DRAFT ENVIRONMENTAL IMPACT REPORT

World Oil Tank Installation Project

State Clearinghouse # 2020100119

Prepared for

Port of LONG BEACH
THE GREEN PORT

Submitted by

Aspen environmental group

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CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

LIST OF ACRONYMS

AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ARB	Air Resources Board
ARSSS	Anchorage Road Soil Storage Site
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_2S	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 Draft 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 Draft 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 t 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.

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

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

During Project operations, the 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 Ribost and is a receive-only pipeline that would deliver crude oil to the proposed new tanks. The proposed Project would not enable the facility to increase throughput of existing pipelines, tanks, or loading racks beyond the permitted limits established by the Ribost Terminal South Coast Air Quality Management District (SCAQMD) Permit to Operate.

Ribost 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 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.

Project maintenance 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. Ribost would adopt all existing maintenance procedures for the proposed Project, including cleaning the tanks of sludge, repair, and/or hydrotesting approximately every 10 years. Although typical tank cleaning and emptying occurs approximately every 10 years, other maintenance activities may be conducted sooner, as needed.

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

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

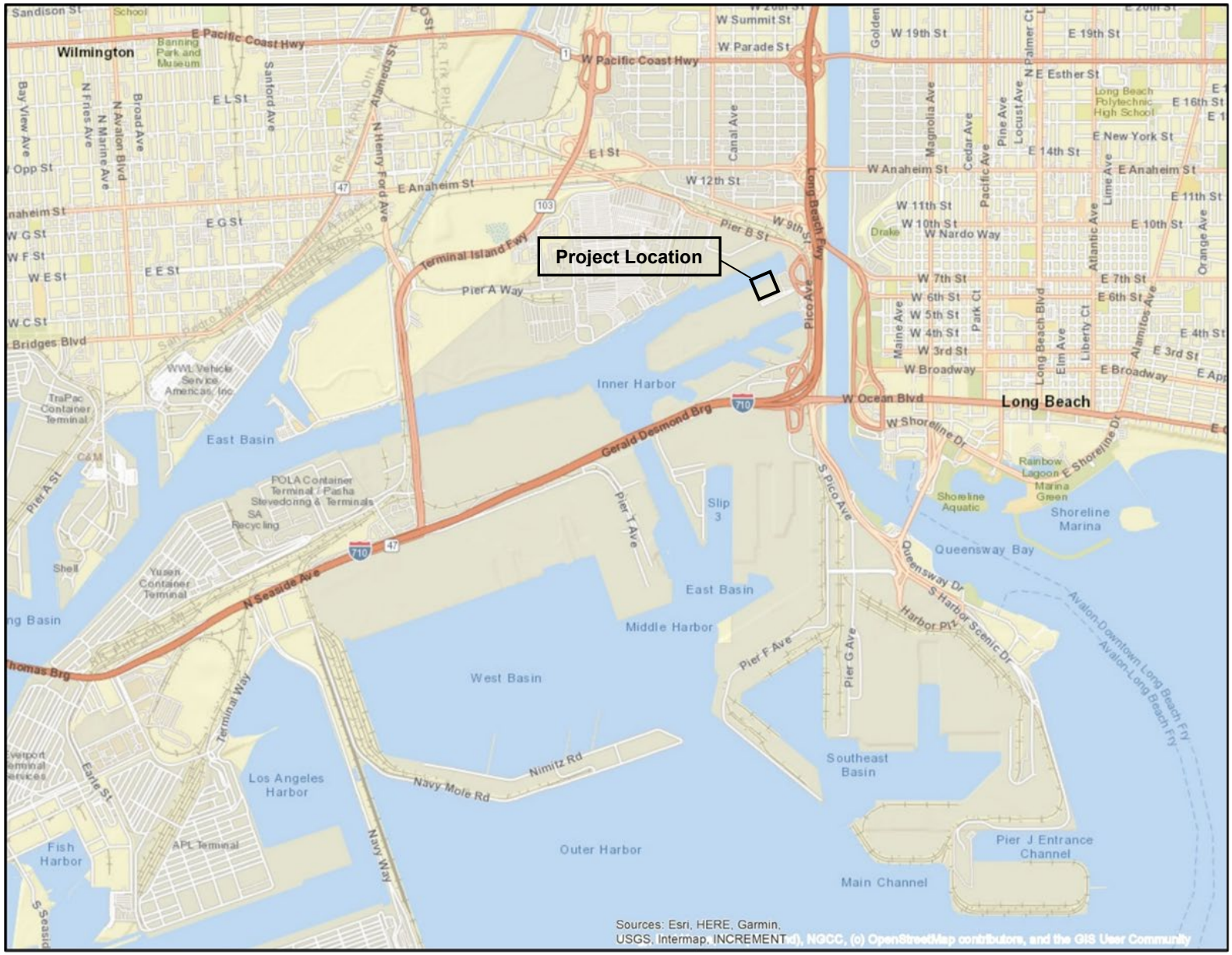
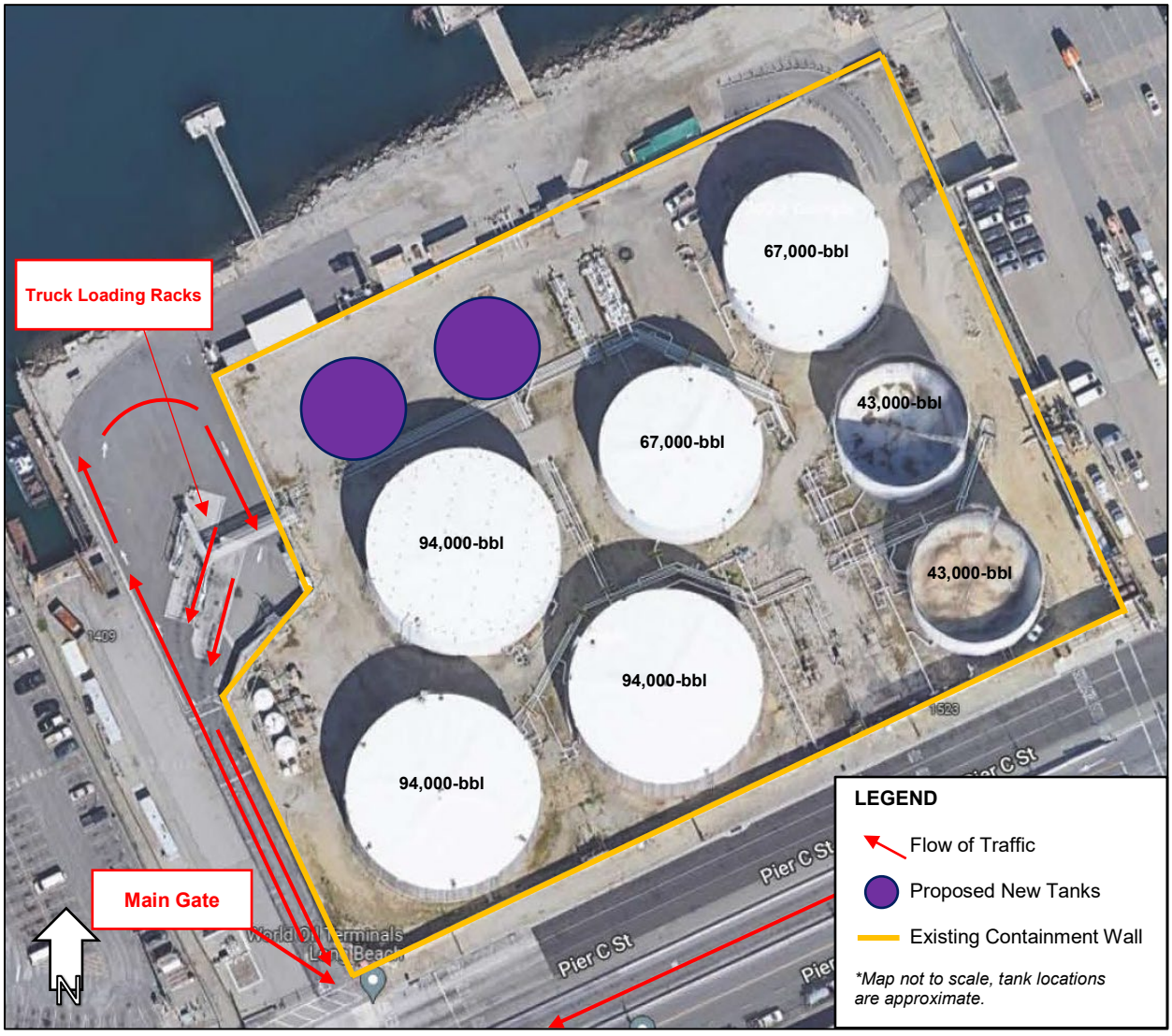


Figure ES-2. Project Site Plan – World Oil Tank Installation Project



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.

None of these alternatives meet the Project's main objectives or are infeasible due to site or operating constraints. Therefore, 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 (Impact AQ-1); 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 (Impact AQ-1).

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 (H_2S) 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).

Geology and Soils

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

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

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

While the Project site is underlain by expansive soils, the proposed Project would incorporate the recommendations of the site-specific 2018 updated geotechnical update report including placement of compacted sand beneath the proposed tanks; installation of a ground improvement system and 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 (Impact GEO-5).

