: Cecily Dussell	Signature: Cecily Dussell	Phone: 909-548-5532
Zip Code: 90804	Email: cdussell@worldoilcorp.com	
Print Name:	Signature:	Phone:
Zip Code:	Email:	
Print Name:	Signature:	Phone:
Zip Code:	Email:	
Print Name:	Signature:	Phone:
Zip Code:	Email:	
Print Name:	Signature:	Phone:
Zip Code:	Email:	
Print Name:	Signature:	Phone:
Zip Code:	Email:	

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Please print it legibly.

Print Name: <i>Pedro Espino</i>	Signature: <i>Pedro Espino</i>	Phone: <i>562-505-4183</i>
Zip Code: <i>90806</i>	Email: <i>Pespio@hottmail.com</i>	
Print Name:	Signature:	Phone:
Zip Code:	Email:	
Print Name:	Signature:	Phone:
Zip Code:	Email:	
Print Name:	Signature:	Phone:
Zip Code:	Email:	
Print Name:	Signature:	Phone:
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Please print it legibly.

Print Name: <u>Ryan Fernando</u>	Signature: <u>[Signature]</u>	Phone <u>310-863-5513</u>
Zip Code: <u>92805</u>	Email: <u>rfernando@worldoilcorp.com</u>	
Print Name:	Signature:	Phone
Zip Code:	Email:	
Print Name:	Signature:	Phone
Zip Code:	Email:	
Print Name:	Signature:	Phone
Zip Code:	Email:	
Print Name:	Signature:	Phone
Zip Code:	Email:	
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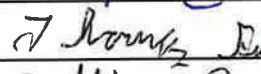


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Please print it legibly.

Print Name: Edwin Abarca	Signature: 	Phone (323) 795-3957
Zip Code: 90807	Email: edwin.abarcacarranza@gmail.com	
Print Name: Albert Sento	Signature: 	Phone (337) 280-8584
Zip Code: 90810	Email: ASento@worldoilcorp.com	
Print Name: Jessie Lopez	Signature: 	Phone (209) 277-0657
Zip Code: 90503	Email: jlopez@worldoilcorp.com	
Print Name: Tom Giddings	Signature: 	Phone 438-9682
Zip Code: 90720	Email: Tgiddings@worldoilcorp.com	
Print Name: Cesar Magdaleno Jr.	Signature: 	Phone (562) 225-3501
Zip Code: 90805	Email: cmagdaleno@worldoilcorp.com	
Print Name: Hugo Castillo	Signature: 	Phone (562) 668-8957
Zip Code: 90805	Email: Hcastillo@worldoilcorp.com	
Print Name:	Signature:	Phone
Zip Code:	Email:	

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Please print it legibly.

Print Name: <i>SAE GARNICK</i>	Signature: <i>SAE GARNICK</i>	Phone: <i>562-367-6353</i>
Zip Code: <i>90802</i>	Email: <i>SGarnick@worldoilcorp.com</i>	
Print Name:	Signature:	Phone:
Zip Code:	Email:	
Print Name:	Signature:	Phone:
Zip Code:	Email:	
Print Name:	Signature:	Phone:
Zip Code:	Email:	
Print Name:	Signature:	Phone:
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Please print it legibly.

Print Name: <i>Agua Ili Junior</i>	Signature: <i>Agua Ili Junior</i>	Phone: <i>310-466-5079</i>
Zip Code:	Email:	
Print Name:	Signature:	Phone
Zip Code:	Email:	
Print Name:	Signature:	Phone
Zip Code:	Email:	
Print Name:	Signature:	Phone
Zip Code:	Email:	
Print Name:	Signature:	Phone
Zip Code:	Email:	
Print Name:	Signature:	Phone
Zip Code:	Email:	

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GABRIELENO BAND OF MISSION INDIANS - KIZH NATION
Historically known as The Gabrielino Tribal Council - San Gabriel Band of Mission Indians
recognized by the State of California as the aboriginal tribe of the Los Angeles basin

February 22

Project Name: World Oil Tank Installation Project

Dear Jennifer Blanchard,

Thank you for your letter dated January 30, 2023 regarding AB52 consultation. The above proposed project location is within our Ancestral Tribal Territory; therefore, our Tribal Government requests to schedule a consultation with you as the lead agency, to discuss the project and the surrounding location in further detail.

Please contact us at your earliest convenience. ***Please Note: AB 52, "consultation" shall have the same meaning as provided in SB 18 (Govt. Code Section 65352.4).***

Thank you for your time,

Andrew Salas, Chairman
Gabrieleno Band of Mission Indians – Kizh Nation
1(844)390-0787

Andrew Salas, Chairman

Albert Perez, treasurer I

Nadine Salas, Vice-Chairman

Martha Gonzalez Lemos, treasurer II

Dr. Christina Swindall Martinez, secretary

Richard Gradias, Chairman of the council of Elders

PO Box 393 Covina, CA 91723

admin@gabrielenoindians.org

DEPARTMENT OF TRANSPORTATION

DISTRICT 7

100 S. MAIN STREET, MS 16

LOS ANGELES, CA 90012

PHONE (213) 269-1124

FAX (213) 897-1337

TTY 711

www.dot.ca.gov

*Making Conservation
a California Way of Life*

February 23, 2023

Jennifer Blanchard
Port of Long Beach
415 W. Ocean Blvd.
Long Beach, CA 90802

RE: World Oil Tank Installation Project
SCH # 2020100119
Vic. LA-710/PM 5.982
GTS # LA-2020-04160-NOP

Dear Jennifer Blanchard:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above-referenced environmental document. The proposed Project proposes to construct and operate two additional, new 25,000-barrel petroleum storage tanks with internal floating roofs with new tank foundations and piping connections to existing facility infrastructure, including the truck loading racks.

The mission of Caltrans is to provide a safe and reliable transportation network that serves all people and respects the environment. Senate Bill 743 (2013) has codified into CEQA law and mandated that CEQA review of transportation impacts of proposed development be modified by using Vehicle Miles Traveled (VMT) as the primary metric in identifying transportation impacts for all future development projects. You may reference the Governor's Office of Planning and Research (OPR) for more information:

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

As a reminder, VMT is the standard transportation analysis metric in CEQA for land use projects after July 1, 2020, which is the statewide implementation date.

The proposed Project would result in temporary passenger vehicle (automobile) and haul truck trips during construction. Construction worker passenger vehicle (automobile) 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 (approximately 10 months), trips would occur during 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. The construction would generate a maximum of 32 worker one-way commute trips during the overlap between construction Phases 1 and 2, with material and equipment deliveries spread throughout the day. There would be a less-than-significant impact to such transportation facilities during construction.

The operation baseline maximum truck count at the loading rack is 53 trucks per day (see Table 3). It is estimated that truck trips would increase approximately 10 percent during a typical operation such as when a pipeline is being serviced, resulting in a projected increase of up to five truck trips per day (a new maximum of 58 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 five trips per day would not conflict with any program pertaining to the performance of the circulation system. Operation of the Project would result in less-than-significant impacts on transportation facilities.

As a reminder, any transportation of heavy construction equipment and/or materials that requires the use of oversized-transport vehicles on State highways will need a Caltrans transportation permit. We recommend that large-size truck trips be limited to off-peak commute periods.

If you have any questions, please feel free to contact Mr. Alan Lin, the project coordinator, at (213) 269-1124 and refer to GTS # LA-2020-04160AL-NOP.

Sincerely,



MIYA EDMONSON
LDR/CEQA Branch Chief

email: State Clearinghouse

From: [Oscar Espino-Padron](#)
To: [Port of Long Beach Environmental Planning](#)
Cc: [Shana Emile](#)
Subject: Comments on the Initial Study for the World Oil Tank Installation Project (Ribost Terminal, LLC (World Oil Terminals); Application No. 19-066)
Date: Friday, February 24, 2023 3:38:11 PM
Attachments: [2023 0224 Comments on the Initial Study for the World Oil Tank Installation Project.pdf](#)

VIA ELECTRONIC MAIL ONLY

Dear Mr. Arms –

For your review, attached please find Earthjustice comments on the Initial Study for the World Oil Tank Installation Project.

Thank you,

Oscar Espino-Padron
Senior Attorney
Earthjustice Los Angeles Office
707 Wilshire Blvd., Suite 4300
Los Angeles, California 90017
T: 213.766.1070
earthjustice.org



The information contained in this email message may be privileged, confidential and protected from disclosure. If you are not the intended recipient, any dissemination, distribution or copying is strictly prohibited. If you think that you have received this email message in error, please notify the sender by reply email and delete the message and any attachments.



February 24, 2023

VIA ELECTRONIC MAIL ONLY

Matthew Arms
Director of Environmental Planning
Port of Long Beach
415 W. Ocean Blvd.
Long Beach, CA 90802
Email: ceqa@polb.com

**Re: Comments on the Initial Study for the World Oil Tank Installation Project
(Ribost Terminal, LLC (World Oil Terminals); Application No. 19-066)**

Dear Mr. Arms:

We appreciate the Port of Long Beach's decision to require detailed environmental review under an Environmental Impact Report (EIR) for the World Oil Tank Installation Project (hereinafter "Oil Tanks Project"), given the significant foreseeable impacts this fossil fuel infrastructure project would have on surrounding communities and the environment. Undoubtedly, the Oil Tanks Project would add to the cumulative burdens that fossil fuel infrastructure and other polluting operations currently place on surrounding communities.¹

World Oil proposes a massive storage tank buildout that would create 50,000 barrels of additional storage capacity in a region that is already overburdened with the most petroleum refineries and related infrastructure on the West Coast.² In fact, the Oil Tanks Project would add to the over 1,100 large stationary storage tanks currently in use at petroleum facilities across the region that, combined, can store over 3 billion gallons of toxic materials that pollute our air and damage our climate.³

For these reasons, the EIR must gather and disclose critical information about the real human health and environmental impacts from approving the Oil Tanks Project. There are at least three areas where the Initial Study underestimates or dismisses potential environmental impacts that

¹ Office of Health Hazard Assessment, *CalEnviroScreen 4.0* (October 2021) <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40> [archived at <https://perma.cc/4V6M-BVPZ>].

² See U.S. Energy Information Administration, Number and Capacity of Operable Petroleum Refineries by PAD District and State as of January 1, 2022, <https://www.eia.gov/petroleum/refinerycapacity/table1.pdf> [archived at <https://perma.cc/D6E5-Y97Y>]; California Air Res. Bd., *Refineries*, <https://ww2.arb.ca.gov/resources/documents/california-refineries> [archived at <https://perma.cc/UP4H-DEFF>]; See California Energy Commission, *California Oil Refinery History*, <https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/californias-oil-refineries/california-oil> [archived at <https://perma.cc/3H5W-RS8C>].

³ See South Coast Air Quality Mgmt. Dist., Proposed Amended Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities: Working Group Meeting 2 at 18 (July 15, 2021), http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1178/par1178-wgm2_final.pdf?sfvrsn=12 [archived at <https://perma.cc/7TS6-4W5X>].

require a detailed examination in the EIR. In particular, the Port must properly disclose to the public and decisionmakers how approving the Oil Tanks Project will harm air quality and climate and undermine the Port's environmental commitments.

First, the Oil Tanks Project would not align with the Port of Long Beach's Green Port Policy. In particular, the Oil Tanks Project conflicts with the Port's commitment to "protect the community from harmful environmental impacts of Port operations," "promote sustainability," and "[e]mploy best available technology to avoid or reduce environmental impacts."⁴ The Oil Tanks Project will facilitate the storage of hazardous materials near neighborhoods and sensitive receptors, including schools. The EIR must detail how the Oil Tanks Project would advance the Port's objectives.

Second, the Oil Tanks Project would conflict with implementing the South Coast AQMD's recently approved 2022 Air Quality Management Plan (AQMP).⁵ The AQMP relies on electrification and the deployment of zero-emissions technology to achieve air quality standards in the region. That, in turn, requires a pause out of the continued expansion of fossil fuel infrastructure, such as this project, that would undermine reductions secured through the deployment of these technologies. The Oil Tanks Project is incompatible with the AQMP. The EIR must address this conflict.

Finally, the Oil Tanks Project would conflict with the California State Air Resources Board's recently approved 2022 Scoping Plan to reduce GHG emissions.⁶ Specifically, the Oil Tanks Project would undermine statewide efforts to significantly reduce demand for liquid petroleum and fossil fuel use by 2040.⁷ The Oil Tanks Project would undercut those efforts by expanding fossil fuel infrastructure at a time when there should be a moratorium on continued expansions. The Oil Tanks Project would allow for the storage of petroleum and facilitate World Oil's production of marine diesel fuel. The EIR must detail how the Oil Tanks Project would align with the State's objectives.

⁴ Port of Long Beach, *Environment*, <https://polb.com/environment> [archived at <https://perma.cc/CJ6T-HR2D>].

⁵ South Coast Air Quality Mgmt. Dist., 2022 Air Quality Management Plan (Dec. 2022) <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/final-2022-aqmp/final-2022-aqmp.pdf?sfvrsn=16> [archived at <https://perma.cc/2XEK-AQS9>].

⁶ California Air Res. Bd., 2022 Scoping Plan for Achieving Carbon Neutrality (Nov. 16, 2022) <https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf> [archived at <https://perma.cc/7M4A-8CAM>].

⁷ *Id.* at 2, 73.

The Port must not rush through this environmental review process but should instead take the time to fully evaluate, disclose, and mitigate the Oil Tanks Project's environmental and health impacts. We appreciate your consideration of these concerns and urge the Port to address these topics in more detail as part of the EIR.

Respectfully submitted,

Oscar Espino-Padron, Senior Attorney
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From: [Tom Williams](#)
To: [Port of Long Beach Environmental Planning](#); [Blanchard, Jennifer](#); [Arms, Matthew](#)
Subject: Public Comments - Scoping SCH# 2020100119 World Oil Terminal
Date: Tuesday, February 28, 2023 10:42:26 AM
Attachments: [POLB World Scoping 022823 Submtd.docx](#)

DATE: Tues., Feb. 28, 2023

TO: Matthew Arms, Dtr. Envir.Planning, Port of Long Beach, 415 W.
Ocean Blvd., Long Beach, CA 90802 ceqa@polb.com

CC: Jennifer Blanchard Port of Long Beach Lead/Public Agency ,
415 W. Ocean Blvd., Long Beach, CA 90802 562-283-7100.
562-441-8555 jennifer.blanchard@polb.com

FROM: Dr Clyde T. (Tom) Williams, President Emeritus Citizens Coalition
for A Safe Community, Sierra Club Angeles Water and
Transportation Committees
4117 Barrett Road, Los Angeles, CA 90032-1712 323-528-9682
ctwilliams2012@yahoo.com

SUBJECT: Scoping for Initial Study and CEQA/EIR/EIS for World Oil Terminals Project of two new
25,000-barrel petroleum storage tanks for storage of crude oil, with internal floating roofs, new tank
foundations and piping connections at Pier C with additions to existing facility infrastructure, including the
truck loading racks and Existing tanks for Lease by third-parties for marine fuel storage and blending

RE: Scoping Comments for DEIR as provided in Notice of Preparation
SCH # 2020100119 By Port of Long Beach for World Oil Tank
Project – NOP/Initial Study

Current Initial Study and Notice of Preparation are totally inadequate and incomplete as they do not
provide sufficient and adequate details regarding the project and proposed mitigation of significant
impacts. Further as an EIR considerations must be provided for alternatives: #1 Do-Nothing/Stop the
Project and perhaps #2 relocation of proposed tanks along with existing or expanded containment, or
even #3 replacement of two existing fixed roof tanks with proposed floating roof tanks.

As the project site has been used for more than 50 years, the Initial Study is inadequate and incomplete
regarding historic documentation (aerial photos and satellite images) for the site since 1920 (Fairchild
photos, available via EDRnet/Light Box). Locations of pit-prives and waste dumps within the site would
be expected to contain historic resources and remains. Similarly, Native Americans have occupied the
area for >10,000 years and remains and resources could be affected during deep borings and gravel
backfilling of the underlying natural ground beneath more recent fills.

The IS also lacks adequate information and has erroneous information regarding the local seismic
activities and fault locations which can be documented via existing THUMS faults, oil geological studies,
and onsite and nearby oil wells, their logs, and current status. Similar the entire geologic context for the
ground underlying the Project area/parcel appears conjectural without reference to any deep borings for
detailed geologic context.

Similarly the Project area has undergone settlement/subsidence since 1920 due to oil production and
maybe undergoing rising ground conditions due to changes in oil production and appropriate mitigation.
No information has been provided in the Scoping Initial Study regarding geological/mineral
resources/hydrology conditions related to ground subsidence and uplift and especially their relationships
to rising sea levels/inundation risks, drainage, and tsunamis.

Mineral resources descriptions are totally inadequate by the absence of any references to historically

located oil wells within the project area and the underlying oil field and within 500ft of the parcel for an existing idled well.

For hazardous materials, the IS does not provide any detailed analyses and does include references to total porous/uncontained/unconfining ground conditions within the existing "containment walls" which immediately supports additional mitigation measures at this time (e.g., impervious covering or all exposed ground surface within the "containment" walls/barriers). Additionally, no description of historic leakage or spillage has been provided nor potential contamination of underlying ground materials.

Although the Project is for the storage of vaporous hydrocarbons, no specific content/usage information is provided for the entire tank inventories and permit compliances for the last 20 years and the anticipated Project materials and mentioned blending/mixing processes.

Please revise the initial study and recirculate for the review and assistance as to scoping for the future Draft Environmental Impact Report.

As a somewhat separate issue, the repeated mentioning of the unpaved ground surface within the spill containment walls, generally indicates a potential illegal/noncompliance of storage of hazardous, toxic, and contaminated fluids on the site. consideration of

Dr Tom

DATE: Tues., Feb. 28, 2023

TO: Matthew Arms, Dtr. Envir.Planning, Port of Long Beach, 415 W. Ocean Blvd.,
Long Beach, CA 90802 ceqa@polb.com

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By Port of Long Beach for World Oil Tank Project – NOP/Initial Study

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The IS also lacks adequate information and has erroneous information regarding the local seismic activities and fault locations which can be documented via existing THUMS faults, oil geological studies, and onsite and nearby oil wells, their logs, and current status. Similar the entire geologic context for the ground underlying the Project area/parcel appears conjectural without reference to any deep borings for detailed geologic context.

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For hazardous materials, the IS does not provide any detailed analyses and does include references to total porous/uncontained/unconfining ground conditions within the existing "containment walls" which

immediately supports additional mitigation measures at this time (e.g., impervious covering or all exposed ground surface within the “containment” walls/barriers). Additionally, no description of historic leakage or spillage has been provided nor potential contamination of underlying ground materials.

Although the Project is for the storage of vaporous hydrocarbons, no specific content/usage information is provided for the entire tank inventories and permit compliances for the last 20 years and the anticipated Project materials and mentioned blending/mixing processes.

Please revise the initial study and recirculate for the review and assistance as to scoping for the future Draft Environmental Impact Report.

As a somewhat separate issue, the repeated mentioning of the unpaved ground surface within the spill containment walls, generally indicates a potential illegal/noncompliance of storage of hazardous, toxic, and contaminated fluids on the site. consideration of

Dr Tom

DETAILED COMMENTS

Page/paragraph

1-2/1 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.

Provide a thorough throughput inventory (typical annual, maximum design thru-put, by component, and outputs) and liquids flowchart for the Project site for total (pipeline and truck volumes).

Provide inventory and flowchart for onsite “recycling process” and asphalt blending.

Provide inventory and modes of transport for Project facility and South Gate site.

1-2/2 While the proposed Project would provide additional storage capacity of **petroleum products**, the new smaller tanks would ultimately provide for more efficient terminal operations by providing the **adequate crude oil storage capacity** for World Oil’s paving/roofing asphalt refinery in South Gate.

Define “petroleum products”, crude oil, and antifreeze wastes.

Provide inventory and flowchart for any “crude oil” deliveries, processing, storage, and “take-aways”.

1-2/3 Objectives

Provide goals or purposes for listed objectives.

1.2 Project Objectives The objectives of the proposed Project are:

To increase **efficiency** of terminal operations;

To realign **storage capacity** needs; and

To make **more existing tanks** available for lease by third-party customers.

Provide a typical annual flow inventory and flow charts with and without project and provide calculation of efficiencies with and without the Project as proposed, and for at least 3 Project alternatives, e.g., do-nothing, Project, X2 Project volume-incoming, and X2 Project volume-outgoing.

Provide alternative sizing and numbers of Project tanks, e.g., one larger, higher tank, three smaller, lower tanks, etc.

Provide alternative Project facilities in order to make all existing tanks available for third party customers.

NOP is totally inadequate and incomplete with regard to Alternatives - project alternatives are not mentioned throughout the NOP. References only to alternative groundwater, wastewater (2-26), fuels (2-28), and energy. Revise and recirculate.

1-3/3 1.3.2 Existing Project Site Conditions and Operations The majority of the 6-acre site is unpaved and **covered with sand and gravel**,.... The **unpaved gravel surface lies atop riprap and fill**. The paved surfaces cover the western portion of the terminal...from the same access point located on Pier C Street....The loading area is equipped with a **berm capable of containing the equivalent of one truckload (approximately 6,700 gallons) of crude oil in the event of an accidental spill.**

Provide Project mitigations for full, 100% impervious containment and recovery of any spill within containment

Provide at least 8 borings logs for the site, including one each at Project tanks and for the Project area at 25ft center, other than under tanks.

Provide all available historic aerial photos (1920-1941 and 1993) and satellite images say at 5-year intervals since 1993.

As Project mitigation, require truck area containment to include for 1-2%ile 24hr rainfall (1/50-100yr) in addition to truck spillage.

1-3/4 Current terminal operations of tanks allocated to the World Oil consist of the transport of **crude oil** to the existing tanks by a dedicated receive only pipeline and daily on-road transport truck trips to and from the terminal to the offsite World Oil Refinery located in South Gate, California. Periodically, **crude oil** may be returned to the tanks by on-road transport trucks for **refinery crude balancing**.