Greenhouse Gas Emissions

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

The Project's construction GHG emissions would not exceed the SCAQMD GHG emissions significance threshold. Therefore, the impact of the proposed Project's GHG emissions during construction would be less than significant (Impact GHG-1). During operations, GHG emissions would be generated during the transferring of materials between the two new storage tanks, the change in volume of truck traffic, increased use of the existing thermal oxidizer, and increased use of electricity at the site. The quantity of operational GHG emissions would not exceed the SCAQMD GHG emissions significance threshold, and this impact would be less than significant (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 (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 1.8 (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

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 conducted a courtesy call with interested tribes in October 2022.	Section 1.8 (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 1.8 (Environmental Resources Not Affected by the Proposed Project) Appendix B, Initial Study, Section 2-XVII (Transportation)
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 3.3 (Greenhouse Gas Emissions)
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 3.2 (Geology and Soils) Section 3.4 (Hazards and Hazardous Materials) Section 5 (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 1.8 (Environmental Resources Not Affected by the Proposed Project) Section 3.1 (Air Quality and Health Risk) Appendix B, Initial Study, Section 2-XVII (Transportation)

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

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. In this Draft 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
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	Significance Conclusion
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

1

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, which would replace two currently underutilized, larger tanks that store petroleum oil products transported to and from World Oil Refining in South Gate. Two existing tanks 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. From 1964 to 1983, Powerine also leased approximately 2.5 acres of Port-owned property immediately to the east of the Powerine-owned property (not part of the Project site), 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.

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.

Figure 1-1. Existing Tanks

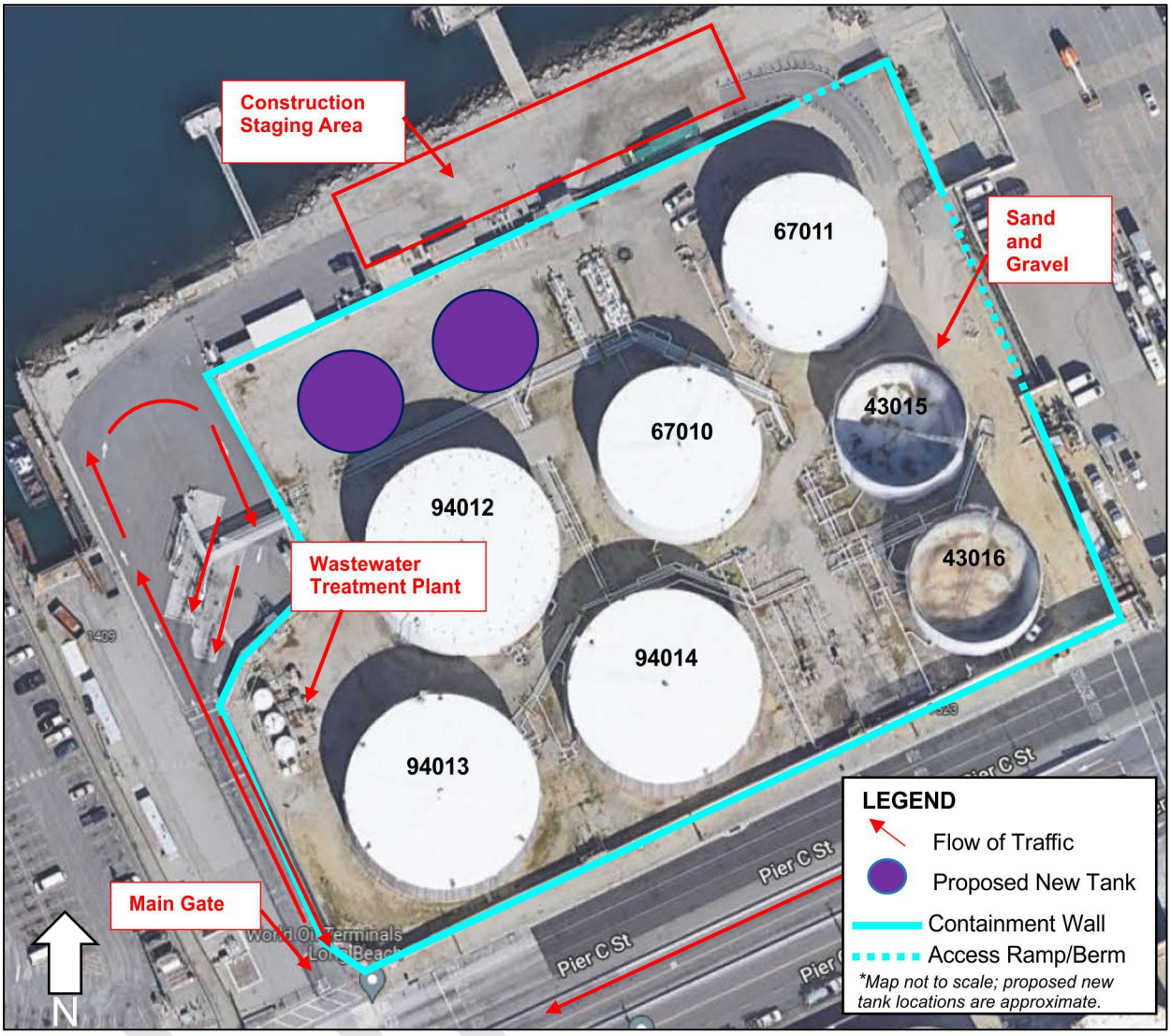
While World Oil Corp., the parent company to Ribost and Lunday-Thagard Company dba World Oil Refining (World Oil Refining), primarily recycles oil-based waste including used motor oil, antifreeze, and oily wastewater into motor oil, marine diesel fuel, new antifreeze, and paving and roofing asphalt blending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

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. 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

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



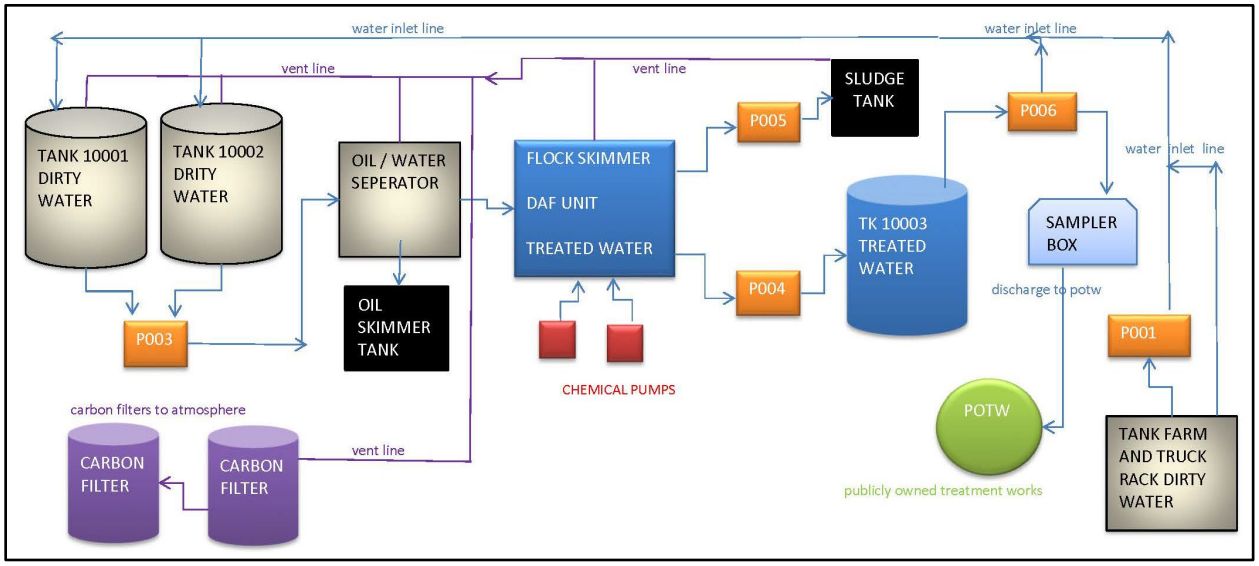
Existing tanks allocated to the Ribost Terminal (Tanks 43015, 43016, and 67011, as shown in Figure 1-2) store crude oil that is transmitted to and from the tanks by a dedicated receive-only pipeline and daily on-road transport truck trips to and from the terminal to World Oil Refining located in South 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