Provide clarified annual volumes of all liquids delivered to, storage at, and taking from the Project area for say 2013-date, including crude oils, oil-based wastes (used motor oil, antifreeze, and oily wastewater), marine diesel fuel, new antifreeze, and paving/roofing asphalt blending components.

Provide description and flowchart for refinery crude balancing at the Project area.

Provide VMT for all truck deliveries annually for 2013-2023.

1-3/5 In the current tanks leased to third-party customers, different grades of marine fuels, such as marine diesel oil, bunker fuel oil, and low sulfur fuel oil have been stored. Product is transmitted via two existing 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.

Provide map and flowcharts for all processing and blending and any pipelines connected to the Project area and overall facility.

Provide pipeline systems connections and flowchart for all pipelines connected to the truck loading facilities and their contents records for at least five years.

1-5/Figure 3. Project Site Plan – World Oil Tank Installation Project
Construction site next to Water
Sand/Gravel floor of containment and surrounding site.

Provide spill containment for entire construction area, within and outside the existing spill containment walls.

1-6/3 The two new, smaller tanks would realign and provide more adequate storage capacity for World Oil's operations by moving the **crude oil** currently stored **for World Oil's paving/roofing asphalt refinery** from two existing larger tanks at the site. The two larger existing tanks would then be removed from World Oil's dedicated paving/roofing asphalt refinery service and made available to lease by third-party customers for storage of **marine fuels and marine fuel blending components**, as is currently done for four of the existing tanks at the facility.

Provide clarified annual volumes of all liquids delivered to, storage at, and taking from the Project area for say 2013-date, including crude oils, oil-based wastes (used motor oil, antifreeze, and oily wastewater), marine diesel fuel, new antifreeze, and paving/roofing asphalt blending components.

Provide types of fluids stored for each tank for 2013-23.

1-6/3 Furthermore, the proposed Project would not enable the facility to increase throughput beyond the **permitted limits** through the pipelines, tanks, or loading racks 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**.

Provide summary of all permitted limits for delivery from and transfers to others.

Provide existing physical limitations and past annual uses.

Provide maps and flowcharts for pipelines, pumps, and any processing units.

1-7/1 Furthermore, the proposed Project would not enable the facility to increase throughput beyond the permitted limits through the pipelines, tanks, or loading racks 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.

Provide current permitted limits for all permitted equipment or facilities serving such permitted equipment.

Provide 2022 flows, 2022 permitted flows, and those provided for one year after Project is operational.

1-7/1 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 locally imported sandy engineered fill would consist of fine particles and placed in loose lifts...Each lift would either be watered or air-dried...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....

Provide civil-engineered requirements for placement of fill on top of uncompacted fill of >20ft depth on top of unconsolidated estuarine deposits.

1-7/2 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....

No design or engineering report provided for the specific locations of the tanks. Provide thorough documentation regarding ground conditions to 100ft depth, details/drawing of piers/columns, foundations connections and tank connections to foundations.

1-7/3 The backfilled areas around the tank foundations would be graded to allow for proper drainage. **Because the Project site is unpaved and covered in gravel, water runoff can infiltrate the soil.** No excess water would be directed toward or allowed to pool....

Provide proper drainage on an impervious surface over the porous sand/gravel cover and assure drainage can be removed in the event of a spill.

1-10/1 1.4.2 Project Operation and Maintenance The existing tanks leased by third-party customers have historically stored **different grades of marine fuels, such as marine diesel oil, bunker fuel oil, and low sulfur fuel oil**. The proposed existing tanks that would be converted to newly leased tanks would continue to primarily **ship and receive the same or similar fuel oils** through.... 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 proposed new tanks.

Many fluids are mentioned for pass-thru and storage in the tank farm. Provide an annual listing and volumes of every fluid passing through the Project area, tank farm.

Provide flowcharts and descriptions for all fluid mixing conducted within the tank farm and probable for the existing tanks which will be replaced, especially as to any significant changes in vapor pressures and emissions rates.

1-10/3 No changes to conditions in World Oil's existing Permits to Operate for the existing tanks are proposed or 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 would not change with implementation of the proposed Project.

Provide all permits or summaries as to contents and to permitted emissions, including for H₂S and Total HC.

1-10/4 The new Permits to Construct and Permits to Operate for each of the two new storage tanks would reflect the requirements of the SCAQMD New Source Review program. The new air permits would limit the throughputs and types of materials to be stored in the new tanks and require the tanks to incorporate the **Best Available Control Technology** for limiting emissions.

Provide current BACT for floating roof tanks and for containment on pervious surfaces.

Provide mitigation for ZERO net increase in tank emissions with project.

1-11/2 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 training and quarterly/annual emergency drills, have evacuation plans, and shutdown procedures**.

Provide all copies of AQMD/LACoFD approved emergency contingency plans, Response Plans, and Control/Countermeasure Plans and draft updates and specifically for porous containment facilities.

2-1/1 "Potentially Significant Impact" and requiring implementation of mitigation as indicated by the checklist on the following pages. ...**Air Quality... Greenhouse Gas Emissions Hazards &**

Hazardous Materials Hydrology/Water Quality...Mandatory Findings of Significance

Other impacted resources

Cultural Resources, Energy, Geology/Soils, Mineral Resources, Public Services, Transportation, Tribal Cultural Resources

2-2/1 A "No Impact" answer is **adequately supported** if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the **project falls outside a fault**

rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project specific screening analysis

No Impact answers must be documented as to what is the basis for the assessment of the no impact of the project’s construction and operations upon the local environment which must also be documented. Provide accurate, truthful, adequate, and complete environmental settings as part of the initial study, unlike the discussion regarding the locations of major faults around the Project.

Provide a revised, adequate and complete Initial Study.

2-4/5 2.9.1 Project Objectives The objectives of the proposed project are: — To increase efficiency of terminal operations — To expand crude oil storage; and — To make more existing tanks available for lease by third-party vendors.

No Purpose/Goals

Provide purposes/goals for the mentioned objectives and provide suitable alternatives for the Project which are aligned for achieving the same objectives.

2-8/1 Although normal operation of the leased tanks would involve pipeline transfers, and there would be no increase in required site staffing levels, truck trips are estimated to increase 10 percent during proposed project operations 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...

Provide listing of all stored/transferred materials and volumes/durations and estimated emissions for daily, monthly, and annual intervals. Separate as to recycled vs virgin materials and blended products.

2-8/3 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.

Provide assess to all government/Port approved Plans related to the site and a record as to when prepared, approved, and update, since 1993.

2-9/1 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. **Operations/maintenance in accord with....** TSDFs may be in any number of locations in the U.S. depending on the type of treatment required....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. [2075]**

Provide to accessible records of maintenance for 2000-date. Provide records for quantities, types, and locations of disposition of sludge for last three cleanings.

Provide “useful life” for all tankage.

2-9/Table 2-5. Permits that May Be Required for the Proposed Project

Provide listing of all required permits, MOAs/MOUs, and flowchart of application, documentation, and completions/approvals.

2-11/5 **Product** stored in the tanks allocated to the World Oil Refinery is only moved offsite via truck. Trucks associated with operation of the proposed Project are required to comply with all state and local regulations, including requirements in SCAQMD permits for the existing truck loading racks. Therefore, the nominal increase in trucks transporting **fuel oil** would not conflict with the AQMP.

Provide a detailed listing of deliveries, storages, pass-thrus, and take-aways by product, fluid types, and vapor pressures for the last 10 years/since last cleaning of al tanks.

2-12/4 **POTENTIALLY SIGNIFICANT IMPACT.** SCAQMD has **recommended daily emissions thresholds** of significance for construction and operation for federal and state non-attainment pollutants. The proposed Project's peak construction emissions are anticipated to occur during tank coating and tank installation. Operation of the Project may increase emissions due to operation of the new tanks and increased use of existing underutilized tanks. Thus, Project construction and operation may potentially exceed SCAQMD thresholds and impacts due to criteria pollutants may be significant. As such, the EIR will include an evaluation of the Project's construction and operational criteria pollutant emissions.

2-13/3 **POTENTIALLY SIGNIFICANT IMPACT.** During construction, the short-term increase in air pollutants and odors primarily due to the combustion of diesel fuel from construction equipment and VOC emissions associated with the application of tank interior and exterior coating (i.e., paint) may have the potential for 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 2600ft 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.**

Don't use metric units for general public documents and always edit cut and pasted words.

Provide an area-wide air pollution review of the Project and air pollution model run for port emissions area within 2000ft, I-710, and nearest residential contact (3000ft radius), associated facilities, I-710 emissions for the regional issues and pollution impacts.

2-13/4 Impacts due to emissions and odors **may have** a potentially significant impact.

2-13/5 The EIR will further analyze odor impacts to nearby sensitive receptors during operations and compare them with odor screening level risk assessment procedures and thresholds...for H2S.

Provide an area-wide air pollution review of the Project and air pollution model run for port emissions area within 2000ft, I-710, and nearest residential contact (3000ft radius), associated facilities, I-710 emissions for the regional issues and pollution impacts.

2-16/1 As such, any potential pollutants from site runoff would not substantially adversely affect these marine HAPCs due to Project distance from these habitats. Any potential pollutants from site runoff during construction **would be removed prior to draining into any water system in compliance with the existing facility Storm Water Pollution Prevention Plan (SWPPP) requirements.** Operations would occur within the same footprint of the existing site and **utilize the existing drainage and treatment system; runoff would not change from existing conditions.** Therefore, no impacts to a riparian habitat or other sensitive natural community would occur.

Provide construction spill containment/contingency and response plans and remediation.

Provide drawings and descriptions of all drainage and treatment facilities on the site, within and beyond the existing containment walls, and specifically adjacent to the northerly channel.

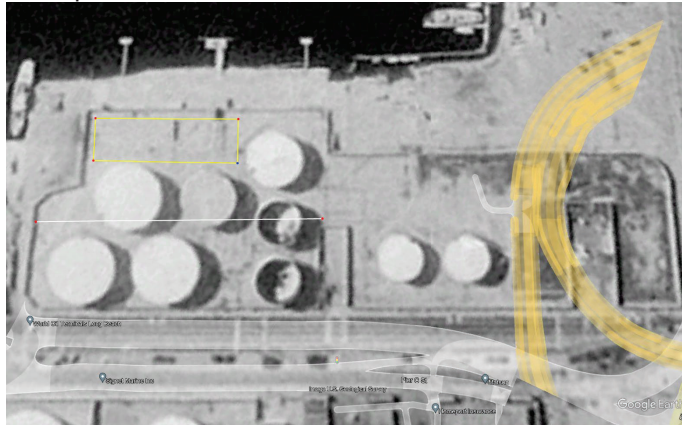
Provide documentation as to “not change” for the construction area north of the existing containment wall.

2-18/1 NO IMPACT. The proposed Project would not cause a substantial adverse change or affect a **historical resource**....A record search and literature information from the **South Central Coastal Information Center (SCCIC)**...did not identify the presence of any eligible or listed historic properties within the Project area.... **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.** No impact to an historical resource would occur. Mitigation Measures: No mitigation is required

Provide Historic aerial photos 1920-1995 LightBox/EDR.net and review for potential sources of historic remains (privies and trash pits).

Provide review/assessments of all historic aerial photos of Project site and area

Example: Historic Resources 05/--/1994 Yellow Line = 518ft - total 1150ft L<>R, W<>E



2-23/2 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).**....**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.

Deep-Draft-Navigation-Study-Draft-IFR-EIS-EIR.pdf 19/3 Three **major active faults** in the vicinity of the study area are the San Andreas, Palos Verdes and Newport-Inglewood. They are all capable of producing a moment magnitude 7 earthquake....The Newport-Inglewood and Palos Verdes are located approximately 2 miles northeast and 2 miles southeast of the study area, respectively. Portions of the Palos Verdes fault pass through the west side of port of Long Beach and are outside the study project limits. Historically, the study area has been subjected to seismic events with a Magnitude 6 (1933 Long Beach earthquake – Magnitude 6.3). A study by EMI (2015), presents the geography, source, and probabilistic seismic hazard parameters for the local faults.

Deep-Draft-Navigation-Study-Draft-IFR-EIS-EIR.pdf 19/4 Of those, the THUMS-Huntington Beach and Compton Thrust faults are considered the most significant tectonic features from the San Pedro margin as they both pass directly through the port of Long Beach. Either of these faults are capable of producing a moment magnitude 7 earthquake (BSSA 2019). The Wilmington Blind Thrust Fault also underlies the Port and has recently been upgraded to active status (BSSA, 2019). The size of the fault suggests that it is capable of generating moderate-magnitude earthquakes (Mw 6.3–6.4),

Provide a thoroughly revised and competently edited initial study for review. The NI Fault lies north of the Project site, not South or Southwesterly. Author may have confused the Palos Verdes Fault with the NI Fault.

Provide thorough review for the Thums/Huntington Beach Fault within 3 miles of the Project site including relations with the Thums/Long Beach petroleum sources and their development as evidenced by the presence of historically active oil wells within the Pier C area and oil development amongst the Thums faults.

2-23/5 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).

Provide the geotechnical studies and report which form the engineering basis of such a system to support the proposed tanks and compared to the bases and engineered foundation for all other tanks on Project area.

2-24/1 iii) Seismic-related ground failure, including liquefaction? LESS-THAN-SIGNIFICANT IMPACT. Liquefaction....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**....In addition, densification of the soil resulting in **vertical settlement** of the ground can also occur....The Project area is mapped as being in a liquefaction hazard area on the CGS Seismic Hazard Map (CGS, 1999b). Various layers below a depth of 5 feet are potentially liquefiable (Albus-Keefe, 2018). The implementation of a ground improvement system included in the design of the Project consisting of Geopiers or the equivalent rammed aggregate piers **would minimize the effects** of liquefaction. Therefore, the impacts from seismic related ground failure, including liquefaction, would be less than significant.

Provide geotechnical boring for the full depth of fill (100+/-ft) beneath the Project site and containment area to natural soil/alluvium prior to development of the Port of Long Beach. Aggregate pier/columns in uncompacted fills of >20ft depth may not be suitable for seismic resistant support and foundations.

Define “minimize the effects of liquefaction”. Would the piers support the tanks without spillage during a 7 magnitude quake within 3 miles of the site?

Provide thorough engineering analyses of requirements for supporting the tanks during the next 100 years during a 7.0+Magnitude event within 3 miles of the Project site.

Provide examples of existing tanks with such piers/aggregate foundations within 3 miles of the Project.

2-24/5 Construction of the proposed Project,...would be constructed and operated in compliance with the existing facility's **Stormwater Pollution Prevention Plan (SWPPP)**, which identifies Best Management Practices (BMPs)...Trucks during operations would continue to utilize **paved surfaces and unpaved surfaces surrounding the tanks** would be **covered with gravel, same as is found currently throughout the tank area**. As such, erosion impacts during...2-25/1...operations would be negligible. Therefore, potential impacts related to soil erosion would be less than significant.

Provide construction work plan which fully complies with and shall be enforced and accessible web-page for project during construction period for public monitoring of compliance with SWPPP.

Provide mitigation including 100% paving of all surfaces, other than active excavations or borings, during construction and following completion of construction.

2-25/2 c. Would the project be located on geologic units or soil that is unstable....**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..., 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...ground improvement system...would be implemented for the two tanks. These features of the project design would **reduce the potential for seismically induced damage**....Therefore, the impacts related to unstable soil would be less than significant.

The Project site and area are founded on uncompacted estuarine alluvium/soil and uncompacted fill over such alluvium. The entire subsurface say to 100ft depth must be considered unstable and treated accordingly. Provide thorough documentation (including fill borings to 100ft and at 25ft centers or encircling the existing tanks) of subsurface materials and competencies with in-boring and laboratory tests.

Provide specific report regarding the existing ground conditions, potential seismic exposure for site and ground conditions, and maximum seismic event without spillage for existing and Project tanks and piping systems.

2-26/3 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 would 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.

Provide all geotechnical reviews and analyses for the entire Project are and parcel. Provide current or likely depths of all stone-column/piers for the proposed project and foundation designs for adjacent existing tanks.

2-27/1 **POTENTIALLY SIGNIFICANT IMPACT**. The proposed Project is an industrial stationary source project that requires a permit to construct/permit to operate 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, 2019).

Provide 25-year emissions projections for all existing tanks and proposed project tanks and for processing and road-based transport facilities and significant thresholds. Provide same for all oil-related facilities within one-mile of Project parcel.

2-29/1 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. Regardless, consistency with applicable plans, policy and regulations aimed at reducing GHG emissions **will** be evaluated in the EIR for their potential to cause significant impacts.

Provide 25-year emissions projections for all existing tanks and proposed project tanks and for processing and road-based transport facilities and significant thresholds. Provide same for all oil-related facilities within one-mile of Project parcel.

2-31/1 ...fluids during construction and while parked. Spills and leaks of hazardous materials during construction activities could potentially result in soil or groundwater contamination.

Provide mitigation for all construction related activities, including containment system including sealing and making impervious all surfaces within the Project parcel/area.

2-31/2 The majority of the six-acre site, including the construction and staging areas, are **unpaved and covered with sand and gravel**, whereas 0.83 acres 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. **Therefore, hazardous materials impacts during Project construction activity could be potentially significant and will be further evaluated in the EIR.**

Provide complete boring review of tank farm – 5ft boring on 25ft grid with 24hr gas monitoring in bores.

Provide compaction of upper one foot of “soil” suitable for placement of 4in layer of impervious asphalt coat with appropriate drainage to sumps for removable of any spillage or leakage.

Provide soil vapor recovery and treatment wherever detectable HC gases are found in 24hr monitoring.

Provide complete sealing and rendering impervious for all surfaces within the Project parcel/area and provide for adequate drainage and runoff interception and containment for upto 100-year rain storm event.

Provide Draft Mitigation, Monitoring and REPORTING Program in Draft EIR.

Provide slit trench impervious HC barrier sheet of at least 3 ft depth from surface if HC gases are detected.

2-31/4 POTENTIALLY SIGNIFICANT IMPACT. Spills of hazardous materials could occur due to improper handling and/or storage practices during construction or operation activities and potentially cause soil or groundwater contamination, or contamination of the adjacent Channel 2. As described in Section IX(a), the proposed Project could potentially create a significant hazard to the public or environment through accidental release of hazardous materials. Therefore, hazardous materials impacts during construction and operations **could be potentially significant and will be further evaluated in the EIR.**

Provide mitigation measures and assessment mentioned herein, e.g., current Spill Contingency and cleanup plans.

Provide 5ft deep borings on 25ft grid outside of current spill containment barriers and HC vapor monitoring for 24hr.

2-32/2 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. Therefore, impacts related to listed hazardous materials sites would be less than significant.

As no ground borings and vapor monitoring has been conducted/reported herein, and the most of the entire parcel has permeable surfaces or pathway for liquid to enter the ground fill a thorough ground investigation must be provided to document and verify the existing levels of hazardous contaminations and potential for increased contamination during project construction and operations.

Provide the facts and provide information and mitigation measures based on facts.

2-34/ X

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

Provide clear delineation of inundation zone in graphic form on map of entire facility area.

2-35/2 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 geotechnical report prepared by Albus-Keefe 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. Groundwater would be disposed of in accordance with applicable regional, State, and federal regulatory requirements. Groundwater would not be discharged to open waters.

Provide pre-construction boreholes for within 2ft of any planned penetration of groundwater table, require water sampling, and HC-gas monitoring for 24hr.

With such information prepare and provide a groundwater remediation plan for construction activities expected to penetrate the groundwater table.

2-35/3 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 and discharged in accordance with applicable regulations.

Provide prohibition of test waters to drains or open water and require non-potable reuse of cleaned test water within the Port area.

2-35/4 Implementation of **applicable SWPPP BMPs and compliance with regulations** would ensure runoff and discharges during Project construction would not violate any water quality standards and would reduce short-term construction-related impacts to water quality to a less-than-significant level.

Provide a clear and specific monitoring and disposal plan and enforceable public complaint procedure related to the BMP to assure and document compliance through the entire Project construction.

2-37/2 LESS-THAN-SIGNIFICANT IMPACT. As discussed in Section X(c)(i) and X(c)(ii),... 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 related to stormwater drainage during construction** and operation would be less than significant.

Provide complete boring review of tank farm – 5ft boring on 25ft grid with 24hr gas monitoring in bores.

Provide compaction of upper one foot of “soil” suitable for placement of 4in layer of impervious asphalt coat with appropriate drainage to sumps for removable of any spillage or leakage.

Provide soil vapor recovery and treatment wherever detectable HC gases are found in 24hr monitoring.

Provide Draft Mitigation, Monitoring and REPORTING Program in Draft EIR.

Provide slit trench impervious HC barrier sheet of at least 3 ft depth from surface if HC gases are detected.

2-37/3 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).

Provide complete boring review of within tank farm and entire project site – 5ft boring on 25ft grid with 24hr gas monitoring in bores.

Provide compaction of upper one foot of “soil” suitable for placement of 4in layer of impervious asphalt coat with appropriate drainage to sumps for removable of any stormwater, spillage, or leakage.

Provide soil vapor recovery and treatment wherever detectable HC gases are found in 24hr monitoring within the entire Project site (parcel).

Provide Draft Mitigation, Monitoring and REPORTING Program in Draft EIR.

Provide slit trench impervious HC barrier sheet within the spill containment walls of at least 3 ft depth from surface if HC gases are detected.

2-37/4 The Project site **does not have a flood control system in place**; however, air driven pumps may be used to **divert water out of the area within the containment wall during a flood event** as would be done under existing conditions. The proposed Project would not alter the existing drainage pattern on-site and flood flows would not be impeded or redirected because the tanks would be installed within the existing containment walls. As such, impacts regarding flood flows during construction and operation would be less than significant.

Provide adequate stormwater control systems for 100-year event for the tank containment area and for the truck loading/unloading facility runoff control area.

Provide for segregation/treatment of any oil contaminates from runoff/drainage as required for spill contamination areas (spillage plus 100-year rainfall).