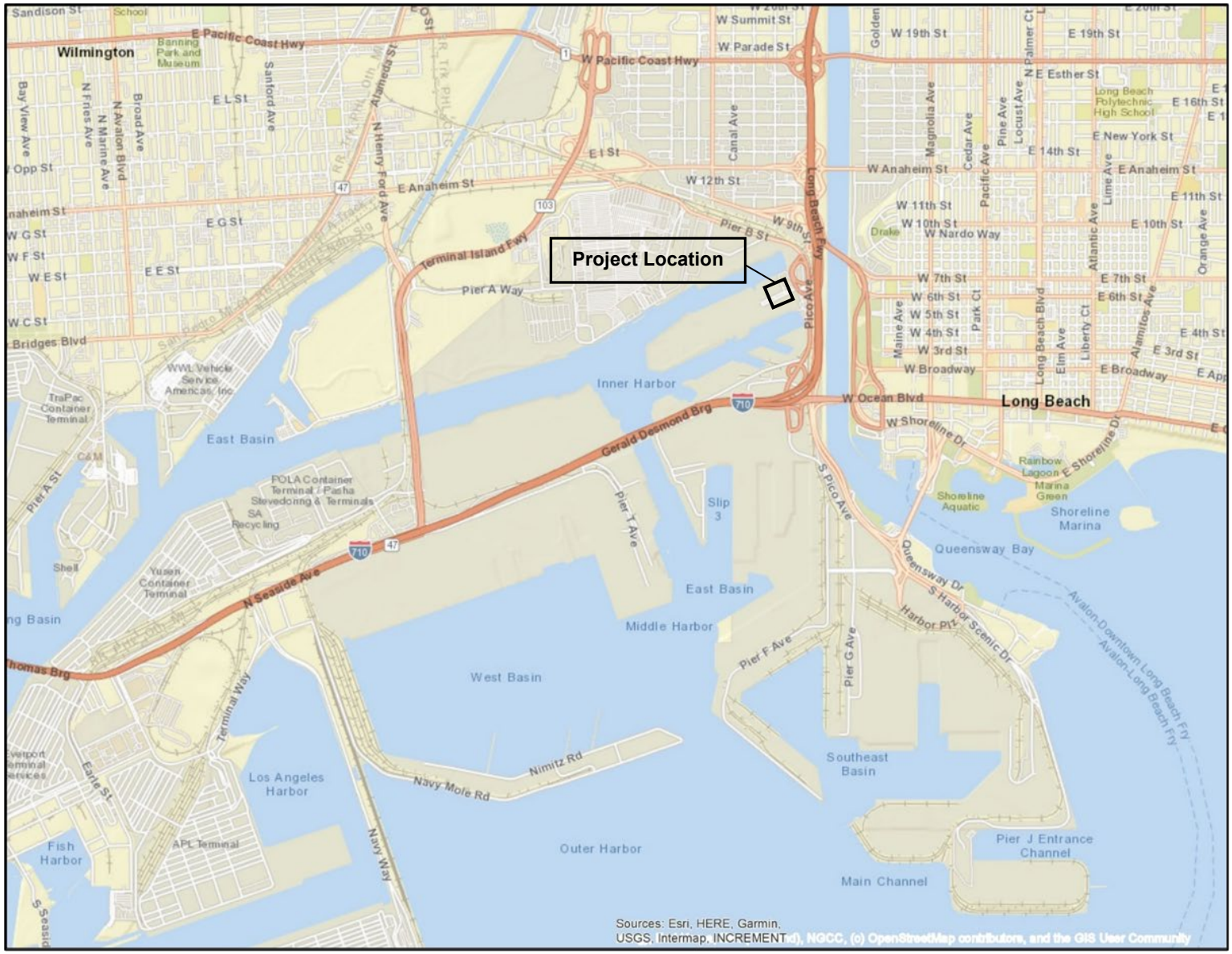
The objectives of the proposed Project are to:

- 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.

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 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

	Average Truck Count		Barrels	
2017-2022	**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)?

Four 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
- Agriculture and Forestry Resources
- Biological Resources
- Cultural Resources
- Energy
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- 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.

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 Stormwater 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	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 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.

Figure 2-1. Location of Related and Cumulative Projects

Note: See table 2-1 for corresponding projects

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 Transmis-sion Tower Replace-ment 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 north-ern portion of the site. The project would include 74 detached single-family condominium units, 99 attached townhouse units, and 53 attached condomi-nium 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.

No. in Figure	Project Title / Location	Project Description	Project Status
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.
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 northbound 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.

No. in Figure	Project Title / Location	Project Description	Project Status
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.
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.

No. in Figure	Project Title / Location	Project Description	Project Status
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.
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 cul-de-sacs, 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.

No. in Figure	Project Title / Location	Project Description	Project Status
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.
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.	Final Negative Declaration adopted December 2014. Currently under construction.

No. in Figure	Project Title / Location	Project Description	Project Status
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.

Water Quality Control Plan – Los Angeles River Basin

The Water Quality Control Plan for the Los Angeles River Basin (Region 4) was adopted by the RWQCB in 1978 and updated in 1994. The plan designates beneficial uses of the water resources of the basin and describes water quality objectives, implementation plans, and surveillance 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 basic objectives of the Project but would avoid or substantially lessen any significant environmental impacts. The EIR should compare merits of the alternatives and determine an environmentally superior alternative.

Section 1.6 of this EIR sets forth potential alternatives to the proposed Project and describes detailed requirements to evaluate alternatives, as specified by CEQA Guidelines (Section 15126.6). As previously indicated, the impacts of each alternative are discussed within Sections 3.1 through 3.5 with a comparison of the proposed Project and the alternatives provided in 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 (O_3), particulate matter less than 10 microns in diameter (PM10), particulate matter less than 2.5 microns in diameter (PM2.5), carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2). Of the pollutants of concern, ozone isa secondary pollutant, formed from emissions of precursor pollutants, volatile organic compounds (VOC) and nitrogen oxides (NOx), that react in the presence of sunlight to form O_3. 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, O_3 impacts are indirectly addressed by comparing Project-generated emissions of VOC and NOx 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 (PM10)	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 (PM2.5)	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 pm	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_2S)	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/m^3 = micrograms per cubic meter; "—" = no standard.

The USEPA, CARB, and local air districts classify an area as attainment, unclassified, or nonattainment 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
PM10	Nonattainment	Attainment/Maintenance
PM2.5	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 (H_2S) is produced during the decay of organic material and is also

found naturally in petroleum and natural gas. H_2S 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 H_2S 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 H_2S 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.

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 NOx emissions, while building on measures in place from previous AQMPs to reduce ozone and PM2.5 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 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.)
- **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 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. Rule 1178 applies to any petroleum facility that emits more than 20 tons per year of VOC in any emission inventory year. The emissions from the Project site occur at quantities that are below the applicability threshold of this rule. Therefore, SCAQMD Rule 1178 does not apply to the proposed Project.
- **SCAQMD Rule 1180, Refinery Fenceline and Community Air Monitoring.** This amended rule and companion Proposed Rule 1180.1 under development would apply to refineries and operations contiguous to refineries. The Project site is not contiguous to a refinery. Therefore, Rule 1180 does not apply to the proposed Project. (SCAQMD is considering proposed amendments in 2023.)
- **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. Currently, the Ribost Terminal is not subject to Rule 1178 because it does not and has not 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. Because the site is not a subject facility, the requirements of Rule 1178 are not applicable to Ribost Terminal's existing and proposed new storage tanks.
- **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, NOx, and SOx, as compared to 2005 conditions:

- By 2014, reduce port-related emissions by 22 percent for NOx, 93 percent for SOx and 72 percent for DPM.
- By 2023, reduce port-related emissions by 59 percent for NOx, 93 percent for SOx 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.

Impact AQ-3: Construction would result in substantial offsite ambient air pollutant concentrations 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 (H_2S) 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.

Impact AQ-8: Operation would result in substantial offsite ambient air pollutant concentrations 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 H_2S odor threshold of 8 ppb.

Table 3.1-5. Mass Daily Emissions Significance Thresholds

Activity	VOC (lb/day)	NOx (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (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	NOx (lb/day)	CO (lb/day)	PM10 (lb/day)	PM2.5 (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 EMFAC202121 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.

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. 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.

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**
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 (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, and 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 ($\mu g/m^3$). For emissions up to 148 pounds of DPM during the construction period, annual average concentration would be 0.007 $\mu g/m^3$ of DPM at the residential receptors of maximum impact, and the concentration would be approximately 0.2 $\mu g/m^3$ 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, and the localized health risk impact of construction emissions would be less than significant.

Mitigation Measures

No mitigation would be required.

Significance of Impacts after Mitigation

The Project construction impact of TACs including DPM emissions is less than significant.

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 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. Two existing tanks from Ribost's dedicated paving/roofing asphalt refinery service would be removed from 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
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, and this impact 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, and the impact of Project operations to off-site concentrations of criteria air pollutants 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 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 H_2S 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 H_2S 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 H_2S, which has a rotten egg odor that most people find offensive. Odor from H_2S 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 H_2S 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 H_2S (CARB, 2023).

The SCAQMD staff provided emission calculations to estimate H_2S 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 H_2S, the SCAQMD determined H_2S 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 H_2S facility-wide.

The SCAQMD evaluated the Project H_2S emissions increase for each tank against the OEHHA odor threshold (8 parts per billion [ppb]) that is more stringent than the CAAQS for H_2S of 0.03 ppm (30 ppb, 42 µg/m^3). The maximum modeled H_2S 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 H_2S would be unlikely to affect a substantial number of people because offsite H_2S concentrations would be substantially lower than the odor thresholds for H_2S.

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 H_2S 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 H_2S, there is little to no potential for any substance other than H_2S 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)

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 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: Off-site ambient air pollutant concentrations 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 application 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 H_2S, 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 underlaying 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.