2-37/4 The Project site is located within the 100-year flood hazard zone. The proposed tanks would be constructed and installed within existing containment walls at the site, which are designed to withstand a 100-year storm event. However, anticipated future rise in sea-levels may exacerbate the potential for flooding impacts resulting in a potentially significant impact. Therefore, the potential for flooding impacts will be evaluated further in the EIR.

Provide projected sea level rise for 25 and 50 years and integrate with full containment requirements of largest tank spillage and containment-discharge treatment requirements.

2-37/6 d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? **POTENTIALLY SIGNIFICANT IMPACT.** Flood Hazard The Project site is located within the 100-year flood hazard zone. The proposed tanks would be constructed and installed within existing containment walls at the site, which are designed to withstand a 100-year storm event. However, anticipated future rise in sea-levels may exacerbate the potential for

flooding impacts resulting in a potentially significant impact. Therefore, the potential for **flooding impacts will be evaluated further in the EIR.**

Provide projected sea level rise for 25 and 50 years and integrate with full containment requirements of largest tank spillage and containment-discharge treatment requirements.

2-38/1 The Project site is adjacent to Channel 2 of the Cerritos Channel to the north....Project site is located within a tsunami inundation area (CGS, 2009) vulnerable to tsunamis generated off the coast of California. The proposed Project could have potentially significant impacts associated with the risk of inundation from a tsunami. Therefore, the potential for the risk of pollutants to be released in the event of inundation due to a tsunami **will be evaluated further in the EIR.**

Provide alternatives which would not be subject to risks of tsunami inundations, e.g., augment existing containment with protective berms and calculations confirming adequate containment (e.g., largest tank + 1/100yr storm event, including those in 2023).

2-38/4 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).

Provide Project and two alternatives which would meet all goals and objectives and a Do-Nothing case.

2-64/Table XXI.

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? ***OIL SPILL 100yr rainstorm + Spill***

Provide mitigation for existing conditions/past projects on the parcel, e.g., parcel containment walls and sumps for removal.

Provide 100% impervious surface for parcel within containment walls and sumps for sufficient size and capable for the largest tank volume AND 100-year rainfall event.

Provide containment to assure no spillage/runoff can enter the marine waters.

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 effects of probable future projects.)

Provide mitigation for existing conditions/past projects on the parcel, e.g., parcel containment walls and sumps for removal. Provide 100% impervious surface for parcel within containment walls and sumps for sufficient size and capable for the largest tank volume

AND 100-year rainfall event. Provide containment to assure no spillage/runoff can enter the marine waters.

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

Provide plan and mitigation for spillage of existing conditions/past projects and with Project additions on the parcel and for protective operation and equipment for spill-response teams and operations.

Provide 100% impervious surface for parcel within containment walls and sumps for sufficient size and capable for the largest tank volume AND 100-year rainfall event. Provide containment to assure no spillage/runoff can enter the marine waters and required spill response operations on marine waters.

2-64/2 **POTENTIALLY SIGNIFICANT IMPACT.** The proposed Project involves the construction and operation of two new storage tanks at the existing World Oil Terminal. The proposed Project may have potentially significant impacts that are considered cumulatively considerable (see Section III, Air Quality; Section VIII, Greenhouse Gas Emissions; Section IX, Hazards and Hazardous Materials; and Section X, Hydrology and Water Quality). The EIR will evaluate whether the proposed Project's construction and operation impacts are cumulatively considerable.

Provide evaluation whether the proposed Project's construction and operation impacts in the context of all Project parcel's facilities are cumulatively considerable.

- 2-64/3 c. Does the project have environmental effects, which would cause substantial adverse effects on human beings, either directly or indirectly?

POTENTIALLY SIGNIFICANT IMPACT. As previously discussed, implementation of the proposed Project may result in potentially significant impacts to Air Quality, Greenhouse Gas Emissions, Hazards and Hazardous Materials, and Hydrology and Water Quality, which may cause adverse effects on humans. Therefore, the EIR will evaluate the **proposed Project's impacts to these issue areas** to identify potential direct and indirect adverse effects to humans.

Provide assessments whether the proposed Project's construction and operation impacts in the context of all Project parcel's facilities are cumulatively considerable for human populations within 5-mile radius of the Project site, especially for air quality, as SCAQMD basin cannot meet Calif. Or Federal air quality limits for HC, NOx, O3, and others.

3-65/2 **POTENTIALLY SIGNIFICANT IMPACT.** The proposed Project involves the construction and operation of two new storage tanks at the existing World Oil Terminal. The proposed Project may have potentially significant impacts that are considered cumulatively considerable (see Section III, **Air Quality**; Section VIII, **Greenhouse Gas Emissions**; Section IX, **Hazards and Hazardous Materials**; and Section X, **Hydrology and Water Quality**). The EIR will evaluate whether the proposed Project's construction and operation impacts are cumulatively considerable.

As the project is an addition to and not replacement of storage for hydrocarbon based materials, any additional emissions must be considered significant or considerable. Provide mitigation for all emissions to remain within the existing emissions levels by capturing

existing emissions and treating such to have no additional releases of hydrocarbons over the maximum during the last five years of records.

3-65/3 As...implementation of the proposed Project may result in potentially significant impacts...which may cause adverse effects on humans. Therefore, the EIR will evaluate the proposed Project's impacts to these issue areas to identify potential direct and indirect adverse effects to humans.

As the project is an addition to and not replacement of storage for hydrocarbon based materials, any additional emissions must be considered significant or considerable. Provide adequate computer modelling for the Project, and all local area tanks and potential human impacts to central area of Long Beach for the World facilities and the Project. Provide mitigation for reduction of emissions to remain within the existing emissions levels by capturing existing emissions and treating such to have no net/additional releases of hydrocarbons over the maximum during the last five years of records. Mitigation must focus on reducing tank emissions by using secondary vapor containments and treatment of exhaust air/vapors from fixed roof tanks.

4-18 Cultural Resources

As indicated elsewhere, acquire, review, and assess historic aerial photos from 1920 to date for past human occupations and prospective sites of historic debris on the site.

4-22/4 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 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 [=mitigation] in the final project design [no conditional] ensures** that impacts from ground shaking would be less than significant.

Provide final design within the DEIR and if changes are made circulate a supplemental/subsequent EIR at a later date for public review and comments.

Undocumented future mitigation measures cannot be acceptable without public review.

4-23/1 The final project design would implement the recommendations of the geotechnical investigation report. Therefore, the impacts from seismic related ground failure, including liquefaction, would be less than significant.

Provide final designs including geotechnical mitigation for the Project Description of the DEIR. Without public review, the Project cannot comply with CEQA as established by the legislative approvals for subsequent and supplemental EIRs.

4-24/1 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 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.**

Provide final designs including geotechnical mitigation for the Project Description of the DEIR. Without public review, the Project cannot comply with CEQA as established by the legislative approvals for subsequent and supplemental EIRs.

4-24/3 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 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.

Provide for conduct of all investigation and incorporation of all mitigation measures prior to completion of the publicly accessible Draft EIR. Without public review, the Project EIR cannot comply with CEQA as established by the legislative approvals for subsequent and supplemental EIRs.

4-24/4 Mitigation Measures: No mitigation is required.

As indicated in 4-24/3 and elsewhere mitigation measures are considered between determination of the FEIR and Project construction, without public review and comments which does not comply with CEQA or NEPA. Revise throughout the initial study and recirculate.

4-25/3 **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.

As additional borings and changes of designs are anticipated elsewhere, this statement is totally unfounded at this time. Provide all investigations and design development prior to the circulation of the DEIR, otherwise the DEIR, FEIR, and Determination maybe subject to further external review and adjudication.

4-30/1 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.

Remove the conjectures regarding duration and climate conditions and Provide required measures of approved spill contingency plans in order to render spillage as less than significant. Provide for impervious containment of all tanks and pipe networks.

4-31/5 One open Regional Water Quality Control Board (RWQCB) cleanup program site, Arco Marine Terminal – T3, is located approximately 0.11 mile **[580ft]** southeast of the proposed project site (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.

Provide application of all such cleanup and containment program requirements to the Project site and area and perhaps to the earlier two are tanks (now a parking lot) so as to assure compliance and protection of hazardous contamination for Pier C.

Provide similar programs to the Project parcel including oil wells known to be located within the parcel, as is the case with the ARCO Terminal.

Appendix B

WORLD OIL INITIAL STUDY

Notice of Preparation/Initial Study for the World Oil Tank Installation Project Port of Long Beach

State Clearinghouse # 2020100119

Prepared for:



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

Prepared by:



Aspen Environmental Group
5020 Chesebro Road, Suite 200
Agoura Hills, CA 91301

January 2023

NOTICE OF PREPARATION/INITIAL STUDY
Prepared in Accordance with the
California Environmental Quality Act of 1970
as Amended
for the
World Oil Tank Installation Project

The narrative and attached documents, including the project description, and staff analysis constitute an Initial Study prepared in accordance with the California Environmental Quality Act (CEQA). Based upon the data contained herein, the proposed project has been determined to have potentially significant adverse environmental impacts, and an Environmental Impact Report (EIR) will be prepared.

INITIAL STUDY ISSUED FOR PUBLIC REVIEW: January 30 – February 28,
2023

BY: DIRECTOR OF ENVIRONMENTAL PLANNING: 

BY: CITY OF LONG BEACH BOARD OF HARBOR COMMISSIONERS

Harbor Development Permit Application No. 19-066

State Clearinghouse No. 2020100119

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Acronyms and Abbreviations

AB	Assembly Bill
AQMP	Air Quality Management Plan
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
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
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
HDP	Harbor Development Permit
I	Interstate
IP	Port-Related Industrial District
IS	Initial Study
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
LNAPL	light non-aqueous phase liquid
Lmax	maximum noise level
Lmin	minimum noise level
LST	Localized Significance Threshold
LUST	leaking underground storage tank
m ³	cubic meter
MBTA	Migratory Bird Treaty Act
mils	one-thousandth of an inch
MP	Port Manufacturing
MRZ	Mineral Resource Zone
MT	metric tons

MW	Megawatt
NPDES	National Pollutant Discharge Elimination System
NSR	New Source Review
OEHHA	Office of Environmental Health Hazard Assessment
PDTR	Port Drayage Truck Registry
PMP	Port Master Plan
POLB/Port	Port of Long Beach
PPV	peak particle velocity
RAP	rammed aggregate pier
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
sec	second
SRA	source receptor area
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

INTRODUCTION TO THE INITIAL STUDY

The proposed World Oil Tank Installation Project (Project) involves the construction and operation of two 25,000-barrel (bbl) petroleum tanks with internal floating roofs. The proposed Project is located at the Port of Long Beach (POLB/Port) within property privately owned and operated by Ribost Terminal LLC, dba World Oil Terminals (World Oil) at 1405 W. Pier C Street, Long Beach, California. The Project site is approximately 6 acres and contains seven existing petroleum tanks with a total terminal storage capacity of 502,000 bbl. Construction of the new tanks would include new tank foundations, two pumps, and connections to the existing piping for the existing truck loading racks.

This Initial Study (IS) has been prepared pursuant to the California Environmental Quality Act (CEQA) and the *State CEQA Guidelines* (14 CCR 15000, et seq). The purpose of the IS is to inform 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 if required, identify proposed mitigation measures that would avoid or reduce environmental effects to the extent feasible.

1. Introduction

1.1 Project Background

Ribost Terminal LLC, doing business as (dba) World Oil Terminals (World Oil) submitted 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). The proposed Project is located within the existing World Oil Terminal at 1405 Pier C Street, Long Beach, California. World Oil has privately owned and operated the petroleum storage facility on Pier C since 1964 (see Figure 1). 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.

World Oil is proposing to construct and operate two new 25,000-bbl internal floating roof petroleum storage tanks at the World Oil Terminal. The new storage tanks would be connected to existing utilities, such as electrical lines and petroleum piping. The World Oil 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



Figure 1. Existing Tanks

the proposed Project would provide additional storage capacity of petroleum products, the new smaller tanks would ultimately provide for more efficient terminal operations by providing the adequate crude oil storage capacity for World Oil's paving/roofing asphalt refinery in South Gate. The larger existing tanks would be made available for lease by third-party customers for storage of fuel oils, as is currently done at the terminal. At this time, third-party customers have not yet been identified and are unknown; pipeline transfers to these tanks would occur as is done currently. Due to the speculative nature regarding the future destination(s) and use(s) of the petroleum products, an assessment of this topic cannot be reasonably forecast per *State CEQA Guidelines* Section 15145.

1.2 Project Objectives

The objectives of the proposed Project are:

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

1.3 Project Location and Existing Conditions

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 depicts a map of the Project site within the regional context of the vicinity. Figure 3 shows the Project site plan with the proposed tank locations, access routes, and staging area.

1.3.1 Project Vicinity and Surrounding Land Uses

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 industrial 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, the Tesoro Marine Terminal 3 Facility and Inner Harbor Channel to the south, and the Matson Container Yard operated by SSA Terminals to the immediate west.

1.3.2 Existing Project Site Conditions and Operations

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 or unload, and exit from the same access point located on Pier C Street (one-way in, one-way out), as shown on Figure 3. Each on-road transport truck has a capacity of approximately 6,700 gallons (160 bbl). The terminal can accommodate a maximum truck capacity of five trucks due to the limited available area for truck queuing and the required clearance for emergency and fire lane access. The loading area is equipped with a berm capable of containing the equivalent of one truckload (approximately 6,700 gallons) of crude oil in the event of an accidental spill. A drainage device in the center of the berm collects the oil into a processing area to prevent oil from permeating soil or contaminating seawater.

Current terminal operation of tanks allocated to the World Oil consist of the transport of crude oil to the existing tanks by a dedicated receive only pipeline and daily on-road transport truck trips to and from the terminal to the offsite World Oil Refinery located in South Gate, California. Periodically, crude oil may be returned to the tanks by on-road transport trucks for refinery crude balancing.

In the current tanks leased to third-party customers, different grades of marine fuels, such as marine diesel oil, bunker fuel oil, and low sulfur fuel oil have been stored. Product is transmitted via two existing 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. During atypical periods when the pipelines are being serviced, product may be transported to/from the leased tanks by on-road transport truck via the existing truck loading rack.



January 2023

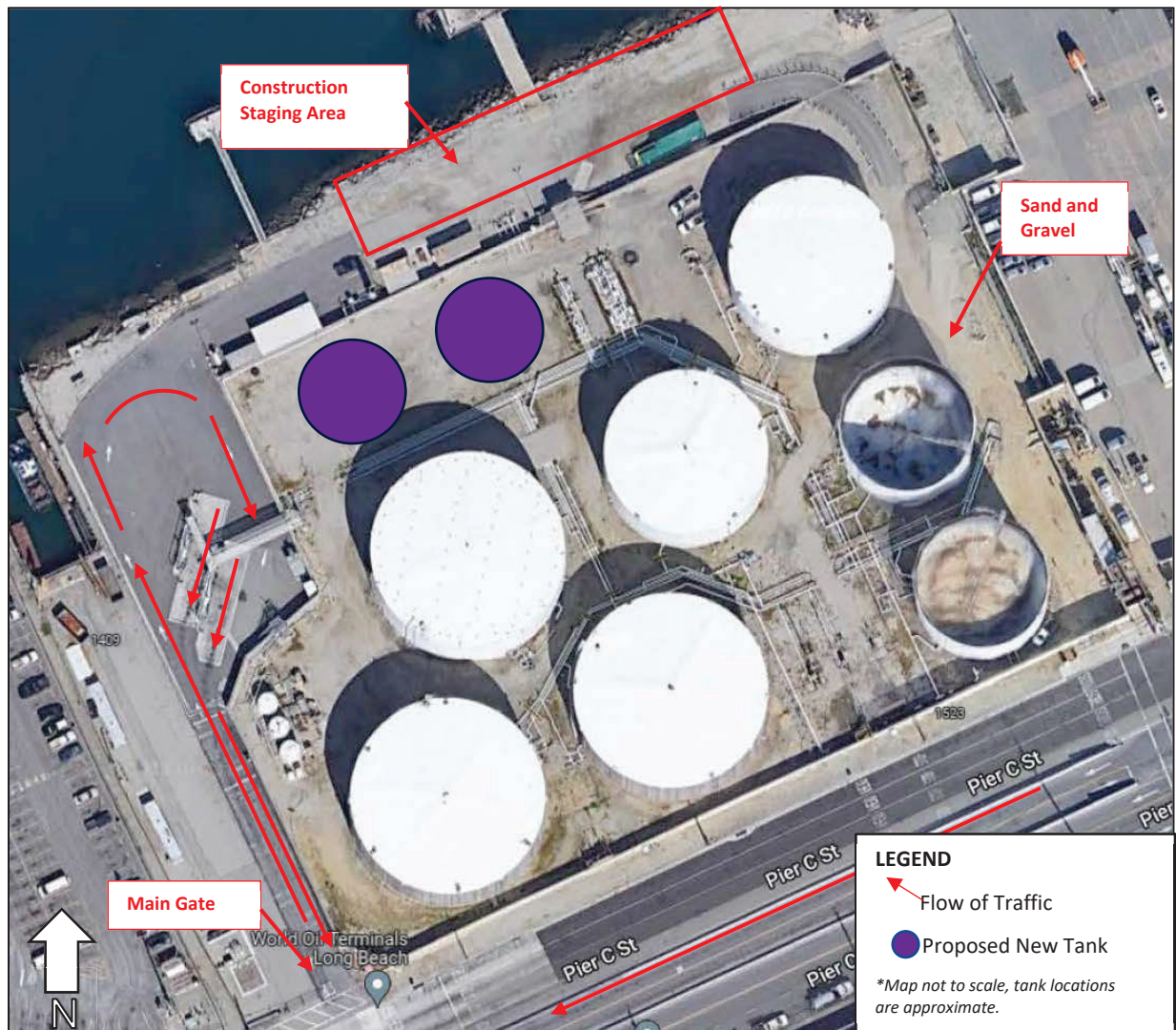


Figure 3. Project Site Plan – World Oil Tank Installation Project

1.3.3 Port Master Plan

The Port Master Plan (PMP) was originally certified by the California Coastal Commission (CCC) in 1978 in conformance with the policies of Chapter 8 (entitled “Ports”) of the California Coastal Act (CCA). The PMP was updated and certified in 1983 and again in 1990 as Amendments No. 3 and No. 6, respectively. Since 1990, numerous plan amendments have been adopted by the POLB and certified by the CCC.

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 construction and operation of the proposed two new petroleum storage tanks at the existing World Oil Terminal at Pier C would be consistent with the Northeast Harbor’s allowable and permitted use of hazardous cargo facilities. The design and use of the two new tanks would be similar to the existing storage tanks. In addition, the proposed Project would not store fuel oils or crude oils in such quantities as would

have significant impact upon the oil and gas supply of the state and/or nation. Therefore, the proposed Project would not require a PMP amendment and is not among the categories of development projects that may be appealable under the CCA prior to the approval by Board of Harbor Commissioners.

1.3.4 Current City of Long Beach General Plan Land Use Designation and Zoning

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).

1.4 Project Description

World Oil currently operates seven tanks at their facility and proposes to construct and operate two additional, new 25,000-bbl petroleum storage tanks with internal floating roofs with new tank foundations and piping connections to existing facility infrastructure, including the truck loading racks. The two new, smaller tanks would realign and provide more adequate storage capacity for World Oil’s operations by moving the crude oil currently stored for World Oil’s paving/roofing asphalt refinery from two existing larger tanks at the site. The two larger existing tanks would then be removed from World Oil’s dedicated paving/roofing asphalt refinery service and made available to lease by third-party customers for storage of marine fuels and marine fuel blending components, as is currently done for four of the existing tanks at the facility. No new pipelines, truck loading racks, or other facility modifications are being proposed at World Oil’s Pier C Terminal, World Oil’s paving/roofing asphalt refinery in South Gate, or the third-party customers’ facilities. Furthermore, the proposed Project would not enable the facility to increase throughput beyond the permitted limits through the pipelines, tanks, or loading racks 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.

1.4.1 Project Construction Activities, Equipment, and Schedule

The site would be prepared for tank installation by clearing debris, such as concrete and abandoned underground components. 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 4 shows the existing area where the tanks would be installed. An existing out-of-service concrete oil/water separator sump at the Project site would be demolished to accommodate the new tanks (see Figure 5).



Figure 4. Project Site – View Looking West

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).

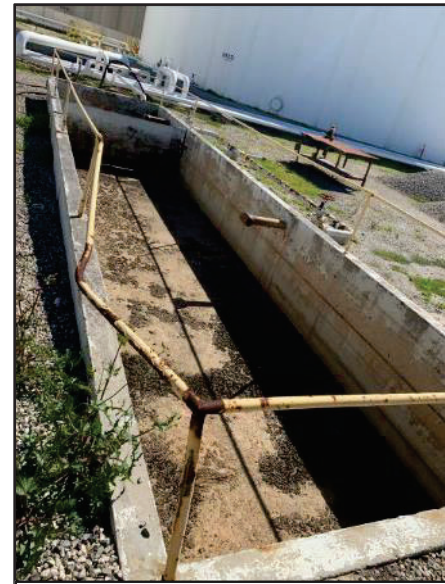


Figure 5. Concrete Oil/Water Separator Sump (to be demolished)

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 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 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 linear feet (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 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 1, 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 1. Construction Schedule and Personnel

Proposed Project Construction Phase	Work Activity (subphase)	Duration	Duration (Workdays)	Shifts¹	Workers Per Day
Phase 1	Excavation/ Foundation	4.5 months	91	1/10	8
Phase 2	Tank Erection/Painting	6.5 months	134	1/10	8

¹Five-day work weeks; Phases 1 and 2 overlap by approximately 0.5 month, so the total duration is approximately 10 months.

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

Table 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	55
	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, gated entrance to the World Oil Terminal property, which would be gated for the duration of Project construction and continued 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 6).



1.4.2 Project Operation and Maintenance

The existing tanks leased by third-party customers have historically stored different grades of marine fuels, such as marine diesel oil, bunker fuel oil, and low sulfur fuel oil. The proposed existing tanks that would be converted to 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 proposed 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. No improvements to pipelines to or from the facilities at the Marathon Petroleum Carson Refinery or Glencore's Long Beach Marine Terminal or Carson Marine Terminal are proposed as part of the proposed Project. Therefore, refinery processes would not be influenced by the proposed Project's storage capacity.

The equipment at the facility is subject to the air permitting requirements established by the South Coast Air Quality Management District (SCAQMD). Each of the existing tanks and loading racks at the World Oil Terminal has an SCAQMD Permit to Operate that limits throughput, vapor pressure of materials, and the types of materials (based on volatilities and Reid Vapor Pressure [RVP]) that are permitted to be stored. The proposed Project would not enable the facility to increase throughput of existing pipelines, tanks, or loading racks beyond the permitted limits. The following throughput limits are enforced by the SCAQMD in the facility's Permits to Operate for each piece of equipment (SCAQMD, 2018):

- 107,500 bbl/month for the 43,000-bbl capacity tanks
- 167,500 bbl/month for the 67,000-bbl capacity tanks
- 235,000 bbl/month for the 94,000-bbl capacity tanks
- 10,000 bbl/day of total throughput for the two truck loading racks

World Oil would need to obtain new Permits to Construct and Permits to Operate from SCAQMD for each of the two new storage tanks. No changes to conditions in World Oil's existing Permits to Operate for the existing tanks are proposed or 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 would not change with implementation of the proposed Project.

The new Permits to Construct and Permits to Operate for each of the two new storage tanks would reflect the requirements of the SCAQMD New Source Review program. The new air permits would limit the throughputs and types of materials to be stored in the new tanks and require the tanks to incorporate the Best Available Control Technology for limiting emissions. World Oil would be required to provide offsets for the projected increase in emissions. The air permits would also include conditions requiring proper installation and maintenance of the tanks and floating roofs, use of emissions controls during roof landings during tank cleaning and degassing, and recordkeeping and reporting to verify proper use and maintenance of the tanks.

After proposed Project implementation, the newly leased tanks may also ship product through the truck loading racks during atypical conditions such as when a pipeline is being serviced, as is currently done with existing leased tanks. To account for this, it is estimated that truck trips would increase approximately 10 percent over baseline truck counts. Table 3 displays the existing monthly and daily average loading rack truck count and barrels transported. Table 4 displays the projected future monthly and daily average loading rack truck count and barrels transported including this 10 percent increase.

Table 3. Existing Loading Rack Truck Traffic

2017-2022	Average Truck Count		Barrels	
	Monthly	Daily	Monthly	Daily
Minimum	344	0	54,071	0
Maximum	1,228	53	202,279	8,542
Overall Average	780	26	124,971	4,109

Note: Truck and barrel counts include receipts (unloaded trucks) and deliveries (loaded trucks).

Table 4. Proposed New Loading Rack Truck Traffic

	Average Truck Count		Barrels	
	Monthly	Daily	Monthly	Daily
Minimum	378	0	59,478	0
Maximum	1,351	58	222,507	9,396
Overall Average	858	29	137,468	4,520

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 training and quarterly/annual emergency drills, have evacuation plans, and shutdown procedures.

Tank Maintenance

Typical 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 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. Although typical tank cleaning and emptying occurs approximately every 10 years, other maintenance activities may be conducted sooner, as needed. Reasons for emptying and/or cleaning a tank could include, but are not limited to, the following:

- Product in a tank does not satisfy the quality requirements or standards;
- The type of product stored in the tank is changed, and the new product is not compatible with or would be contaminated by existing product in the tank; or
- Tank repair is required.

1.5 Anticipated Permits and Other Approvals

In accordance with Sections 15050 and 15367 of the *State CEQA Guidelines*, POLB is the designated Lead Agency for the proposed Project and has principal authority and jurisdiction for CEQA actions and project approval.

The discretionary actions to be considered by POLB as part of the proposed Project include the following:

- Approval and certification of the environmental impact report required under CEQA; and
- Approval of a Harbor Development Permit (HDP) that would allow for the construction activities.

In addition to the Harbor Development Permit, the approvals or permits from other federal, state, local, and/or regional agencies that may be required to implement the proposed Project include but are not limited to those listed in Table 5.

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

Agency	Jurisdiction	Requirements
Federal/State Agencies		
U.S. 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
Local/Regional Agencies		
South Coast Air Quality Management District	Air quality	Limits on throughputs and types of materials to be stored; recordkeeping and reporting to verify proper use and maintenance of the new tanks
Los Angeles Regional Water Quality Control Board	Tank hydrotest water	Discharge to Long Beach Harbor
	Construction	Discharge of Storm Water
Los Angeles County Sanitation District	Wastewater treatment	Wastewater discharge limits
City of Long Beach Planning and Building Permit	Construction	Tank construction building codes
City of Long Beach Fire Department	Demolition of oil/water concrete separator pump	Underground Storage Tank Permit

2. Environmental Determination

2.1 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 checked="" type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input type="checkbox"/> Geology/Soils | <input checked="" type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards & Hazardous Materials |
| <input checked="" 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 checked="" type="checkbox"/> Mandatory Findings of Significance |

2.2 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

Date

2.3 Evaluation of Environmental Impacts

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
4. “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analyses Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

- a) the significance criteria or threshold, if any, used to evaluate each question; and
- b) the mitigation measure identified, if any, to reduce the impact to less than significance.

I. 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.

Construction

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. Therefore, the proposed Project would result in no construction related impact on scenic vistas.

Operation

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 operation related 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 I(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 to scenic resources due to either construction or operation.

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 PMP's Public Access, Visual Quality, and Recreation/Tourist Element contains goals which include minimizing disruptive views and improving the appearance of Harbor lands at and along major vehicular approaches. The PMP identifies the most sensitive views within the Port as predominate structures east from downtown Long Beach and along ocean bluffs, ground-level views along the boundary of Queensway Bay, and ground-level views along Harbor Scenic Drive from southbound lanes south of Anaheim Street (POLB, 1990). The Project site is not located near any of these sensitive views and would not conflict with the PMP's goals for visual quality.

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.

Construction

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. Construction impacts would be less than significant.

Operation

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 smaller storage tanks would be consistent with the visual character of the Project site, as they would be installed in an area surrounded by seven larger 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. Operational 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.

Construction

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., eliminating the need for nighttime lighting. Compliance with LBMC Section 8.80.202 would ensure light and glare impacts associated with construction of the Project are minimized to less-than-significant levels.

Operation

No new lighting is proposed as part of the proposed Project. Therefore operation of the new smaller storage tanks will not change any lighting and glare from the project and operational impacts due to lighting and glare would be less than significant.

Mitigation Measures: No mitigation is required.

II. 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 within 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 II(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 II(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 II(a) through II(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.

III. 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Expose sensitive receptors to substantial pollutant concentrations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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?

LESS-THAN-SIGNIFICANT IMPACT. This impact discussion addresses Project compliance with the applicable air quality management plans.

Air Quality Management Plan (AQMP). The South Coast Air Quality Management District (SCAQMD) implements, and periodically updates the 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.

Petroleum storage tanks, including those proposed with the Project, are subject to a variety of controls that specifically focus on storage tanks and fugitive components including:

- SCAQMD Rule 463, Organic Liquid Storage;
- SCAQMD Rule 1149, Storage Tank and Pipeline Cleaning and Degassing;

- SCAQMD Rule 1173, Control of Volatile Organic Compound Leaks and Releases from Components at Petroleum Facilities and Chemical Plants; and
- SCAQMD Rule 1178, Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities.

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.

Project construction would be required to comply with all applicable air quality regulations and all applicable strategies of the Clean Air Action Plan (CAAP) (POLB, 2017), including construction Best Management Practices (BMPs). Compliance with these regulations and CAAP BMPs ensures construction practices and emissions would conform with the AQMP.

Operation of two proposed floating roof crude oil storage tanks would not increase the crude oil throughput beyond the limits set in World Oil's SCAQMD-issued Permits to Operate for the loading racks or tanker truck transportation requirements. The tanks would be required to obtain SCAQMD permits and comply with all SCAQMD permit conditions and 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.

Product stored in the tanks allocated to the World Oil Refinery is only moved offsite via truck. Trucks associated with operation of the proposed Project are required to comply with all state and local regulations, including requirements in SCAQMD permits for the existing truck loading racks. Therefore, the nominal increase in trucks transporting fuel oil would not conflict with the AQMP.

The pre-construction review of the Permit to Construct/Permit to Operate applications by the SCAQMD would establish permit conditions requiring inspection, monitoring, and recordkeeping to ensure compliance with the SCAQMD rules and regulations for the proposed Project's operation and use of the two proposed petroleum storage tanks at the site. The proposed new and modified sources would be subject to the SCAQMD requirements to use the Best Available Control Technology (BACT) to ensure that the Project would pose no potential to conflict with the AQMP or SCAQMD requirements.

Truck and Bus Regulation. California Air Resources Board's (CARB) Truck and Bus Regulation requires heavy-duty diesel vehicles that operate in California to reduce toxic air contaminants (TACs) emissions from their exhaust. By January 1, 2023, drayage trucks will be required to have 2010 or newer model year engines to reduce particulate matter (PM) and oxides of nitrogen (NOx) emissions. Starting in 2020, only vehicles compliant with this regulation will be registered by the California Department of Motor Vehicles (DMV). Trucks visiting the World Oil Terminal would be subject to the applicable provisions of the CARB Truck and Bus Regulation.

Clean Air Action Plan (CAAP). In 2006, the Boards of Harbor Commissioners of the ports of Long Beach and Los Angeles adopted the San Pedro Bay Ports CAAP as a means of complying with the SCAQMD's AQMP for the region. The CAAP was designed to reduce the health risks posed by air pollution from all port-related emission sources, specifically ships, trains, trucks, terminal equipment and harbor craft, such as tugboats. The 2017 CAAP Update contains strategies to reduce emissions from sources in and around the ports, plan for zero-emissions infrastructure, encourage freight efficiency, and address energy resources.

Community Emission Reduction Plan (CERP). The Community Emissions Reduction Plan (CERP) for Wilmington, Carson, and West Long Beach was adopted by the South Coast AQMD pursuant to 2017 Assembly Bill (AB) 617 to reduce air pollution and improve public health in communities experiencing disproportionate burdens from exposure to air pollutants. The CERP was developed in partnership and collaboration between the Community Steering Committee (CSC), which is made up of local community members and land use and public health agencies, the SCAQMD, and the CARB. Together they identified refineries, ports, neighborhood truck traffic, oil drilling and production, railyards, and schools, childcare centers, and homes as air quality priorities to be addressed and identified actions to reduce emissions and/or exposures (CERP 2019).

The following specific actions identified in the CERP may be relevant to the proposed Project:

- **Refineries: Action 4: Initiate Rule Development to Amend Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities.** The SCAQMD most-recently amended this rule in November 2020, and additional revisions are being considered for 2022 and 2023.
- **Ports: Action 3: Reduce Emissions from Port Equipment (Cargo Handling Equipment) and Drayage Trucks.** Trucks visiting the World Oil Terminal would be subject to CARB requirements for idling trucks, and the applicable provisions of the CARB Truck and Bus Regulation.
- **Neighborhood Truck Traffic: Action 1: Reduce Truck Idling; Neighborhood Truck Traffic: Action 2: Reduce Emissions from Heavy-Duty Trucks.** Trucks visiting the World Oil Terminal would be subject to CARB requirements for idling trucks, and the applicable provisions of the CARB Truck and Bus Regulation.

As described above, the proposed Project's construction and operational activities would be required to comply with all applicable air quality regulations and BMPs to ensure the proposed Project would not conflict with or obstruct implementation of the AQMP, Bus and Truck Regulation, CAAP, or the CERP. The proposed Project would have a less-than-significant impact with respect to compliance with the applicable air quality management plans.

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?

POTENTIALLY SIGNIFICANT IMPACT. SCAQMD has recommended daily emissions thresholds of significance for construction and operation for federal and state non-attainment pollutants. The proposed Project's peak construction emissions are anticipated to occur during tank coating and tank installation. Operation of the Project may increase emissions due to operation of the new tanks and increased use of existing underutilized tanks. Thus, Project construction and operation may potentially exceed SCAQMD thresholds and impacts due to criteria pollutants may be significant. As such, the EIR will include an evaluation of the Project's construction and operational criteria pollutant emissions.

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

POTENTIALLY SIGNIFICANT IMPACT. The Project site is located on World Oil Terminals' privately-owned property on Pier C within the Port. The Port is surrounded by a buffer of industrial/commercial areas and natural boundaries between most Port operating areas and nearby sensitive receptors such as the Los Angeles River Channel. For the purposes of the 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 area of the proposed new tanks. The nearest school, Edison Elementary School, is located more than a half-mile (over 880 meters) from the area of the proposed new tanks. The nearest hospital and known daycare facility are located farther than the nearest residences and school. Dignity Health - Saint Mary Medical Center (1050 Linden Ave, Long Beach) is approximately 1.5 miles (2,405 meters) from the project site and Childtime of Long Beach (One World Trade Center #199, Long Beach) is approximately 0.58 mile (1,284 meters) from the project site.

SCAQMD has recommended localized significance thresholds for construction and operation emissions based on modeled maximum Project concentration levels to address potentially significant Project-level criteria pollutant health impacts based on the size of a proposed construction site and the site's distance to receptors (in meters). The proposed Project's construction and operation emissions will be compared to the SCAQMD localized significance thresholds in the EIR. Additionally, SCAQMD has established significance criteria for toxic air contaminants (TACs). The TACs of concern for the proposed Project are diesel particulate matter (DPM) during construction and speciated VOC emissions from the operation of the new petroleum storage tanks. The proposed Project's potential impacts to sensitive receptors are potentially significant and will be assessed against the SCAQMD significance criteria in the EIR.

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

POTENTIALLY SIGNIFICANT IMPACT. During construction, the short-term increase in air pollutants and odors primarily due to the combustion of diesel fuel from construction equipment and VOC emissions associated with the application of tank interior and exterior coating (i.e., paint) may have the potential for 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.

While it is anticipated that odors during construction would be less than significant, during proposed Project operation, there would be increases in fugitive VOC and H₂S emissions from the two new tanks; the loading rack, exhaust emissions from the loading rack vapor control thermal oxidizer, and tanker truck trips. The thermal oxidizer exhaust would not have substantial odors; truck emissions odors would be minor and dispersed over a long transportation route. Therefore, these emissions sources would not have the potential to adversely affect a substantial number of people. Fugitive VOC and H₂S emissions associated with crude oil, and the truck loading rack fuel oil would include a mixture of substances with distinct odors; H₂S has a rotten egg odor that most people find offensive. Therefore, the downwind concentration of these substances could be high enough for individuals to find such odors objectionable and adversely affect a substantial number of people. Impacts due to emissions and odors may have a potentially significant impact.

The EIR will further analyze odor impacts to nearby sensitive receptors during operations and compare them with odor screening level risk assessment procedures and thresholds established by the SCAQMD and California Ambient Air Quality Standard for H₂S.

IV. Biological Resources

Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than- Significant Impact	No Impact
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. Another site visit was conducted by a Port biologist on December 13, 2022. Conditions at the Project site have not changed, and the assessment remains the same as observed in the 2020 survey. A records search of the California Natural Diversity Database was conducted by Aspen Environmental Group on December 19, 2022 (CDFW, 2022). 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 3).

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 March 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 during the site visit in March 2020 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 in 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, and not conducive to nesting impacts to nesting birds would be less than significant. Regardless, World Oil is required to follow the regulatory requirements of the MBTA.

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 X(a), Hydrology and Water Quality, 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* spp.), 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). As such, any potential pollutants from site runoff would not substantially adversely affect these marine HAPCs due to Project distance from these habitats. Any potential pollutants from site runoff during construction would be removed prior to draining into any water system in compliance with the existing facility Storm Water Pollution Prevention Plan (SWPPP) requirements. Operations would occur within the same footprint of the existing site and utilize the existing drainage and treatment system; runoff would not change from existing conditions. Therefore, no impacts to a riparian habitat or other sensitive natural community 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 X, Hydrology and Water Quality, for details). Construction and operation 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 during construction or operation 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 to state or federally protected wetlands 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 to the movement of any native resident or migratory fish or wildlife species or use of wildlife nursery sites 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 in the existing World Oil Terminal facility. 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.

V. 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]?*

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). A record search and literature information from the South Central Coastal Information Center (SCCIC) on April 1, 2020 did not identify the presence of any eligible or listed historic properties within the Project area (see Appendix A – Confidential). 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. No impact to an historical resource would occur.

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 identify 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. No impact to an archaeological resource would occur.

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 ground disturbance planned during construction of the proposed Project is planned to be within fill

soils only. Background archival research failed to find any potential for human remains (e.g., the existence of formal cemeteries) in fill soils. Operations of the project does not include any ground disturbing activities. Therefore, the proposed Project would not disturb any human remains and no impact to human remains would occur.

Mitigation Measures: No mitigation is required.

VI. 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.

Construction

During construction activities, the proposed Project would consume energy in the form of diesel- and gasoline-fuels for on-road vehicles and off-road equipment. The proposed Project is designed to be constructed as efficiently as possible and would reuse or recycle construction waste to the extent feasible, in accordance with state and City of Long Beach Municipal Code requirements (see Section XIX, Utilities and Service Systems), such as the reuse of excavated soil and concrete waste spoils. Construction impacts related to energy consumption would be less than significant.

Operation

The proposed Project would not increase the number of on-site facility operations and maintenance personnel, would not substantially increase on-site electricity use, and would not increase long-term transportation fuel consumption from the transport of petroleum product by trucks. Trucks used to deliver fuel would be required to comply with the California Air Resources Board Truck and Bus Regulation, which requires nearly all trucks and buses to have 2010 or newer model year engines as a means of reducing emissions and improving fuel efficiency. 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. Operations impacts related to energy consumption would be less than significant.

Therefore, the proposed Project would not include the wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation. Impacts related to energy consumption would be less than significant.

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.

Construction

The Project does not include energy consumption sources during construction that are directly subject to state or local energy efficiency plans. Indirectly, on-road vehicles used during construction would have to meet the ongoing federal and state fuel efficiency requirements. Construction impacts related to renewable energy and energy efficiency would be less than significant.

Operation

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 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 construction/installation of a few small new energy consumption sources, namely 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 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 operation would have to meet the ongoing federal and state fuel efficiency requirements. Operational impacts related to renewable energy and energy efficiency would be less than significant.

Therefore, the proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Impacts related to renewable energy and energy efficiency would be less than significant.

Mitigation Measures: No mitigation is required.

VII. 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/sec²). 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).

The proposed Project would incorporate a ground improvement system consisting of Geopiers or the equivalent rammed aggregate piers that 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).

Although the site is likely to experience strong to very strong ground shaking within its lifetime, the ground improvement system and mat-raft foundation included in the Project's design for the two new tanks would ensure 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). Various layers below a depth of 5 feet are potentially liquefiable (Albus-Keefe, 2018). The implementation of a ground improvement system included in the design of the Project consisting of Geopiers or the equivalent rammed aggregate piers would minimize the effects of liquefaction. 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 and operated in compliance with the existing facility's Stormwater Pollution Prevention Plan (SWPPP), which identifies Best Management Practices (BMPs) to reduce or avoid effects associated with erosion. Operations would occur within the same footprint of the existing site. Trucks during operations would continue to utilize paved surfaces and unpaved surfaces surrounding the tanks would be covered with gravel, same as is found currently throughout the tank area. As such, erosion impacts during

operations would be negligible. Therefore, potential impacts related to soil erosion 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 and a mat-raft foundation system consisting of a mat supported by caissons/piles (Albus-Keefe, 2018) would be implemented for the two tanks. These features of the project design would reduce the potential for seismically induced damage to the proposed Project from seismic shaking, liquefaction, or lateral spreading. Therefore, the impacts related to unstable soil 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 design for the proposed Project includes testing for soil expansion subsequent to rough grading and prior to the construction of foundations and other concrete flatwork, placement of compacted sand beneath the proposed tanks, and installation of a deep foundation. The results of soil testing would confirm if the soil meets the specified engineering requirements to correct for expansive soils. If corrective measures are needed, standard engineering practice includes removing the expansive soil and importing non-expansive soil, chemical treatment, or possibly adding lime. Testing and implementation of standard engineering corrective measures would ensure that impacts from potentially expansive soils underlying the Project site 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 would 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.

VIII. 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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

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

POTENTIALLY SIGNIFICANT IMPACT. The proposed Project is an industrial stationary source project that requires a permit to construct/permit to operate 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, 2019).

Construction

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) and electricity use for the two new pumps associated with the new tanks. Project construction GHG emissions will be estimated and evaluated in the EIR for their potential to cause significant impacts.

Operation

Two larger existing tanks currently used by World Oil would be leased by Marathon Petroleum Carson Refinery and/or Marathon Petroleum Terminal assets, Glencore Long Beach Marine Terminal, and/or Glencore Carson Marine Terminal as remote fuel oil product storage. Similar to other leased tanks at the World Oil Terminal, fuel oil is currently transmitted between the World Oil facility and the Marathon and Glencore facilities primarily via existing pipelines. In the atypical event a pipeline is out of service, trucks would be used to transport fuel oil between the World Oil facility and the Marathon and/or Glencore facilities (see Section 1.4.2, Project Operation and Maintenance).

In addition, there would be a minor amount of increased indirect GHG emissions from the electricity used to power the two new pumps associated with the new tanks. Project operation GHG emissions will be estimated and evaluated in the EIR for their potential to cause significant impacts.

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 6.

Table 6. Applicable GHG Emissions Reduction Strategies	
Strategy	Compliance with Strategy
State AB 32 Strategies	
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 renewable fuels 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. While the current facility, and the proposed Project description, does not include the storage of 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.
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 wastewater transportation and disposal.
Port of Long Beach and City of Long Beach Strategies	
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. As stated in Section III, Air Quality, the proposed Project would be required to comply with all applicable strategies of the CAAP. CAAP compliance will be addressed as requirements in the Project's Harbor Development Permit.