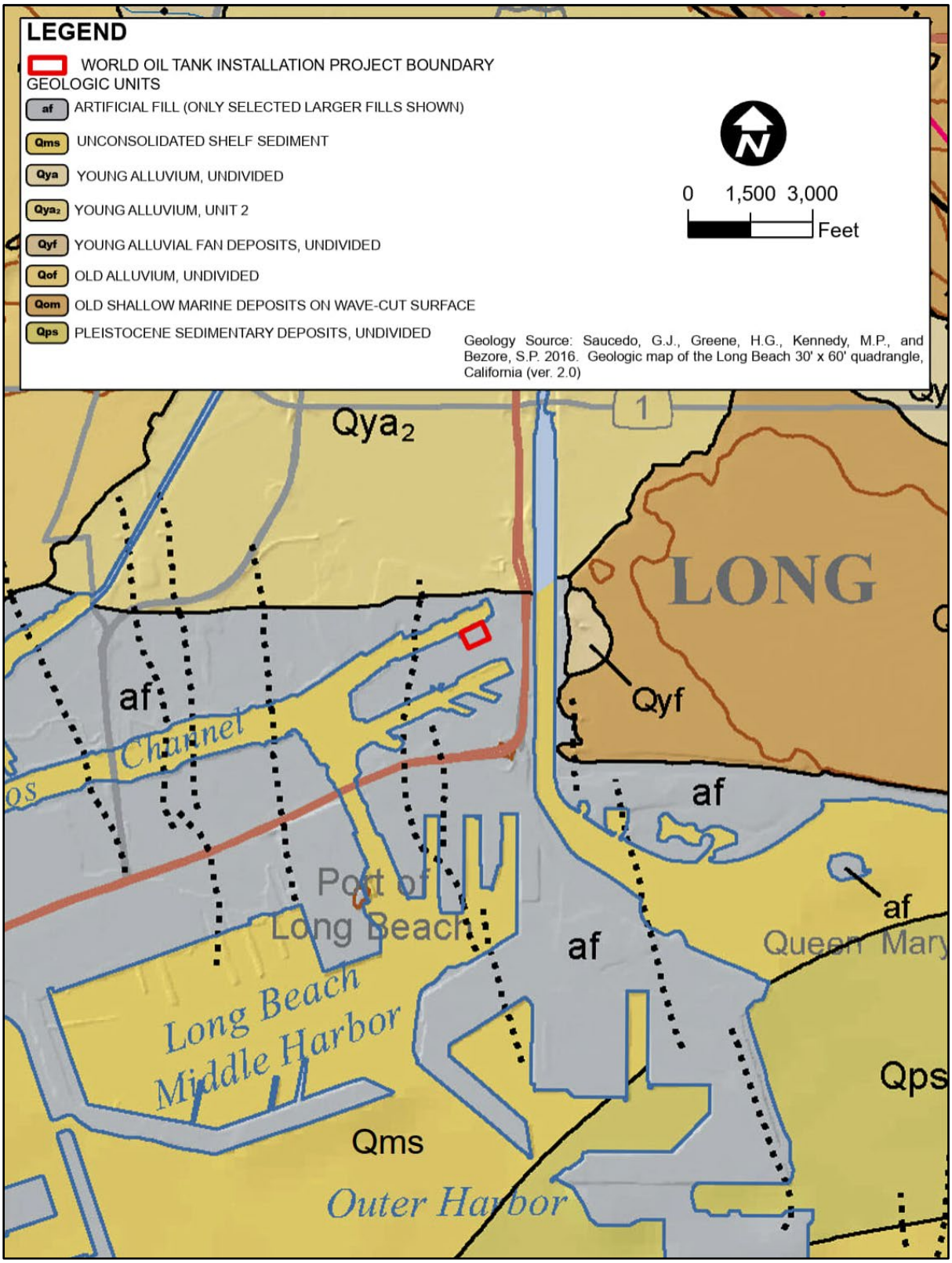
Young alluvial fan deposits (Qyf). Young alluvial fan deposits consist of Holocene and late Pleistocene poorly consolidated and poorly sorted clay, sand, gravel, and cobble alluvial fan and valley deposits.

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.