Table 6. Applicable GHG Emissions Reduction Strategies

Strategy	Compliance with Strategy
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. World Oil 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. Regardless, consistency with applicable plans, policy and regulations aimed at reducing GHG emissions will be evaluated in the EIR for their potential to cause significant impacts.

IX. 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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?

POTENTIALLY SIGNIFICANT IMPACT.

Construction

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. Hazardous materials such as mineral oil, cleaning solvents, paints, adhesives, vehicle fuels, oil, hydraulic fluid, and other vehicle and equipment maintenance fluids would be used and/or stored 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 six-acre site, including the construction and staging areas, are unpaved and covered with sand and gravel, whereas 0.83 acres 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. Therefore, hazardous materials impacts during Project construction activity could be potentially significant and will be further evaluated in the EIR.

Operation

Operation of the tanks would involve scheduled cleaning of sludge, requiring the transport, treatment, storage, and disposal of hazardous materials at a disposal facility such as a U.S. Ecology waste facility. Hazardous conditions, such as fire, also have the potential to occur at the Project site during operations. Construction and operation activities associated with the proposed Project could potentially create a significant hazard to the public through the routine transport, use, and disposal of hazardous materials. Therefore, hazardous materials impacts during Project operations would be potentially significant and will be further evaluated in the EIR.

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?

POTENTIALLY SIGNIFICANT IMPACT. Spills of hazardous materials could occur due to improper handling and/or storage practices during construction or operation activities and potentially cause soil or groundwater contamination, or contamination of the adjacent Channel 2. As described in Section IX(a), the proposed Project could potentially create a significant hazard to the public or environment through accidental release of hazardous materials. Therefore, hazardous materials impacts during construction and operations could be potentially significant and will be further evaluated in the EIR.

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. There are no schools within 0.25-mile of the proposed Project. The proposed Project would not use or handle acutely hazardous materials. The closest school to the Project site is 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 to existing schools due to hazardous emissions or handling of hazardous or acutely hazardous materials, substances or wastes 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 among the sites 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. Therefore, impacts related to listed hazardous materials sites 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 XIII(c), Noise). No airport-related safety hazard or excessive noise impact would occur.

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 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 XVII, Transportation) or increase demand on existing emergency response services during construction (see Section XV, 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 related to an emergency response or evacuation plan 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 Terminal 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 related to wildland fires would occur.

Mitigation Measures: No mitigation is required.

X. 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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.

Construction

The proposed Project would disturb less than one acre as part of grading and excavation activities for the foundations of the new tanks, and as such, would not be required to obtain NPDES coverage under the California General Permit for Discharges of Storm Water Associated with Construction Activity. The requirements and Best Management Practices (BMPs) of the existing facility's Stormwater Pollution Prevention Plan (SWPPP) (World Oil Terminals, 2021) would be applied to reduce or avoid effects associated with erosion and other construction-related stormwater impacts.

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 geotechnical report prepared by Albus-Keefe 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. 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 and discharged in accordance with applicable regulations.

Implementation of applicable SWPPP BMPs and compliance with regulations would ensure runoff and discharges during Project construction would not violate any water quality standards and would reduce short-term construction-related impacts to water quality to a less-than-significant level.

Operation

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 to water quality during Project operations 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 brackish groundwater 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 during construction or operation. 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.

Construction

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. Additionally, implementation of the existing facility's SWPPP BMPs, such as using perimeter controls, 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. Impacts to site drainage during construction would be less than significant.

Operation

The operation of the proposed Project would not have the potential to result in substantial erosion or on-site or off-site siltation. 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 where the new tanks are to be installed would remain covered in pervious gravel after construction of the tanks to prevent pooling and flooding of water. Therefore, impacts to site drainage during operation 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 related to surface water runoff during construction and operation would be less than significant.

Mitigation Measures: No mitigation is required.

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 X(c)(i) and X(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 related to stormwater drainage during construction and operation 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. The tank storage area containment walls are designed to withstand a 100-year storm event. The two proposed tanks would be installed within these containment walls, which 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 out of the area within the containment wall during a flood event as would be done under existing conditions. The proposed Project would not alter the existing drainage pattern on-site and flood flows would not be impeded or redirected because the tanks would be installed within the existing containment walls. As such, impacts regarding flood flows during construction and operation 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?

POTENTIALLY SIGNIFICANT IMPACT.

Flood Hazard

The Project site is located within the 100-year flood hazard zone. The proposed tanks would be constructed and installed within existing containment walls at the site, which are designed to withstand a 100-year storm event. However, anticipated future rise in sea-levels may exacerbate the potential for flooding impacts resulting in a potentially significant impact. Therefore, the potential for flooding impacts will be evaluated further in the EIR.

Tsunamis

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) vulnerable to tsunamis generated off the coast of California. The proposed Project could have potentially significant impacts associated with the risk of inundation from a tsunami. Therefore, the potential for the risk of pollutants to be released in the event of inundation due to a tsunami will be evaluated further in the EIR.

Seiches

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 wall. During a seiche event, the containment wall would provide the same level of protection to the new tanks as they do for the existing tanks. Project construction would not increase the risk of a release of pollutants due to project inundation from a seiche. Therefore, impacts related to seiches would be less than significant.

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 (California Water Boards, 2014).

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 of Long Beach 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 the facility's existing SWPPP BMPs 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 related to water quality control or groundwater management planning during construction and operation would be less than significant.

Mitigation Measures: No mitigation is required.

XI. Land Use and 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 located in POLB's Northeast Harbor Planning District (District 2) in a predominantly industrial area 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 and Tesoro Marine Terminal 3 Facility 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. The operation of all surrounding land and water-based uses would not be affected by the Project. 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 related to physical division of an established community 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 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 improve the efficiency of terminal operations by providing adequate crude storage capacity for World Oil's paving/roofing asphalt refinery in South Gate while freeing up two larger, currently underutilized, storage tanks for lease 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 California Coastal Act (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 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). The Project and the existing operations at the World Oil Terminals are not water dependent, therefore are consistent with the industrial nature of surrounding activities in the same land use designation.

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 with such plans and regulations. No impact would occur.

Mitigation Measures: No mitigation is required.

XII. 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 located 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 oil wells on the Project site 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.

XIII. 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

- 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. The proposed Project would be located inside World Oil'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, the Tesoro Marine Terminal 3 Facility and 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. The closest sensitive noise receptors to the Project site include two schools, Edison Elementary School (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 is identified on Chester Place (approximately 0.5 mile or 2,610 feet east of Project site/staging area).

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 7. The noise limits specified in Table 7 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 7 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 7. Long Beach Municipal Code Exterior Noise Limits

Receiving Land Use District	Time Period	Noise Level (dBA) ^{1, 2}
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.

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 7 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.

Construction

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. As shown in Table 8, typical maximum noise levels (Lmax) generated by the types of construction equipment expected to be utilized range from approximately 73 to 90 dBA (e.g., generator, vibratory pile driver) at a distance of 50 feet. These represent actual measured instantaneous maximum noise levels.

Table 8. 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 ¹
Generator	Generator (<25 KVA)	50	73
Skip Loader	Front End Loader	40	79
Man-Lift	Man Lift	20	75
Pile Driver ²	Mounted Impact Hammer (hoe ram)	20	90
Pick-up Truck	Pick-up Truck	40	75

Source: FWHA, 2006.

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 B). This residence is located within District 1, where the exterior noise limit during daytime is 50 dBA (see Table 7). However, ambient noise measured at this location ranged from 47 dBA (minimum) to 64 dBA (maximum) with an average of 53 dBA Leq (Aspen Environmental Group, 2020). 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. Construction impacts related to temporary increases in ambient noise levels in the vicinity of the project would be less than significant.

Operation

Operational activities associated with the proposed Project would be similar to existing operations. The new smaller tanks would provide the adequate crude oil capacity needs for World Oil by replacing two larger currently underutilized storage tanks that provide crude oil storage to World

Oil's paving/roofing asphalt refinery in South Gate. The two larger existing tanks would then be removed from World Oil's dedicated refinery service and made available to lease by third-party customers for storage of marine fuels and marine fuel blending components, as is currently done for several of the existing tanks at the facility. It is estimated that use of the truck loading rack would increase approximately 10 percent, which equates to approximately three additional trucks entering and leaving the facility per day. Though this would only occur during atypical operations such as when a pipeline is being serviced. This limited increase in operational truck traffic would not increase ambient noise levels. No impact related to temporary or permanent increase in ambient noise levels in the vicinity of the project would occur during operation.

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. 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, 2013 – 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, 2013 – Table 20). Equipment used during construction activities would include trucks, cranes, an 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 cause ground-borne vibration associated with general operation but also due to travel on cracked/potholes or faulting roadway surfaces (Caltrans, 2013). 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, 2013). 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). A down-hole vibrator, mounted impact hammer (hoe ram), or equivalent (referred to as "pile driver" in the equipment list) would be used during construction of vibro piers and RAPs. 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, 2013 – 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 associated with the proposed Project would not reach levels 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 or people residing near the project area to excessive noise levels associated with airport operations. No impact related to excessive noise near an airport would occur.

Mitigation Measures: No mitigation is required.

XIV. 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. Growth inducement is defined by the State CEQA Guidelines as the ways in which a proposed project could foster economic or population growth, or the construction of additional housing, 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 or indirect 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.

XV. 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 operation 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 XIV(a), Population and Housing, 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. Impacts related to fire protection facilities from the proposed Project would be less than significant.

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 providing the adequate storage capacity for World Oil and allow World Oil to lease existing larger tanks to third-party vendors. After implementation of the proposed Project, operations would remain similar such that there would be no increase in the number of permanent staff. As discussed in Section XIV(a), Population and Housing, the Project would not directly or indirectly 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. Normal operation of the existing storage tanks in addition to the new tanks would not require an increase in permanent staff and therefore would not 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 XV(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. Normal operation of the existing storage tanks in addition to the new tanks would not require an increase in permanent staff and therefore would not 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.

XVI. 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. 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. 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.

XVII. 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.

Construction

The proposed Project would result in temporary passenger vehicle (automobile) and haul truck trips during construction. Construction worker passenger vehicle (automobile) 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 (approximately 10 months), trips would occur during 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 Table 1, construction would generate a maximum of 32 worker one-way commute trips during the overlap between construction Phases 1 and 2, with material and equipment deliveries 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 XVII(b)). There would be a less-than-significant impact to such transportation facilities during construction.

Operation

The baseline maximum truck count at the loading rack is 53 trucks per day (see Table 3). It is estimated that truck trips would increase approximately 10 percent during atypical operations such as when a pipeline is being serviced, resulting in a project increase of up to five truck trips per day (a new maximum of 58 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 five trips per day would not conflict with any program pertaining to performance of the circulation system. Operation of the Project would result in less-than-significant impacts to transportation facilities.

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. CEQA Guidelines Section 15064.3, describes specific considerations for evaluating a project's transportation impacts and states that, generally, vehicle miles traveled (VMT) is the most appropriate measure. VMT refers to the amount of travel and distance of automobile travel attributable to a project. The term "automobile" refers to on-road passenger vehicles, specifically cars and light-duty trucks; heavy-duty truck trips are not included in the transportation analysis per OPR verbal guidance (OPR, 2020; City of Long Beach, 2020b). As such, VMT analysis of heavy-duty truck trips is not considered in the assessment of Port projects' transportation impacts under CEQA. The Caltrans document titled *Vehicle Miles Traveled – Focused Transportation Impact Study Guide* (Caltrans, 2020) indicates that Caltrans does not provide significance criteria for evaluating a project's VMT impacts, but instead indicates that the local lead agency has discretion to choose the most appropriate methodology to evaluate a project's VMT impacts. The document does state, however, that projects generating or attracting fewer than 110 trips per day generally may be assumed to cause a less-than significant transportation impact.

Construction

As discussed under Section XVII(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 (based on one-way worker trip length of 14.7 miles on CalEEMod trip distance default for Los Angeles-South Coast County). This VMT is generally consistent with typical employee VMT of 18.5 for the County of Los Angeles (City of Long Beach, 2020b – Figure 3). While construction activities would generate additional automobile and construction-related trips and VMT, these trips would be temporary and only in volumes necessary for the delivery of equipment and materials to the site and hauling away of debris for construction of the proposed Project. Construction-related equipment and material deliveries and haul trips cannot utilize public transportation in efforts to reduce overall VMT of the Project. Additionally, most construction worker 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. Additionally, as shown in Table 1, the proposed Project would generate a maximum of 32 worker commute trips during the overlap between construction Phases 1 and 2. This number of trips is well below the Caltrans threshold of 110 trips per day. Therefore, construction of the proposed Project would result in a less-than-significant VMT impact.

Operation

With respect to permanent “operations” automobile 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 (Caltrans, 2020; City of Long Beach, 2020b). As discussed in Section 1.4.2, Operations and Maintenance, normal operation of the leased tanks would involve pipeline transfers, such that there would be no increase in required site staffing levels. Therefore, the proposed Project would have no permanent effect on existing VMT of the area (VMT is based on passenger vehicle/commute trips not heavy-duty truck trips per OPR guidance, as described above) during the operational period. 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.

Construction

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 related to geometric design features would be less than significant during construction.

Operation

As stated above, 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 modifications to any public roadways or driveways. Trucks would continue to enter the site, load or unload, and exit from the same access point located on Pier C Street (one-way in, one-way out), as shown on Figure 3. Impacts related to geometric design features would be less than significant during operation.

Mitigation Measures: No mitigation is required.

d. Would the project result in inadequate emergency access?

LESS-THAN-SIGNIFICANT IMPACT.

Construction

Project construction would not encroach upon or cause any temporary disruptions to public roadways. As discussed under Section XVII(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. Impacts to emergency access would be less than significant during construction.

Operation

Project operation would not cause any temporary disruptions to public roadways or emergency access ways. The anticipated increase of 10 percent in truck trips would not cause disruptions to emergency access, as it would not increase the number of trucks at the Project site at a given time. The Project site can accommodate a maximum truck capacity of five trucks at any time due to the limited available area for truck queuing and the required clearance for emergency and fire lane access. This would not change with the proposed Project. As discussed in Section IX(f), Hazards and Hazardous Materials, 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. Because existing emergency access features and procedures would not be altered, emergency access would remain adequate. Impacts would be less than significant during operation.

Mitigation Measures: No mitigation is required.

XVIII. 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. There would be 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 identify the presence of any eligible or listed historic resources within the Project area (see Appendix A – 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. The proposed Project is subject to compliance with Assembly Bill (AB) 52 which requires consideration of impacts to tribal cultural resources as part of the CEQA process and requires the lead agency to notify any California Native American tribes of the Project who are traditionally or culturally affiliated with the geographic area of the Project. The Native American Heritage Commission (NAHC) was contacted on April 27, 2022 to request a CEQA Tribal Consultation List (tribes who have requested notification) and to perform a search of their Sacred Lands File (SLF) for the presence of tribal cultural resources. The NAHC responded on June 6, 2022 stating that the results of the SLF search came back positive for the presence of Native American sacred lands and to contact the Gabrieleno/Tongva San Gabriel Band of Mission Indians for more information. The NAHC also provided a contact list of 11 Native American individuals or tribal organizations that are traditionally and culturally affiliated with the geographic area. In compliance with AB 52, on July 5, 2022, certified letters were sent to the NAHC-listed Native American contacts requesting information regarding any known Native American cultural resources within or immediately adjacent to the Project area and providing each tribe an opportunity to request consultation with the POLB within 30 days from the date of receipt. No responses were received.

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. Therefore, the proposed Project would not have an impact on such resources.

Mitigation Measures: No mitigation is required.

XIX. 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.

Construction

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 XIX(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. Impacts to water supplies during construction would be less than significant.

Operation

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 to water supplies during operations 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.

Construction

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. Therefore, impacts to available wastewater capacity would be less than significant during project construction.

Operation

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. Impacts to available wastewater capacity would be less than significant during operation.

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.

Construction

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).

Operation

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.

Therefore, 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.

Construction

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).

Operation

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.

XX. 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 regarding emergency response or evacuation 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 XX(a) above. No impacts regarding pollution concentrations from wildfire or uncontrollable spread of wildfire would occur.

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 XX(a) above. The Project would not require installation or maintenance of infrastructure that may exacerbate fire risk. No impacts related to fire risk would occur.

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 XX(a). The Project site is located in a “not burnable” area. No impacts to people or structures would occur due to risk from post-fire slope instability or drainage changes.

Mitigation Measures: No mitigation is required.

XXI. 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 IV, 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. Another site visit was conducted by a Port biologist on December 13, 2022. Conditions at the Project site have not changed, and the assessment remains the same as observed in the 2020 survey. World Oil is required to comply with the federal MBTA, which ensures the protection of 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 V, 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.)***

POTENTIALLY SIGNIFICANT IMPACT. The proposed Project involves the construction and operation of two new storage tanks at the existing World Oil Terminal. The proposed Project may have potentially significant impacts that are considered cumulatively considerable (see Section III, Air Quality; Section VIII, Greenhouse Gas Emissions; Section IX, Hazards and Hazardous Materials; and Section X, Hydrology and Water Quality). The EIR will evaluate whether the proposed Project’s construction and operation impacts are cumulatively considerable.

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

POTENTIALLY SIGNIFICANT IMPACT. As previously discussed, implementation of the proposed Project may result in potentially significant impacts to Air Quality, Greenhouse Gas Emissions, Hazards and Hazardous Materials, and Hydrology and Water Quality, which may cause adverse effects on humans. Therefore, the EIR will evaluate the proposed Project’s impacts to these issue areas to identify potential direct and indirect adverse effects to humans.

3. 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.

3.1 Lead Agency

Port of Long Beach

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3.2 Project Management and Document Production

Aspen Environmental Group – Prime Contractor

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James Allan, PhD, RPA, Cultural Resources Manager	Cultural Resources, Tribal Cultural Resources
Lauren DeOliveira MS, Cultural Resource Specialist.....	Cultural Resources, Tribal Cultural Resources
Stephanie Tang, Environmental Scientist	Aesthetics, Agriculture and Forestry Resources, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, Recreation, Transportation, Utilities and Service Systems, Wildfire, Mandatory Findings of Significance

ENGEO – Geotechnical/Hazards Subcontractor

James Thurber, CHG, CEG, PG, Principal	Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality (Groundwater)
Jennifer Knipper, Staff Geologist	Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality (Ground Water)

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Appendix A (Confidential)

Cultural Resources Records Search Report

Appendix B

Noise Calculations

APPENDIX B. 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.

Construction Equipment	Lmax Ref dBA @ 50 ft	Useage Per Hour (%)	Along Levee quantity	Distance to Resident feet	Equip Leq(h) dBA
Foundation Installation					
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
Total Quantity of Equipment:			3		
Peak Unmitigated Composite Leq(h):			49.5		
Line-of-Site/Intervening Structures Reduction (10dB):			39.5		

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. Accessed March 2012.

Appendix C

AIR POLLUTANT EMISSIONS DATA

1. Emissions and Health Risk Summary Tables
2. SCAQMD Draft Engineering Evaluation (6-09-2021)
3. CalEEMod Output
4. HRA Screening Plots

ATTACHMENT 1

Emissions and Health Risk Summary Tables

World Oil Tank Installation Project

Baseline Stationary Source Inventory - Criteria Air Pollutants

Facility Details

Facility ID 111238
Company Name RIBOST TERMINAL, LLC.
Address 1405 PIER "C" ST
LONG BEACH, CA 90802

References: Annual Emissions Reports - www3.aqmd.gov/webappl/aersearch/facdetail.aspx?fac_id=111238&year=2019
http://www3.aqmd.gov/webappl/aersearch/facdetail.aspx?fac_id=111238&year=2020
http://www3.aqmd.gov/webappl/aersearch/facdetail.aspx?fac_id=111238&year=2021
Accessed: October 19, 2022 & May 1, 2023

AER Facility: Criteria Pollutants (Tons per Year):

Pollutant ID	Pollutant Description	2019 Annual Emissions	2020 Annual Emissions	2021 Annual Emissions
CO	Carbon Monoxide	0.296	0.238	0.260
NOX	Nitrogen Oxides	0.373	0.298	0.326
PM	Particulate Matter	0.022	0.017	0.019
SOX	Sulfur Oxides	0.001	0.001	0.001
VOC	Volatile Organic Compounds	3.314	3.378	1.510

Toxic Pollutants (Pounds per Year):

Pollutant ID	Pollutant Description	2019 Annual Emissions	2020 Annual Emissions	2021 Annual Emissions
106990	1,3-Butadiene	0.004	0.004	0.004
7664417	Ammonia	19.198	15.337	16.801
71432	Benzene	46.541	87.493	52.637
50000	Formaldehyde	0.119	0.098	0.106
75092	Methylene chloride	0.002	0.159	0.163
91203	Naphthalene	0.002	0.002	0.158
7440020	Nickel	0.000	0.000	0.000
1151	PAHs, total, with components not reported	0.000	0.000	0.000
79016	Trichloroethylene	0.000	0.013	0.013

Other Toxic Pollutants (Pounds per Year, appearing only in 2021 AER):

Pollutant ID
95636
91576
75070
107028
191242
7782505
218019
7440508
100414
110543
108383
1634044
7439965
67561
78933
85018
100425
108883
1330207
95476

Pollutant Description
1,2,4TRIMEBENZE
2-Methyl naphthalene [PAH, POM]
Acetaldehyde
Acrolein
B[GHI] PERYLENE
Chlorine
Chrysene
Copper
ETHYL BENZENE
HEXANE
M-XYLENE
ME T-BUTYLETHER
Manganese
Methanol
Methyl ethyl ketone
PHENANTHRENE
Styrene
Toluene
Xylenes
o-Xylene

2021 Annual Emissions
0.277
0.092
0.026
0.015
0.009
0.002
0.098
0.000
4.424
0.257
0.024
0.010
0.000
0.003
0.000
0.126
0.000
6.463
13.667
0.008

AER Detail Report: Storage Tanks Only

A/N	Permit No.	Description	Tanks ROG (lb/yr, 2019)	Tanks ROG (lb/yr, 2020)	Tanks ROG (lb/yr, 2021)	Product (2021)
560137	G34095	67010 - 67k bbl	23.99	0.77	7.98	Residual oil no. 6
560138	G34224	67011 - 67k bbl	2,068.89	1,852.83	986.82	Crude oil
560139	G34225	94012 - 94k bbl	61.57	41.74	51.96	Residual oil no. 6
560140	G34226	94013 - 94k bbl	51.19	41.77	43.51	Residual oil no. 6
560141	G34227	94014 - 94k bbl	46.14	55.39	40.24	Residual oil no. 6
560142	G34228	43015 - 43k bbl	2,331.09	2,229.27	636.67	Crude oil
560143	G34229	43016 - 43k bbl	1,437.25	1,907.21	617.99	Crude oil
560143			8.01	---	---	Residual oil no. 6

		Total Tanks ROG (2019)	Total Tanks ROG (2020)	Total Tanks ROG (2021)
Tanks ROG (lb/yr)		6,028.13	6,128.98	2,385.17
Tanks ROG (ton/yr)		3.01	3.06	1.19

World Oil Tank Installation Project

Construction Emissions Summary

Daily Emissions (lb/day)										
Proposed Project Emissions Increase	ROG	NOx	CO	SO2	PM10 Exhaust	PM10 Dust	PM10 Total	PM2.5 Exhaust	PM2.5 Dust	PM2.5 Total
	(lb/day)	(lb/day)	(lb/day)	(lb/day)	(lb/day)	(lb/day)	(lb/day)	(lb/day)	(lb/day)	(lb/day)
Construction Activities: Fugitive Dust, Off-Road Equipment, Mobile Sources	2.3	21.2	26.0	0.1	0.8	1.1	1.8	0.8	0.3	1.0
Architectural Coatings	35.3	--	--	--	--	--	--	--	--	--
Total, Maximum Daily Construction Emissions	37.6	21.2	26.0	0.1	0.8	1.1	1.8	0.8	0.3	1.0

CalEEMod Copy of Output - Maximum Daily Emissions, Construction

	ROG	NOx	CO	SO2	PM10 Exhaust	PM10 Dust	PM10 Total	PM2.5 Exhaust	PM2.5 Dust	PM2.5 Total
	(lb/day)	(lb/day)	(lb/day)	(lb/day)	(lb/day)	(lb/day)	(lb/day)	(lb/day)	(lb/day)	(lb/day)
Construction Activities: Fugitive Dust, Off-Road Equipment, Mobile Sources	2.29	21.2	26	0.05	0.83	1.07	1.84	0.76	0.25	1.01
Daily, Summer (Max)	1.88	16.8	22.9	0.04	0.66	1.08	1.73	0.6	0.26	0.85
Daily, Winter (Max)	2.29	21.20	26.00	0.05	0.83	1.08	1.84	0.76	0.26	1.01
Maximum										

CalEEMod Copy of Output - Annual Emissions, Construction

	ROG	NOx	CO	SO2	PM10 Exhaust	PM10 Dust	PM10 Total	PM2.5 Exhaust	PM2.5 Dust	PM2.5 Total
	(ton/year)	(ton/year)	(ton/year)	(ton/year)	(ton/year)	(ton/year)	(ton/year)	(ton/year)	(ton/year)	(ton/year)
Construction Activities: Fugitive Dust, Off-Road Equipment, Mobile Sources	0.14	1.34	1.58	< 0.005	0.05	0.07	0.13	0.05	0.02	0.07
Architectural Coatings	0.18	--	--	--	--	--	--	--	--	--
Total, Annual Construction Emissions	0.32	1.34	1.58	0.00	0.05	0.07	0.13	0.05	0.02	0.07
										CO2e
										(MT/year)
										394
										394

DPM (lb/yr)
100

World Oil Tank Installation Project

Construction Phase - Architectural Coating VOC Emissions

Assumptions:

- 1) Coating types and VOC contents, coating thicknesses, area coated, coating volumes, thinners used, and work schedules per applicant (Field Coating VOC Plan, May 2020)
- 2) Exterior coated w primer offsite. Two coats applied onsite.
- 3) Interior of each tank is coated on the floor and up the sidewalls 48 inches (4 feet).
- 4) Floating roof is not coated onsite.
- 5) Each coating type is applied sequentially over 24 days.

VOC Emissions Estimate

Exterior Coating	Product	Sq.Ft./Tank	Thickness (inch/1000)	Gallons	VOC Content (lb/gal)	VOC (lb)	VOC (lb, x 2 Tanks)	Days	VOC (lb/day)	VOC Tot (lb)
Field Primer	Sherwin Williams 646-100	2,000	3-5 mils	10	0.83	8.3	16.6	4	4.2	16.6
Intermediate Coat	Sherwin Williams 646-100	13,800	4-6 mils	80	0.83	66.4	132.8	8	16.6	132.8
Finish Coat	Sherloxane 800 (no thinner requ	13,800	2-4 mils	40	0.77	30.8	61.6	8	7.7	61.6
						Exterior Sum (lb)	211.0	20		

Interior Coating	Product	Sq.Ft./Tank	Thickness (inch/1000)	Gallons	VOC Content (lb/gal)	VOC (lb)	VOC (lb, x 2 Tanks)	Days	VOC (lb/day)	VOC Tot (lb)
Coating	Duraplate UHS	4,200	16-22 mils	85	0.83	70.6	141.1	4	35.3	141.1

VOC Max Daily (lb/day)
35.3
VOC Tot (ton)
0.2

Exempt Solvents Emissions Estimate, per SCAQMD Rule 102

Exterior Coating Solvents	Gallons	Components	By Weight	Density (lb/gal)	Emissions (lb)
R7K111 Thinner (for SW 646-100)	10	Acetone	40%	8.8	35.0
		p-Chlorobenzotrifluoride	60%	8.8	52.5

Interior Coating Solvents	Gallons	Components	By Weight	Density (lb/gal)	Emissions (lb)
Cleaning Solvent	20	Acetone	100%	6.5	130.9

World Oil Tank Installation Project

Operations Criteria Air Pollutant Emissions Summary

	Daily Emissions (lb/day)									
	ROG	NOx	CO	SO ₂	PM10 Exhaust	PM10 Dust	PM10 Total	PM2.5 Exhaust	PM2.5 Dust	PM2.5 Total
Proposed Project Emissions Increase										
Storage Tanks, New Standing and Working Losses (1)	8.80	---	---	---	---	---	---	---	---	---
Storage Tanks, New Fugitive Components (2)	2.02	---	---	---	---	---	---	---	---	---
Coatings, Consumer Products, Area Sources	0.64	0.01	0.95	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005
Loading Rack Tanker Truck Traffic, Mobile Sources	0.02	1.32	0.45	0.01	0.02	0.30	0.32	0.02	0.08	0.10
Loading Rack Thermal Oxidizer	0.01	0.20	0.16	0.00	---	---	0.01	---	---	0.01
Loading Rack Throughput	0.08	---	---	---	---	---	---	---	---	---
Total, Project Operations	11.57	1.53	1.56	0.01	0.02	0.30	0.33	0.02	0.08	0.11

1 - Basis: lb/day AV30 at 132 lb/mo per tank, during high month (August), Gasoline RVP 10, "average" paint conditions; SCAQMD draft evaluation (6/9/2021).

2 - Basis: lb/day at 363.19 lb/year per tank, divided by 360 days per year; SCAQMD draft evaluation (6/9/2021).

Non-Routine Emissions Examples, per Tank

	Daily Emissions (lb/day)									
	ROG	NOx	CO	SO ₂	PM10 Exhaust	PM10 Dust	PM10 Total	PM2.5 Exhaust	PM2.5 Dust	PM2.5 Total
Breathing Loss Standing Idle, Controlled by Rule 1149	1.16	---	---	---	---	---	---	---	---	---
Cleaning and Degassing, Controlled by Rule 1149	4.30	---	---	---	---	---	---	---	---	---

Operations GHG Emissions Summary

	CO ₂ e (MT/year)
Loading Rack Tanker Truck Traffic, Mobile Sources	195.0
Loading Rack Thermal Oxidizer	32.5
Electricity Use, pumping	11.3
Total	238.8

Proposed Project Emissions Increase

	CO ₂ e (MT)	CO ₂ e (MT/year)
Construction Emissions From CalEEMod, one-time (MT)	394.0	
Construction Emissions (MT/30-year amortized)		13.1
Incremental Operations Emissions Increase		238.8
Total Increase		251.9

CalEEMod Copy of Output - Maximum Daily Emissions, Operations

	ROG (lb/day)	NOx (lb/day)	CO (lb/day)	SO2 (lb/day)	PM10 Exhaust (lb/day)	PM10 Dust (lb/day)	PM10 Total (lb/day)	PM2.5 Exhaust (lb/day)	PM2.5 Dust (lb/day)	PM2.5 Total (lb/day)
Coatings, Consumer Products, Area Sources	0.64	1.00E-02	9.50E-01	< 0.005	< 0.005		< 0.005	< 0.005		< 0.005
Tanker Truck Traffic, Mobile Sources	0.02	1.32	0.45	1.00E-02	0.02	3.00E-01	0.32	0.02	8.00E-02	0.1
Total	0.66	1.33	1.40	0.01	0.02	0.30	0.32	0.02	0.08	0.10

CalEEMod Copy of Output - Annual Emissions, Operations

	ROG (ton/year)	NOx (ton/year)	CO (ton/year)	SO2 (ton/year)	PM10 Exhaust (ton/year)	PM10 Dust (ton/year)	PM10 Total (ton/year)	PM2.5 Exhaust (ton/year)	PM2.5 Dust (ton/year)	PM2.5 Total (ton/year)
Coatings, Consumer Products, Area Sources	0.11	< 0.005	1.20E-01	< 0.005	< 0.005		< 0.005	< 0.005		< 0.005
Energy, Electricity Use										
Tanker Truck Traffic, Mobile Sources	< 0.005	0.24	0.08	< 0.005	< 0.005	5.00E-02	0.06	< 0.005	1.00E-02	2.00E-02
Total	0.11	0.24	0.20	0.00	0.00	0.05	0.06	0.00	0.01	0.02

CO2e (MT/year)
4.40E-01
11.3
195
206.74

World Oil Tank Installation Project

Operations - Maintenance, Standing Idle, Cleaning and Degassing

Tank Parameters, per tank: Yorke 2021 (permit application, 25,000 bbl, each)

- 50 H max liquid height (ft) 141,372 (ft3) max liquid capac
- 60 D (ft) 1,057,601 (gal) max liquid capac
- 0.2 h le (ft) _ est'd stock liquid; no known liquid heel, drained
- 6 h d (ft) _ est'd deck leg height; -generally about 6 feet tall (per 2008 Env Asst for Rule 1149)
- 0.696 h _ (ft) appx vapor space between liquid level and floating roof (212 mm = WO Matrix Applied drawing
- 16,965 Vv (ft3) volume of vapor space under deck leg
- 5.6 WL (lb/gal) weight density of liquid Gasoline RVP10
- 0.067 Wv (lb/ft3), stock vapor density of liquid Gasoline RVP10
- 66 Mv (lb/lb-mole) average vapor molecular weight, Gasoline RVP10
- 0.143 KE (dimensionless) vapor space expansion factor
- 0.123 Fp (dimensionless) vapor pressure function
- 0.1522 SA
- 0.0209 SB

^^ Ref: SCAQMD 2019 Supplemental Instructions AER for liq org storage tanks

0.101379 Ks (dimensionless) vented vapor saturation factor, function of height (eq. 11 in SCAQMD 2019)

SCAQMD Rule 1149, Amended May 2, 2008. Requires venting vapor space to control device.

Control Effectiveness, per SCAQMD's 2008 Environmental Assessment for AST's subject to PAR 1149, Cleaning and Degassing

- 1.42 tpd uncontrolled (2008)
- 0.5 tpd controlled by pre-2008 Rule 1149
- 0.82 tpd controlled by 2008 PAR 1149 (degassing to 5,000 ppmv)
- 0.1 tpd controlled AST's after 2008 PAR 1149
- 0.07 = controlled/uncontrolled
- 93% (appx regional average control effectiveness overall)

Target % reductions by Rule 1149 [2008 PAR 1149 Env Asst; p. 1-7 : 99 % control is 1,000 ppmv - rule is 500 ppmv (99.5%)]

- 100,000 (ppmv) typ saturated vapor concentration
- 500 (ppmv) control device exh conc
- 0.005 = controlled/uncontrolled

USEPA AP-42, Sec 7.1, eq 3-4 (Standing idle with liquid heel)

LSLmax = limit on standing idle loss, lb per landing episode
(all stock liquid
= $5.9 * D^2 * h * le * WL$
23,789 lb

USEPA AP-42, Sec 7.1, eq 3-5 (Internal floating roof vapor space, landing on deck leg)

LSL = annual breathing loss from standing idle during roof landing, lb/yr
(amount of vapor within the vapor space under the floating roof
= $365 * Vv * Wv * KE * KS$
6,014 lb/yr

16.48

 lb/d, uncontrolled idle during roof landing
Roof landing equires control to 5,000 ppmv per Rule 1149

Controlled emissions, idle during roof landing
424 lb/yr (vapor space under the floating roof, @ 93% controlled

1.16

 lb/d, controlled idle for a year

Controlled emissions, degassing control device: less than 500 ppmv
30 lb (vapor space under the floating roof, @ 99.5% controlled
7 days (drain, degassing, inspection; in 2008 PAR 1149 Env Asst; p 2-11)

4.30

 lb/d, controlled avg per degassing

World Oil Tank Installation Project

Operations - Loading Rack/Vapor Control Emissions

Assumptions

- 1) Estimated Project emissions increase is 10 percent over 2019 baseline emissions for loading rack thermal oxidizer use and for ROG (VOC) from loading rack throughput.
- 2) Annual thermal oxidizer natural gas fuel use increase is 10 percent over 2019 baseline fuel use. (Assume 1,020 Btu/scf to convert to MMBtu.)
- 3) Baseline thermal oxidizer fuel use and equipment emissions are from the 2019 Annual Emission Report printed by SCAQMD 3/13/2020.
- 5) Annual emissions divided by 365 days per year for average daily rates.

Loading Rack Thermal Oxidizer Fuel Use (E56, Afterburner < 10 MMBtu/hr)

	MMscf/year	MMBtu/year
2019 Baseline Annual Emission Report, Fuel Usage	5,9995	6,119.5
Estimated Project Increase Annual, Fuel Usage	0.60	611.95

MMscf = million standard cubic feet of natural gas

GHG Emission Factors from 40 CFR Part 98, Subpart C Table C-1 to Table C-2; GWP from Table A-1 (100-year horizon)

Loading Rack Thermal Oxidizer Emissions (E56, Afterburner < 10 MMBtu/hr)

	ROG	NOx	CO	SOx	PM10	PM2.5
2019 Baseline Annual Emission Report, lb/yr	42.00	745.92	573.19	3.60	45.00	45.00
Estimated Project Increase Annual, lb/yr	4.20	74.59	57.32	0.36	4.50	4.50
Average Daily Increase, lb/day	0.01	0.20	0.16	0.00	0.01	0.01

Loading Rack Throughput Emissions (E57; E58; E513)

	ROG
2019 Baseline Annual Emission Report, lb/yr	277.54
Estimated Project Increase Annual, lb/yr	27.75
Average Daily Increase, lb/day	0.08

Loading Rack Thermal Oxidizer GHG Emissions

	GHG Emissions (MTCO2e/year)
	CO2e
2019 Baseline estimate, MTCO2e/year	325.0
Estimated Project Increase Annual, MTCO2e/yr	32.5

GHG Emission Factors, Natural Gas (kg/MMBtu)

CO2	53.06
CH4	0.001
N2O	0.0001
GWP >	25
	298

World Oil Tank Installation Project

Operations - Crude Oil, Odorous Substances Thresholds and Concentrations

Odor Substances	MW	Mean Odor Threshold Concentration	
H ₂ S	34	ppm	µg/m ³
Benzene	78.11	0.03	42
Toluene	92.14	1.5	4,782
Ethylbenzene	106.17	7.6	28,582
Xylene	106.16	0.6	2,600
Napthalene	128.17	0.73	3,163
		0.038	199

Screening Level 1-hr Concentrations

	For Receptor @ onsite 9.1 m		
	Project (lb/hr)	1-hr Chi/Q	Project Impact (ppb)
Sulfur, as H ₂ S	0.0135	413	Project Impact (µg/m ³)
VOC, total	0.45	413	5.58
		---	185.85

	For Commercial Receptor @ 90 meters		
	1-hr Chi/Q	Project Impact (ppb)	Project Impact (µg/m ³)
Sulfur, as H ₂ S	54.15	0.527	0.73
VOC, total	54.15	---	24.37

	For Residential Receptor @ 763 meters		
	1-hr Chi/Q	Project Impact (ppb)	Project Impact (µg/m ³)
Sulfur, as H ₂ S	5.191	0.050	0.07
VOC, total	5.191	---	2.34

Assumptions:

- 1) Emissions per stationary source VOC total, and speciated H₂S in SCAQMD draft evaluation (6/9/2021).
- 2) Screening level 1-hour concentrations based on Chi/Q (ug/m3 per lb/hr emissions) in SCAQMD draft evaluation (6/9/2021).

World Oil Tank Installation Project

Operations - Electricity Use Increase, pumping

Assumptions

- 1) There will be two new 25-hp pumps associated with the new tanks.
- 2) Pump power output ~ 70 percent of power input; typ daily runtime ~ 10 percent (876 hours annually).

GHG Emissions Estimate

Pump power (hp)	hours/year	Pump work (hp-hr)	Efficiency	Pump input (hp-hr)	hp-hr per kWh	Demand (kWh/year)
50	876	43,800	70%	62,571	1.341	46,660

World Oil Tank Installation Project

Health Risk Screening Results - Impacts of TACs

Construction - HARP2, Volume Source (run 2/21/2023, @ up to 148 lb/day DPM)

HARP2	MEIR (near Cesar Chavez Park)	Chronic HI	MEIW (POLB parcel boundary west of Project site)
Construction, DPM	Cancer Risk	Chronic HI	Cancer Risk
Total, Construction-Phase	1.16E-06	0.0013	4.11E-07

UTM Locations, from HARP2

MEIR(x)	MEIR(y)	MEIW(x)	MEIW(y)
388,628	3,737,564	387,756	3,737,820

Operations - Tier 2 Screening (SCAQMD, 2021: Draft Engineering Eval. [6/9/2021], each tank)

	Residential Receptor (nearest @ 763 m, W Chester Place)	Worker Receptor (90 m east of Project site)
Operation, Stationary Sources	Cancer Risk	Cancer Risk
Tank 1 + fugitives, speciated TAC	1.50E-07	2.32E-07
Tank 2 + fugitives, speciated TAC	1.50E-07	2.32E-07

Total, Operations	3.00E-07	0.0014	4.64E-07	0.0324	0.0260
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Sum, Construction + Operation	1.46E-06	0.0016	0.0027	8.75E-07	0.0324	0.0568
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ATTACHMENT 2
SCAQMD Draft Engineering Evaluation (6-09-2021)

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Facility Name: Ribost Terminal, LLC
Facility ID: 111238
SIC Code: 5171
NAICS Code: 424710

Equipment Location: 1405 Pier "C" Street
 Long Beach, CA 90802

Mailing Address: 9301 Garfield Avenue
 South Gate, CA 90280

Facility Contact Person: David Chetkowski
 Environmental Manager
 (562) 928-7000, ext. 2329

Application Submittal Date: February 12, 2021

Equipment Description

A/N 627086

Storage Tank No. TK-1, Capacity 25,000 Barrels, 60'-0" Dia. X 56'-0" H., Welded Shell, Pontoon-Type Internal Floating Roof, with Category A Liquid-Mounted Mechanical Shoe Primary Seal, Category A Rim-Mounted Secondary Seal, and a Mixer.

A/N 627087

Storage Tank No. TK-2, Capacity 25,000 Barrels, 60'-0" Dia. X 56'-0" H., Welded Shell, Pontoon-Type Internal Floating Roof, with Category A Liquid-Mounted Mechanical Shoe Primary Seal, Category A Rim-Mounted Secondary Seal, and a Mixer

INTRODUCTION/HISTORY

Ribost Terminal, LLC, operates a non-Title V, non-RECLAIM bulk loading terminal in the Port of Los Angeles. The facility is approximately 6 acres and contains 7 existing petroleum storage tanks. It primarily handles crude oils, but also handles fuel oil. Deliveries and receipts to/from the facility are done primarily via existing crude oil pipeline from upstream oil production facilities also located in Long Beach.

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These applications were submitted February 12, 2021 for two, new, identical tanks. These tanks were previously issued Permits to Construct on January 2, 2020 under A/Ns 614274 and 614275; however, a Draft Initial Study/Negative Declaration (IS/ND) for the project was not released until October 7, 2020 for public review by the lead agency, Port of Long Beach. The facility requested cancellation of the Permits to Construct on December 18, 2020 and resubmitted the applications on February 12, 2021 to assess the equipment and CEQA impacts and analysis.

There have been no NOV's, NCs, or complaints during the last two years.

PROCESS DESCRIPTION

The new tanks are to be integrated into the terminal facility and all existing product transfer capabilities already existing at the facility. The new tanks will be able to transfer products to and from an existing pipeline and also receive product from upstream oil production facilities located in Long Beach. The facility will be storing crude oil with a much lower vapor pressure than the requested permit limit for a majority of the time, but the facility wants to have the capacity to store liquids with a RVP up to 10.0 PSI of non-gasoline petroleum products. Please see attached Safety Data Sheets (SDS) included in the file.

The operating schedule is 24 hours/day, 7 days/week, and 365 days/year.

There is no K-12 school within 1000 feet of the facility. The nearest school is Edison Elementary, located at 625 Maine Ave., Long Beach, approximately 2751 feet away (see Google Map).

EMISSIONS AND HEALTH RISKS

Emission calculations are based on AP-42 Chapter 7.1 – Organic Liquid Storage Tank (revised 06/2020). The table below compares annual emissions calculated using TANKs 4.09d with the results using revised AP-42 emission calculation methods. Note that due to rounding logic in the spreadsheet, the working and standing losses do not sum exactly to the total emissions.

Assume: Shell height 56 ft.
 Fittings (see 400-E-18 except for ladder-slotted guidepole per 4-2-21 email from DChetkowski)
 Throughput = 75,000 bbl/month
 Commodities: RVP 10 gasoline and RVP 10 crude

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IFRT Emissions Comparison – “New”/ “Good” Paint

	Tanks 4.09d	Spreadsheet – Gasoline RVP 10 ^{1,2}	Spreadsheet – Gasoline RVP 10 ^{1,2}	Spreadsheet – Crude RVP 10 ^{1,2,3}	Spreadsheet – Crude RVP 10 ^{1,2,3}
Paint Condition	Good	New	Average	New	Average
Total Emissions (lb/yr)	1,245.17	1,249.8	1,270.7	1,157.2	1,166.2
Rim Seal Loss (lb/yr)	301.93	1,130.0	1,152.6	553.4	564.1
Deck Fitting Loss (lb/yr)	824.43				
Deck Seam Loss (lb/yr)	0				
Working Loss (lb/yr)	118.82	118.82	118.82	602.58	602.58

1. Sum of monthly emissions.
2. Standing Losses include Rim Seal, Deck Fitting, and Deck Seam Losses.
3. “Midcontinent Crude Oil” mixture properties from AP-42 Table 7.1-2 are used for these calculations. Vapor pressure equation constants A & B are calculated from RVP of 10 and using Figure 7.1-16 of AP-42. TVP was calculated using constants A & B and ambient temperature data.

The following tables summarize the monthly standing and working losses from gasoline and crude storage and handling.

Monthly Emissions – Gasoline RVP 10

Month	Standing and Working Losses (lb/mo)					
	“New” Paint Conditions			“Average” Paint Conditions		
	Standing	Working	Total	Standing	Working	Total
January	76.24	9.9	86.1	77	9.9	86.9
February	77.37	9.9	87.3	78.32	9.9	88.2
March	82.33	9.9	92.2	83.76	9.9	93.7
April	88.11	9.9	98	90.05	9.9	100
May	95.96	9.9	106	98.22	9.9	108
June	104.05	9.9	114	106.69	9.9	117
July	114.96	9.9	125	118.01	9.9	128
August	118.77	9.9	129	121.78	9.9	132
September	112.86	9.9	123	115.18	9.9	125

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Month	Standing and Working Losses (lb/mo)					
	“New” Paint Conditions			“Average” Paint Conditions		
	Standing	Working	Total	Standing	Working	Total
October	99.02	9.9	109	100.52	9.9	110
November	85.38	9.9	95.3	86.37	9.9	96.3
December	74.97	9.9	84.9	75.67	9.9	85.6
Total	1130.02	118.8	1249.8	1151.57	118.8	1270.7

Monthly Emissions – Crude RVP 10

Month	Standing and Working Losses (lb/mo)					
	“New” Paint Conditions			“Average” Paint Conditions		
	Standing	Working	Standing	Standing	Standing	Total
January	37.38	50.21	87.6	37.74	50.21	88
February	37.91	50.21	88.1	38.37	50.21	88.6
March	40.28	50.21	90.5	40.97	50.21	91.2
April	43.06	50.21	93.3	44.01	50.21	94.2
May	46.89	50.21	97.1	48	50.21	98.2
June	50.88	50.21	101	52.21	50.21	102
July	56.39	50.21	107	57.95	50.21	108
August	58.35	50.21	109	59.9	50.21	110
September	55.32	50.21	106	56.5	50.21	107
October	48.39	50.21	98.6	49.13	50.21	99.3
November	41.75	50.21	92	42.23	50.21	92.4
December	36.77	50.21	87	37.1	50.21	87.3
Total	553.37	602.52	1157.2	564.11	602.52	1166.2

Worst case emissions are represented by storage and handling of RVP 10 gasoline, with “Average” paint condition (worst case), and a high month of August. For fugitive emissions, see Spreadsheet Ribost Tank 25000 bbl.

	A/N 627086 Tank TK-1	A/N 627087 Tank TK-2	Project Total
High Month (August)	132 lb/mo *1/30 = 4.4 lb/day	132 lb/mo *1/30 = 4.4 lb/day	

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	A/N 627086 Tank TK-1	A/N 627087 Tank TK-2	Project Total
Annual Emissions	1270.7 lb/yr	1270.7 lb/yr	2541.4 lb/yr
Fugitives	363.19 lb/yr *1/12 = 30.27 lb/mo *1/30 = 1.01 lb/day	363.19 lb/yr *1/12 = 30.27 lb/mo *1/30 = 1.01 lb/day	726.38 lb/yr
Total (tank plus fugitives)	1270.7 + 363.19 = 1633.89 lb/yr 132 + 30.27 = 162.27 lb/mo *1/30 = 5.41 lb/day AV30 *1/24 = 0.225 lb/hr	1270.7 + 363.19 = 1633.89 lb/yr 132 + 30.27 = 162.27 lb/mo *1/30 = 5.41 lb/day AV30 *1/24 = 0.225 lb/hr	3267.78 lb/yr 324.54 lb/mo 10.82 lb/day AV30 0.45 lb/hr

Project Increase: ROG = 5.41 lb/day * 2 tanks = 10.82 lb/day

ERCs needed: ROG = 10.82 lb/day * 1.2 = 12.98 lb/day or **13 lb/day ERCs**

Toxic Emissions:

There will be an increase in risk associated with the emissions from the new tanks.

Emissions based on AP-42, Chapter 7.1 methodology show annual emissions from each tank are 1270.7 lb/yr and fugitives from each tank are 363.19 lb/yr for a total of 1633.89 lb/yr per tank. A conservative, annual emission rate of 1700 lb/yr per tank will be used for the purpose of the health risk assessment.

TAC Emissions: TAC content is assumed based on SCAQMD Supplemental Instructions for Liquid Organic Storage Tanks Appendix 3: Default TAC Profile for Select Petroleum Products – Gasoline. This TAC profile for gasoline was chosen over the TAC profile for crude as being more conservative. Typically, benzene and ethylbenzene are the TACs of concern for determining Maximum Individual Cancer Risk (MICR). The weight percent of benzene and ethylbenzene is 1.8% and 1.4% respectively in gasoline (vs. 0.6% and 0.4% respectively in crude). Sulfur, assuming as H₂S, although typically not present in gasoline but present in crude, was also included in this analysis.

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TAC emissions lb/yr = (wt.% / 100) * (1700 lb/yr)

TAC	Wt.%	Emissions, lbs/yr	Emissions, lb/hr
n-Hexane	1.00	17.0	0.0019
Benzene	1.80	30.6	0.00349
Toluene	7.00	119.0	0.0136
Ethyl benzene	1.4	23.8	0.0027
Xylene	7.00	119.0	0.0136
Sulfur, as H ₂ S	3%*	51	0.0058

*from SDS Gas Oil, Virgin (Tesoro) 0-3% sulfur

Input Parameters:

Volume Source

Shell height: 56 feet

Area = 2826 sq. ft. (based on tank diameter of 60 ft.)

Residential receptor = 2503 ft. = 763 meters (W. Chester Place)

School *= 2751 ft. = 838 meters (west property line of Edison Elementary – 625 Maine Ave.)

Commercial receptor = 294 ft. = 90 meters (parking lot to the east)

** residential receptor used instead of school, since residential is closer*

Based on Tier 2 screening, each tank shows the following results (see attached spreadsheet):

MICR_{res} = 1.50E-7

MICR_{comm} = 2.32E-7

HIA < 1

HIC < 1

Odor Analysis:

The SDS for Tesoro's Gas Oil (vapor pressure 4 hPa@40 deg C = 0.058 psi @ 104 deg F) has the highest sulfur content 0-3% by weight. Although the vapor pressure of this commodity is very low, this sulfur content was used to conduct an odor analysis assuming the worst case of gasoline RVP 10. For this odor analysis, the combined maximum hourly emissions (tank plus fugitives) will be used:

Sulfur, assume all as H₂S = (% wt / 100) *(0.225 lb/hr)

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Sulfur, as H ₂ S	3% wt	0.00675 lb/hr
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To evaluate the potential for odor complaints, a (volume source based) AERSCREEN model was conducted to evaluate compliance with the California Ambient Air Quality Standard (CAAQS) for H₂S (30 ppb, 1-hr avg) at any receptor location from a new tank to the nearest commercial, nearest residential, and nearest school. The OEHHA odor threshold (8 ppb) will be evaluated as well. The Initial Lateral and Vertical Dimensions were determined using the procedures in EPA's *User's Guide for the AMS/EPA Regulatory Model – AERMOD* (Table 3-2, p. 3-90) for the tank (dimensions are 56 ft. high and 60 ft. diameter) and is tabulated below for ease of reference.

Parameter	Value	Units (if any)
“Building” Area, A ($\frac{D^2}{4} \pi$)	2826	ft ²
Release Height, H _R (center of volume source)	28	ft
“Building” Height, H ($2H_R$)	56	ft
Equivalent Side/Length of “Building,” S (\sqrt{A})	53.16	ft
Estimated Initial Lateral ($\frac{S}{4.3}$)	12.36	ft
Estimated Initial Vertical ($\frac{H}{2.15}$)	26.05	ft

The following parameters were used to model the potential emission calculation for the tank. Parameters not noted below are at the default values for AERSCREEN.

Parameter	Value	Units (if any)
Emissions Rate	1	lb/hr
Volume [Release] Height	28	feet
Volume Source, Initial Lateral Dimension	12.36	feet
Volume Source, Initial Vertical Dimension	26.05	feet
Rural or Urban	Urban	
Population	10000000	
Minimum Temperature	default	°F
Maximum Temperature	default	°F
Surface Characteristics	User Defined	
Albedo	0.18	
Bowen Ratio	1.24	
Roughness Length	0.104	Meters

The AERSCREEN analysis yields a maximum concentration at the following distances. For potential of odor complaints at persistent commercial/residential/school receptor locations, the closest

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commercial, residential, and school receptors are 90, 763 and 838 meters respectively (based on measurements taken from Google Maps).

The AERSCREEN results in a concentration based on an emission rate of 1 lb/hr (see AERSCREEN output) and is proportionally scaled down to 0.00675 lb/hr.

Concentration from $\mu\text{g}/\text{m}^3$ to ppm is converted as follows:

$$\text{Concentration in ppm} = (\text{Concentration in } \mu\text{g}/\text{m}^3)(0.02369)/\text{MW of H}_2\text{S},$$

where the MW H₂S = 34 lb/lbm

Receptor Type	Distance from Source [meters]	Concentration [$\mu\text{g}/\text{m}^3$] @1 lb/hr	Concentration [$\mu\text{g}/\text{m}^3$] @0.00675 lb/hr	Concentration [ppm] 1 tank
Maximum Concentration	9.1	413.0	2.79	0.00194
Nearest Commercial Receptor	90	54.15	0.366	0.00025
Nearest Residential Receptor	763	5.191	0.0350	0.00002
Nearest School Receptor	838	4.601	0.0311	0.00002

At the maximum concentration of 0.00194 ppm (1.94 ppb) located 9.1 meters from the proposed tank location, the concentration of H₂S is below both the OEHHHA limit of 0.008 ppm (8 ppb) and the CAAQS limit of 0.03 ppm (30 ppb). Concentrations at the commercial, residential, and school receptors are further reduced to 0.00025 ppm (0.25 ppb), 0.00002 ppm (0.02 ppb), and 0.00002 (0.02 ppb), respectively.

Receptor	Concentration <ppb>	OEHHHA limit <ppb>	CAAQS limit <ppb>	Exceeds any threshold?
On-site (9.1 m.)	1.94	8	30	No
Commercial	0.25	8	30	No
Residential	0.02	8	30	No
School	0.02	8	30	No

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EVALUATION:

Rule 212: Standards for Approving Permits and Issuing Public Notice

Rule 212 (c)(1) - There is no school within 1,000 feet of the facility.

Rule 212 (c)(2) - On-site emission increases do not exceed the following:

Volatile Organic Compounds	30 lbs/day
Nitrogen Oxides	40 lbs/day
PM10	30 lbs/day
Sulfur Dioxide	60 lbs/day
Carbon Monoxide	220 lbs/day
Lead	3 lbs/day

Rule 212 (c)(3)(A)(i) - MICR is below 1 in a million
Public Notice is not required.

Rule 401: Visible Emissions

Visible emissions are not expected from storage tanks under normal operation.
Compliance is expected.

Rule 402: Nuisance

Nuisance is not expected from storage tanks under normal operation. An odor analysis for H₂S was conducted and nuisance is not expected. Additionally, there have not been any nuisance complaints during the last two years.
Compliance is expected.

Rule 463 – Organic Liquid Storage

The purpose of this rule is to reduce emissions of VOC from the storage of organic liquid in stationary above-ground tanks. This rule applies to any above-ground stationary tank with a capacity of 75,000 liters (19,815 gallons) or greater used for storage of organic liquids, and any above-ground tank with a capacity between 950 liters (251 gallons) and 75,000 liters (19,815 gallons) used for storage of gasoline. This rule applies to both tanks since they have organic liquid storage capacity greater than the 19,815 gallons threshold.

(c)(2) The tanks are fixed roof with internal floating-type cover with a primary and secondary seal. The concentration of organic vapor in the vapor space above the floating roof shall not exceed 30% LEL and is enforced by permit condition.

(d)(2) The floating roof shall float on the organic liquid at all times except when the tank is being emptied for cleaning or repair. The permit will be conditioned to meet the applicable requirements of the rule.

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(e) These tanks are subject to the self-inspection requirements of the rule. The permit will be conditioned to meet the applicable requirements of the rule.

(f) The reporting and recordkeeping requirements apply to these tanks. The permit will be conditioned to meet the reporting and recordkeeping requirements of Rule 463.

Compliance is expected.

Rule 1149 – Storage Tank Cleaning and Degassing

The purpose of this rule is to reduce VOC and toxics emissions from roof landings, cleaning, maintenance, testing, repair and removal of storage tanks and pipelines. The rule applies to the cleaning and degassing of a pipeline opened to atmosphere outside the boundaries of a facility, stationary tank, reservoir, or other container, storing or last used to store VOCs. The rule has requirements for cleaning and degassing of storage tanks. The facility is expected to comply with the applicable cleaning and degassing requirements of this rule. The permit will be conditioned to meet the applicable requirements of the rule.

Compliance is expected.

Rule 1173 – Control of Volatile Organic Compound Leaks and Releases from Components at Petroleum Facilities and Chemical Plants

The purpose of this rule is to control VOC leaks from components and releases from atmospheric process pressure relief devices at refineries, chemical plants, lubricating oil and grease re-refiners, marine terminals, oil and gas production fields, natural gas processing plants, and pipeline transfer stations. This facility is a bulk loading facility since it has a loading rack for truck loading in addition to pipeline transfer. Although it is not subject to this rule as defined under the rule applicability, compliance with Rule 1173 is required in order to comply with BACT requirements for fugitive emissions from Organic Liquid Bulk Loading Facilities. The permit will be conditioned with the applicable requirements of Rule 1173.

Compliance is expected.

Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities

The purpose of this rule is to reduce emissions of VOCs from storage tanks located at petroleum facilities. The rule applies to all aboveground storage tanks that have capacity equal to or greater than 75,000 liters (19,815 gallons), are used to store organic liquids with a true vapor pressure greater than 5 mm Hg (0.1 psi) absolute under actual storage conditions, and are located at any petroleum facility that emits more than 40,000 pounds (20 tons) per year of VOC in any emission inventory year

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starting with the emission inventory year 2000. The facility does not emit more than 20 tons of VOC per year based on AERs submitted since 2000. This rule does not apply.

Reg XIII: New Source Review

1303(a)(1) BACT/LAER – The emission increase from each tank is 4.4 lb/day of VOCs and from fugitive sources is 1.01 lb/day of VOCs. The equipment is subject to BACT requirements. BACT for “Storage Tanks – Liquid: Internal Floating Roof” is “Category A Tank Seals and Compliance with Rule 463” for VOC. Ribost has indicated that the seals will be Category A and the permit equipment description will also reflect this requirement. BACT for “Fugitive Emission Sources at Organic Liquid Bulk Loading Facilities” is “Compliance with Rule 1173, where applicable by Rule” for VOC, along with specific component requirements. The permit will be conditioned to meet the applicable requirements of Rule 1173 and applicable component requirements.

1303(b)(1) Modeling – Modeling for VOCs is not required per Rule 1303 Appendix A.

1303(b)(2) Emission Offsets – Total project increase is 10.8 lb/day. Offsets (13 lb/day) in the form of ERC’s are required. Ribost will supply ERCs for this project.

1303(b)(4) Facility Compliance – This facility is in compliance with South Coast AQMD applicable rules and regulations.

1303(b)(5) Major Polluting Facilities – This section of the rule is not applicable, since this is not a major polluting facility as defined in Rule 1302.

Compliance is expected.

Rule 1401: New Source Review of Toxic Air Contaminants

Rule 1401(d)(1)(A) - The MICR from each permit unit is less than 1.0×10^{-6} limit.

Rule 1401(d)(1)(C) - Since the MICR is less than one in a million, cancer burden is less than 0.5.

Rule 1401(d)(2) and Rule 1401(d)(3)- HIC and HIA values are less than 1 respectively.

Compliance is expected.

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Results of Tier 2 Risk Assessment

Receptor Type	Cancer Risk	Acute HI	Chronic HI	Cancer Risk Threshold	Chronic HI Threshold	Acute HI Threshold	Exceeds Any Threshold?
Resident	1.50×10^{-7}	0.000791	0.000693	1×10^{-6}	1.0	1.0	No
Worker	2.32×10^{-7}	0.0162	0.013	1×10^{-6}	1.0	1.0	No

Rule 1401.1: Requirements for New and Relocated Facilities Near Schools

This facility is an existing facility as defined under (c)(3) (had equipment requiring permits in operation prior to November 4, 2005) and is not subject to this rule.

Compliance is expected.

40 CFR 60 Subpart Kb: Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984)

This subpart applies to storage tanks with a capacity greater than or equal to 75 cubic meters (19,813 gallons) that are used to store volatile organic liquids and for which construction, reconstruction, or modification commenced after July 23, 1984.

60.110b(a) – The tanks will be constructed after July 23, 1984 and are subject to this rule.

60.112b(a)(1)(i) – The tanks are fixed roof with an internal floating roof which floats on the commodity except as noted in the regulation

60.112b(a)(1)(ii), (a)(1)(ii)(B), (a)(1)(C) – The floating roof has one of the listed closure devices between the wall of the storage vessel and edge of the internal floating roof

60.112b(a)(1)(iii) – Each opening provides a projection below the liquid surface

60.112b(a)(1)(iv) – All openings are equipped with a gasketed cover or lid that is closed at all times except as indicated. Covers on each hatch and automatic gauge floats are bolted except as indicated.

60.112b(a)(1)(v) – Automatic bleeder vents shall be gasketed and closed at all times except as noted.

60.112b(a)(1)(ix) – Ladder wells have gasketed sliding cover.

Compliance is expected.

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CEQA:

Per the applicant's Form 400-CEQA (signed by J. Baxter 2-09-21), there will not be an increase in emissions from marine vessels, trains, and/or airplanes and the expansion will not result in an increase in heavy-duty transport truck traffic to/from the facility by more than 350 truck round-trips per day. The Draft IS/ND indicates a maximum of 3 additional trucks per day to accommodate vendors not connected to the pipeline. All other facility responses in "Review of Impacts Which May Trigger CEQA" on Form 400-CEQA were all marked "No". The Draft IS/ND is pending adoption by the City of Long Beach Harbor Department.

CONCLUSION AND RECOMMENDATION:

This project is expected to comply with all applicable Rules and Regulations. A conditional Permit to Construct for each tank is recommended.

ATTACHMENT 3
CalEEMod Output

World Oil Tank Inst Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	World Oil Tank Inst
Construction Start Date	3/1/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	Air District
Windspeed (m/s)	2.30
Precipitation (days)	18.4
Location	33.77398832895538, -118.21220474426605
County	Los Angeles-South Coast
City	Long Beach
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4619
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	—
App Version	2022.1.1.14

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
------------------	------	------	-------------	-----------------------	------------------------	--------------------------------	------------	-------------

General Heavy Industry	21.8	1000sqft	0.50	21,780	0.00	—	—	—
User Defined Industrial	2.00	User Defined Unit	0.30	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.76	2.29	21.2	26.0	0.05	0.83	1.07	1.84	0.76	0.25	1.01	—	6,998	6,998	0.30	0.27	5.91	7,092
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.28	1.88	16.8	22.9	0.04	0.66	1.08	1.73	0.60	0.26	0.85	—	5,537	5,537	0.24	0.26	0.15	5,620
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.96	0.79	7.36	8.67	0.02	0.29	0.40	0.69	0.26	0.09	0.36	—	2,350	2,350	0.10	0.10	0.91	2,382
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.18	0.14	1.34	1.58	< 0.005	0.05	0.07	0.13	0.05	0.02	0.07	—	389	389	0.02	0.02	0.15	394
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Threshold	—	75.0	100	550	150	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	—	No	—	—	—	—	—	—	—	—	—	Yes
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	—	150	—	—	—	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	—	No	—	—	—	—	—	—	—	—	—	Yes
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10,000
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.76	2.29	21.2	26.0	0.05	0.83	1.07	1.84	0.76	0.25	1.01	—	6,998	6,998	0.30	0.27	5.91	7,092
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.28	1.88	16.8	22.9	0.04	0.66	1.08	1.73	0.60	0.26	0.85	—	5,537	5,537	0.24	0.26	0.15	5,620
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.96	0.79	7.36	8.67	0.02	0.29	0.40	0.69	0.26	0.09	0.36	—	2,350	2,350	0.10	0.10	0.91	2,382
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.18	0.14	1.34	1.58	< 0.005	0.05	0.07	0.13	0.05	0.02	0.07	—	389	389	0.02	0.02	0.15	394

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.24	0.66	1.28	1.40	0.01	0.02	0.30	0.32	0.02	0.08	0.10	0.00	1,191	1,191	0.06	0.18	2.62	1,249
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.08	0.50	1.32	0.45	0.01	0.02	0.30	0.32	0.02	0.08	0.10	0.00	1,188	1,188	0.06	0.18	0.07	1,242
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.19	0.61	1.34	1.10	0.01	0.02	0.30	0.32	0.02	0.08	0.10	0.00	1,190	1,190	0.06	0.18	1.13	1,246
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.03	0.11	0.24	0.20	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	0.00	197	197	0.01	0.03	0.19	206
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	55.0	55.0	550	150	—	—	150	—	—	—	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	—	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	55.0	55.0	550	150	—	—	150	—	—	—	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	—	—	—	—	—	—	—	—
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10,000
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.08	0.02	1.27	0.45	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,119	1,119	0.06	0.18	2.62	1,176
Area	0.17	0.64	0.01	0.95	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.90	3.90	< 0.005	< 0.005	—	3.91
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	68.0	68.0	< 0.005	< 0.005	—	68.3
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.24	0.66	1.28	1.40	0.01	0.02	0.30	0.32	0.02	0.08	0.10	0.00	1,191	1,191	0.06	0.18	2.62	1,249
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.08	0.02	1.32	0.45	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,120	1,120	0.06	0.18	0.07	1,174
Area	—	0.49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	68.0	68.0	< 0.005	< 0.005	—	68.3
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.08	0.50	1.32	0.45	0.01	0.02	0.30	0.32	0.02	0.08	0.10	0.00	1,188	1,188	0.06	0.18	0.07	1,242
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.08	0.02	1.33	0.45	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,119	1,119	0.06	0.18	1.13	1,175

Area	0.12	0.59	0.01	0.65	< 0.005	< 0.005	< 0.005	—	< 0.005	—	2.67	2.67	< 0.005	< 0.005	< 0.005	—	2.68
Energy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	—	68.0	68.0	< 0.005	< 0.005	< 0.005	—	68.3
Water	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.19	0.61	1.34	1.10	0.01	0.02	0.32	0.30	0.02	0.08	1,190	1,190	0.06	0.18	0.13	1.13	1,246
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	< 0.005	0.24	0.08	< 0.005	< 0.005	0.06	0.05	< 0.005	0.01	185	185	0.01	0.03	0.19	195	—
Area	0.02	0.11	< 0.005	0.12	< 0.005	< 0.005	< 0.005	—	< 0.005	—	0.44	0.44	< 0.005	< 0.005	—	0.44	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	—	11.3	11.3	< 0.005	< 0.005	—	11.3	—
Water	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00	—
Waste	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00	—
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	—
Total	0.03	0.11	0.24	0.20	< 0.005	< 0.005	0.06	0.05	< 0.005	0.01	197	197	0.01	0.03	0.19	206	—

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	0.51	4.69	5.79	0.01	0.19	—	0.19	0.17	—	0.17	—	852	852	0.03	0.01	—	855

Demolition	—	—	—	—	—	0.07	0.07	—	—	—	0.01	0.01	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.18	0.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	32.7	< 0.005	< 0.005	—	32.8
Demolition	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	< 0.005	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	5.41	< 0.005	< 0.005	—	5.43
Demolition	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	< 0.005	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.13	0.14	1.62	0.00	0.00	0.33	0.00	0.08	0.08	0.08	—	338	0.02	0.01	0.04	343
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.02	< 0.005	0.01	0.01	0.01	—	88.1	< 0.005	0.01	0.01	91.9
Hauling	0.04	0.01	0.65	0.21	< 0.005	0.01	0.15	0.01	0.04	0.05	0.05	—	556	0.03	0.09	0.03	583
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.00	< 0.005	< 0.005	< 0.005	—	13.2	< 0.005	< 0.005	0.02	13.4
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.38	< 0.005	< 0.005	< 0.005	3.53

[illegible]

3.3. Site Preparation (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.29	1.09	10.3	13.4	0.03	0.44	—	0.44	0.40	—	0.40	—	2,721	2,721	0.11	0.02	—	2,730
Dust From Material Movement:	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.29	1.09	10.3	13.4	0.03	0.44	—	0.44	0.40	—	0.40	—	2,721	2,721	0.11	0.02	—	2,730
Dust From Material Movement:	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.27	2.56	3.33	0.01	0.11	0.10	—	0.10	—	678	678	0.03	0.01	—	681				
Dust From Material Movement:	—	—	—	—	—	0.00	—	0.00	0.00	—	—	—	—	—	—	—				
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00				0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				—
Off-Road Equipment	0.06	0.05	0.47	0.61	< 0.005	0.02	0.02	—	0.02	—	112	112	< 0.005	< 0.005	—	113				
Dust From Material Movement:	—	—	—	—	—	0.00	—	0.00	0.00	—	—	—	—	—	—	—				—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00				0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				—
Worker	0.15	0.14	0.13	1.95	0.00	0.33	0.00	0.08	0.08	—	359	359	0.02	0.01	1.42	365				
Vendor	0.01	< 0.005	0.11	0.06	< 0.005	0.02	< 0.005	0.01	0.01	—	88.1	88.1	< 0.005	0.01	0.24	92.1				
Hauling	0.04	0.01	0.62	0.21	< 0.005	0.15	0.01	0.04	0.05	—	556	556	0.03	0.09	1.30	584				
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				—
Worker	0.15	0.13	0.14	1.62	0.00	0.33	0.00	0.08	0.08	—	338	338	0.02	0.01	0.04	343				
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	0.02	< 0.005	0.01	0.01	—	88.1	88.1	< 0.005	0.01	0.01	91.9				
Hauling	0.04	0.01	0.65	0.21	< 0.005	0.15	0.01	0.04	0.05	—	556	556	0.03	0.09	0.03	583				

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.43	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	85.6	85.6	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.15	86.9
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.0	22.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	22.9	
Hauling	0.01	< 0.005	0.16	0.05	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	139	139	0.01	0.02	0.14	0.02	0.14	0.02	0.14	145	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.2	14.2	< 0.005	< 0.005	0.03	< 0.005	< 0.005	< 0.005	0.03	14.4	
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.64	3.64	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.80	
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.9	22.9	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	0.02	24.1	

3.5. Grading (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.47	4.25	5.29	0.01	0.21	—	0.21	0.19	—	0.19	—	786	786	0.03	0.01	—	789
Dust From Material Movement:	—	—	—	—	—	—	0.40	0.40	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.47	4.25	5.29	0.01	0.21	—	0.21	0.19	—	0.19	—	786	786	0.03	0.01	—	789

[illegible]

Worker	0.04	0.03	0.03	0.41	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	84.5	84.5	< 0.005	< 0.005	< 0.005	0.01	85.6
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.1	44.1	< 0.005	< 0.005	0.01	< 0.005	45.9
Hauling	0.02	< 0.005	0.36	0.13	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	281	281	0.02	0.05	0.02	0.02	295
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.88	9.88	< 0.005	< 0.005	< 0.005	0.02	10.0
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.07	5.07	< 0.005	< 0.005	< 0.005	0.01	5.29
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.4	32.4	< 0.005	< 0.005	0.01	0.03	34.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.64	1.64	< 0.005	< 0.005	< 0.005	< 0.005	1.66
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.84	0.84	< 0.005	< 0.005	< 0.005	< 0.005	0.88
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.36	5.36	< 0.005	< 0.005	< 0.005	0.01	5.63

3.7. Building Construction (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.08	0.91	9.20	8.22	0.02	0.38	—	0.38	0.35	—	0.35	—	2,271	2,271	0.09	0.02	—	2,279
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.08	0.91	9.20	8.22	0.02	0.38	—	0.38	0.35	—	0.35	—	2,271	2,271	0.09	0.02	—	2,279

Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.00	0.00	0.01	0.01	0.01	—	20.4	20.4	< 0.005	< 0.005	0.04	20.7
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.23	5.23	< 0.005	< 0.005	0.01	5.46
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	0.01	0.01	< 0.005	—	33.0	33.0	< 0.005	0.01	0.03	34.7

3.9. Architectural Coating (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.35	2.42	2.69	< 0.005	0.09	—	0.09	0.08	—	0.08	—	345	345	0.01	< 0.005	—	346
Architectural Coatings	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.15	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	21.7	21.7	< 0.005	< 0.005	—	21.8
Architectural Coatings	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	0.03	0.03	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Architectural Coatings	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.06	0.03	0.41	0.00	0.00	0.08	0.01	0.02	0.02	0.02	84.5	84.5	< 0.005	0.01	85.6
Vendor	< 0.005	< 0.005	0.06	0.03	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	44.1	44.1	< 0.005	< 0.005	45.9
Hauling	0.02	< 0.005	0.36	0.13	0.13	< 0.005	0.01	0.07	0.08	0.02	0.02	0.02	281	281	0.02	0.02	295
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.03	0.00	0.00	0.01	0.01	< 0.005	< 0.005	< 0.005	5.41	5.41	< 0.005	0.01	5.49
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	2.78	2.78	< 0.005	< 0.005	2.90
Hauling	< 0.005	< 0.005	0.02	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	17.7	17.7	< 0.005	0.02	18.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.90	0.90	< 0.005	< 0.005	0.91
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.46	0.46	< 0.005	< 0.005	0.48
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	2.94	2.94	< 0.005	< 0.005	3.08

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	0.08	0.02	1.27	0.45	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,119	1,119	0.06	0.18	2.62	1,176
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.08	0.02	1.27	0.45	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,119	1,119	0.06	0.18	2.62	1,176
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	0.08	0.02	1.32	0.45	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,120	1,120	0.06	0.18	0.07	1,174
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.08	0.02	1.32	0.45	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,120	1,120	0.06	0.18	0.07	1,174
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	0.01	< 0.005	0.24	0.08	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	185	185	0.01	0.03	0.19	195
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.01	< 0.005	0.24	0.08	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	185	185	0.01	0.03	0.19	195

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	68.0	68.0	< 0.005	< 0.005	—	68.3
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	68.0	68.0	< 0.005	< 0.005	—	68.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	68.0	68.0	< 0.005	< 0.005	—	68.3
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	68.0	68.0	< 0.005	< 0.005	—	68.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	68.0	68.0	< 0.005	< 0.005	—	68.3
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	11.3	11.3	< 0.005	< 0.005	—	11.3
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	11.3	11.3	< 0.005	< 0.005	—	11.3

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.2. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.43	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscaping Equipment	0.17	0.16	0.01	0.95	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.90	3.90	< 0.005	< 0.005	—	3.91
Total	0.17	0.64	0.01	0.95	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.90	3.90	< 0.005	< 0.005	—	3.91
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.43	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscaping Equipment	0.02	0.02	< 0.005	0.12	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	—	< 0.005	—	0.44	< 0.005	—	0.44
Total	0.02	0.11	< 0.005	0.12	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	—	< 0.005	—	0.44	< 0.005	—	0.44

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

[illegible]

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

[illegible]

[illegible]

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

[illegible]

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipment	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
-----------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	03/01/2024	03/20/2024	5.00	14.0	Removal of Oil/Water Separator
Site Preparation	Site Preparation	03/01/2024	07/05/2024	5.00	91.0	Prep Foundation
Grading	Grading	03/21/2024	05/17/2024	5.00	42.0	Prep Excavation
Building Construction	Building Construction	06/14/2024	12/15/2024	5.00	131	Tanks Install
Architectural Coating	Architectural Coating	11/20/2024	12/21/2024	5.00	23.0	Coatings Piping Mechanical

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	2.00	6.00	84.0	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	1.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Bore/Drill Rigs	Diesel	Average	1.00	8.00	148	0.41

Site Preparation	Cranes	Diesel	Average	1.00	8.00	367	0.29
Site Preparation	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Site Preparation	Skid Steer Loaders	Diesel	Average	3.00	8.00	71.0	0.37
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Grading	Excavators	Diesel	Average	1.00	6.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	2.00	4.00	367	0.29
Building Construction	Cranes	Diesel	Average	0.00	4.00	367	0.29
Architectural Coating	Aerial Lifts	Diesel	Average	1.00	6.00	37.0	0.48
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Architectural Coating	Generator Sets	Diesel	Average	1.00	6.00	14.0	0.74

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	32.0	14.7	LDA,LDT1,LDT2
Demolition	Vendor	4.00	6.90	HHDT,MHDT
Demolition	Hauling	4.00	40.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	32.0	14.7	LDA,LDT1,LDT2

Site Preparation	Vendor	4.00	6.90	HHDT,MHDT
Site Preparation	Hauling	4.00	40.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	8.00	14.7	LDA,LDT1,LDT2
Grading	Vendor	2.00	6.90	HHDT,MHDT
Grading	Hauling	4.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	32.0	14.7	LDA,LDT1,LDT2
Building Construction	Vendor	4.00	6.90	HHDT,MHDT
Building Construction	Hauling	4.00	40.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	8.00	14.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	2.00	6.90	HHDT,MHDT
Architectural Coating	Hauling	4.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	0.00	0.00	0.00

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	1,000	—
Site Preparation	—	—	0.50	0.00	—
Grading	—	—	0.50	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Heavy Industry	0.00	0%
User Defined Industrial	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

[illegible]

User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	32,670	10,890	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Heavy Industry	46,660	532	0.0330	0.0040	0.00
User Defined Industrial	0.00	532	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Heavy Industry	0.00	0.00
User Defined Industrial	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Heavy Industry	0.00	—
User Defined Industrial	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Heavy Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.00	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
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5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
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5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	6.24	annual days of extreme heat
Extreme Precipitation	4.10	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about $\frac{3}{4}$ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
41 / 46	

Exposure Indicators	—
AQ-Ozone	17.6
AQ-PM	69.5
AQ-DPM	99.8
Drinking Water	34.7
Lead Risk Housing	—
Pesticides	0.00
Toxic Releases	96.5
Traffic	72.7
Effect Indicators	—
CleanUp Sites	97.7
Groundwater	98.3
Haz Waste Facilities/Generators	98.4
Impaired Water Bodies	99.6
Solid Waste	96.3
Sensitive Population	—
Asthma	40.5
Cardio-vascular	19.5
Low Birth Weights	—
Socioeconomic Factor Indicators	—
Education	—
Housing	—
Linguistic	—
Poverty	—
Unemployment	—

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	—
Employed	—
Median HI	—
Education	—
Bachelor's or higher	—
High school enrollment	—
Preschool enrollment	—
Transportation	—
Auto Access	—
Active commuting	—
Social	—
2-parent households	—
Voting	—
Neighborhood	—
Alcohol availability	—
Park access	—
Retail density	—
Supermarket access	—
Tree canopy	—
Housing	—
Homeownership	—
Housing habitability	—
Low-inc homeowner severe housing cost burden	—
Low-inc renter severe housing cost burden	—
Uncrowded housing	—

Health Outcomes	—
Insured adults	—
Arthritis	5.6
Asthma ER Admissions	29.7
High Blood Pressure	2.9
Cancer (excluding skin)	14.0
Asthma	91.1
Coronary Heart Disease	1.0
Chronic Obstructive Pulmonary Disease	10.5
Diagnosed Diabetes	5.9
Life Expectancy at Birth	0.0
Cognitively Disabled	0.0
Physically Disabled	0.0
Heart Attack ER Admissions	73.4
Mental Health Not Good	52.8
Chronic Kidney Disease	3.6
Obesity	41.1
Pedestrian Injuries	0.0
Physical Health Not Good	25.9
Stroke	3.8
Health Risk Behaviors	—
Binge Drinking	61.9
Current Smoker	43.1
No Leisure Time for Physical Activity	47.6
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	9.9

Children	0.0
Elderly	0.0
English Speaking	0.0
Foreign-born	0.0
Outdoor Workers	0.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	7.5
Traffic Density	0.0
Traffic Access	51.0
Other Indices	—
Hardship	0.0
Other Decision Support	—
2016 Voting	0.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	—
Healthy Places Index Score for Project Location (b)	—
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	Wilmington Long Beach Carson

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Healthy Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

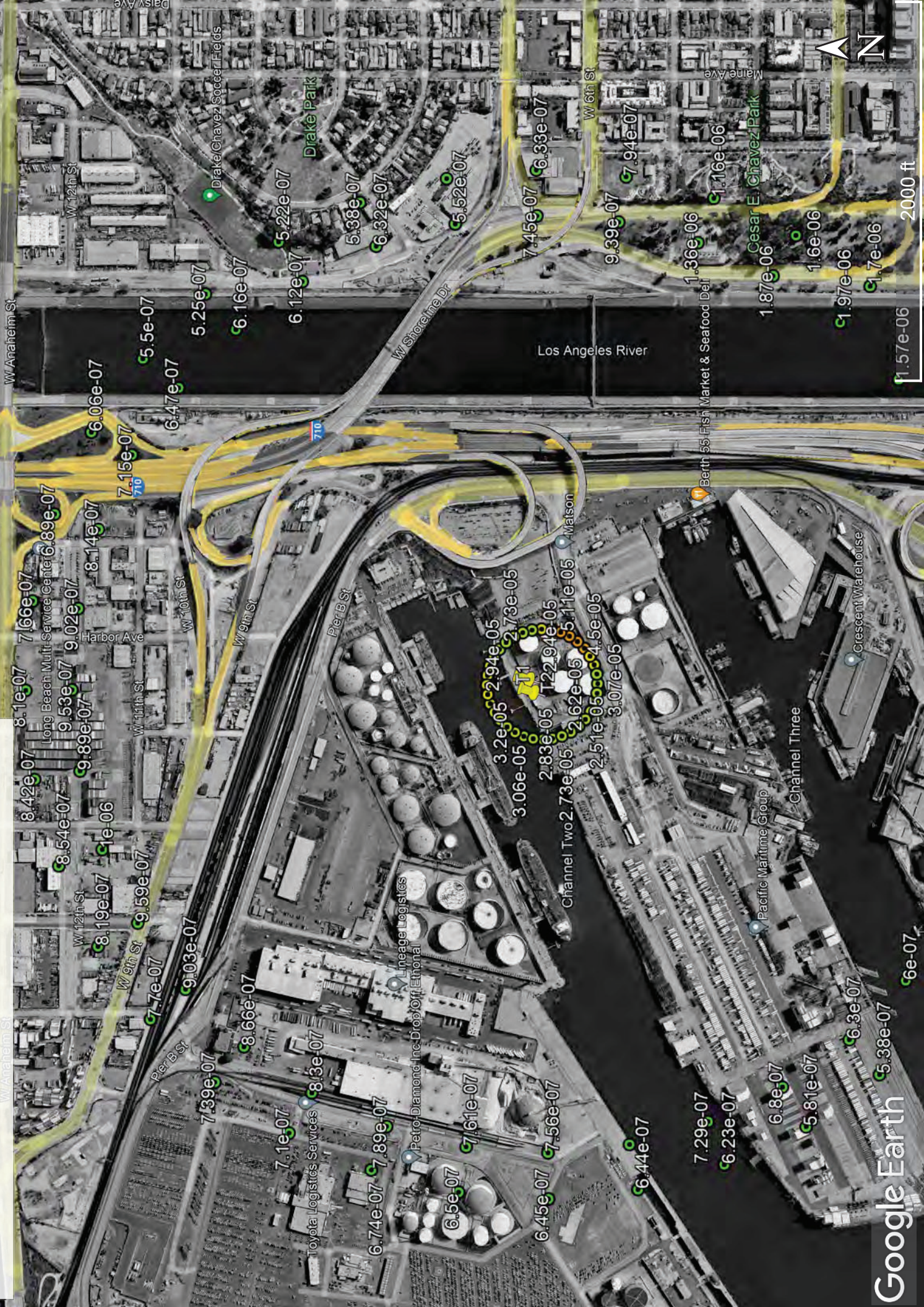
8. User Changes to Default Data

Screen	Justification
Characteristics: Project Details	Site is in Urban location
Construction: Construction Phases	Construction Phase - Overall 10 month sched of two primary phases w added coatings via spreadsheet
Construction: Off-Road Equipment	Fleet forecast source 2019
Construction: Dust From Material Movement	Grading - Include 0.5 acre site prep and staging
Land Use	0.8 acres total User defined unit - 2 tanks
Construction: Architectural Coatings	Architectural Coating - Adding coatings in separate spreadsheet
Operations: Fleet Mix	Vehicle Trips - Operation incrementally adds avg 6 HHDT one-way trips daily up to trip length 30 miles
Operations: Vehicle Data	Vehicle Trips - Operation incrementally adds avg 6 HHDT one-way trips daily up to trip length 30 miles
Operations: Architectural Coatings	Architectural Coating - Adding coatings in separate spreadsheet
Operations: Energy Use	Energy Use - Include incremental onsite electricity use for operation of new pumps, no incremental ng use
Operations: Water and Waste Water	Water And Wastewater - Incremental water use not applicable
Operations: Solid Waste	Solid Waste - Incremental solid waste production not applicable
Construction: Trips and VMT	Trips and VMT - Up to 64 worker and 8 vendor daily one-way trips
Operations: Refrigerants	Refrigerant - not applicable

ATTACHMENT 4
HRA Screening Plots

World Oil Tank Installation

Construction - Cancer Risk, Residential Receptor - HARP2 (2/21/23)



World Oil Tank Installation

Construction - Cancer Risk, Worker Receptor - HARP2 (2/21/23)

5.53e-07 5.3e-07 4.98e-07
5.17e-07 5.41e-07 4.7e-07
4.9e-07 4.28e-07 3.96e-07
3.8e-07 3.8776e-07 4.27e-07
5.07e-07 6.22e-07 7.4208e-07
8.23e-07 8.32e-07 7.66e-07
5.36e-07 6.53e-07 3.89e-07
3.59e-07 3.46e-07 3.44e-07
3.51e-07 3.65e-07 3.81e-07
4.11e-07 3.97e-07 4.2e-07
4.29e-07 4.36e-07 4.44e-07
4.65e-07

T1

T2

World Oil Terminals Long Beach Pier C St

Signet Marine Inc

SSA Marine

World Oil Tank Installation

Construction - Chronic HI - HARP2 (2/21/23)