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

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

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

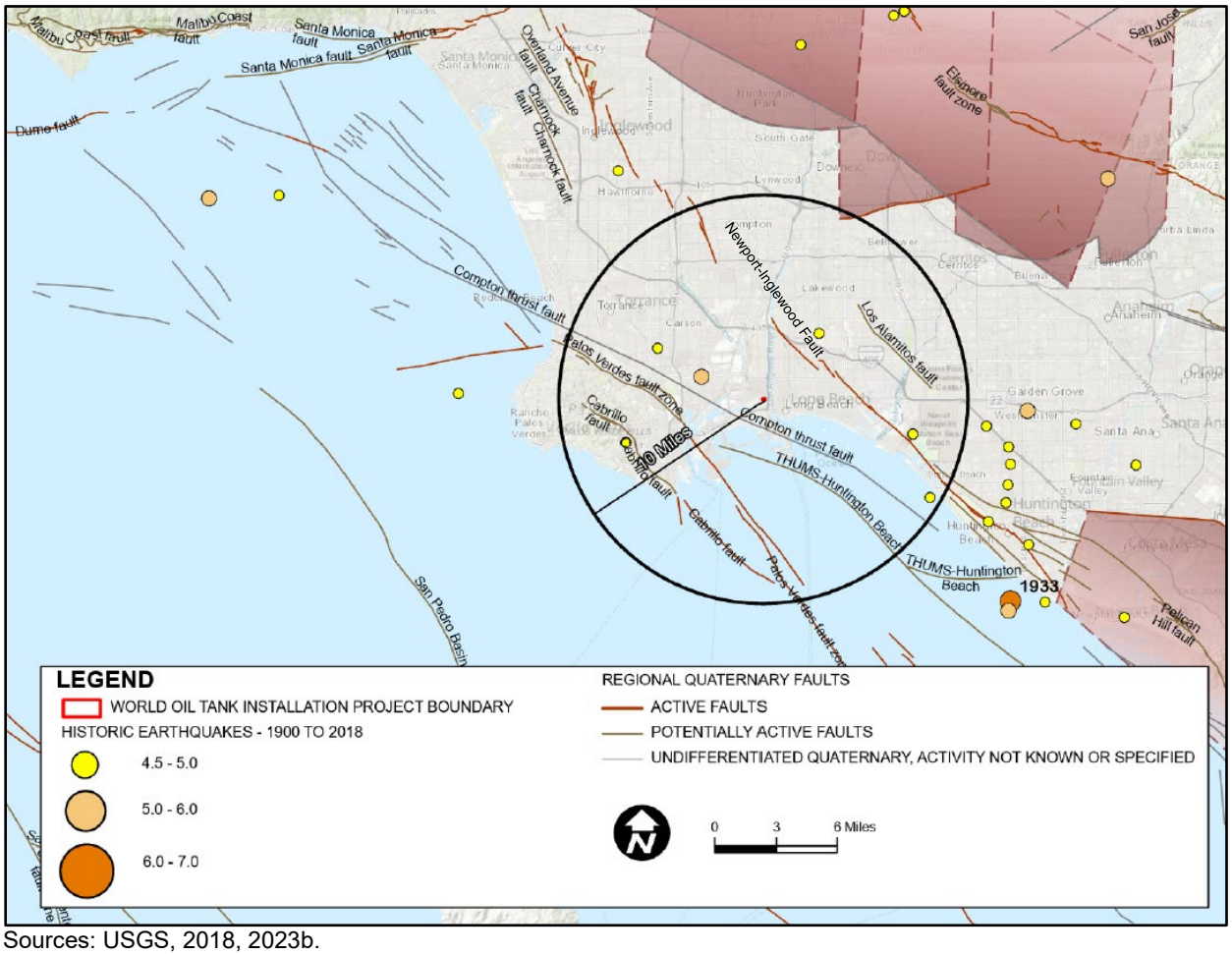
Local faults near the Project site include the Compton thrust fault and THUMS-Huntington Beach fault, located 1.3 and 2.8 miles south, respectively (USGS, 2023b). The Wilmington blind thrust fault is located 2.6 miles south of the Project site and underlies the POLB (Wolfe et. al, 2019). The Cabrillo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

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

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 Wilmington blind thrust fault is potentially active and capable of a Mw 6.3 to M 6.4 earthquake (Wolfe et. al, 2019). The Cabrillo fault is presumed to be related to the Palos Verdes fault (USGS, 1998). The Cabrillo fault is potentially active and capable of a Mw 6.0 to M 6.8 earthquake (SCEDC, 2023).

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

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/sec^2).

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.

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 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. 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 oror 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 are 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 (CO_2), methane (CH_4), and nitrous oxide (N_2O). Examples of GHGs emitted through human activities alone include fluorinated gases and sulfur hexafluoride (SF_6). 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, CO_2 levels are approximately 40 percent higher than the highest levels estimated for the 800,000 years preceding the industrial revolution, as determined from CO_2 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: CO_2, CH_4, N_2O, hydrofluorocarbons (HFC), perfluorocarbons (PFC), and SF_6. Of these, CO_2, CH_4, and N_2O are products of combustion and the GHGs of interest in this analysis; HFC, PFC, and SF_6 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 PM2.5 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-CO_2 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 (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. 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 (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. 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 (MTCO2e)	Annual GHG Emissions (MTCO2e/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 (CH_4) 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 CH_4. Partially processed crude oil would contain little to no methane because CH_4 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 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 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 hydrotested. 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.

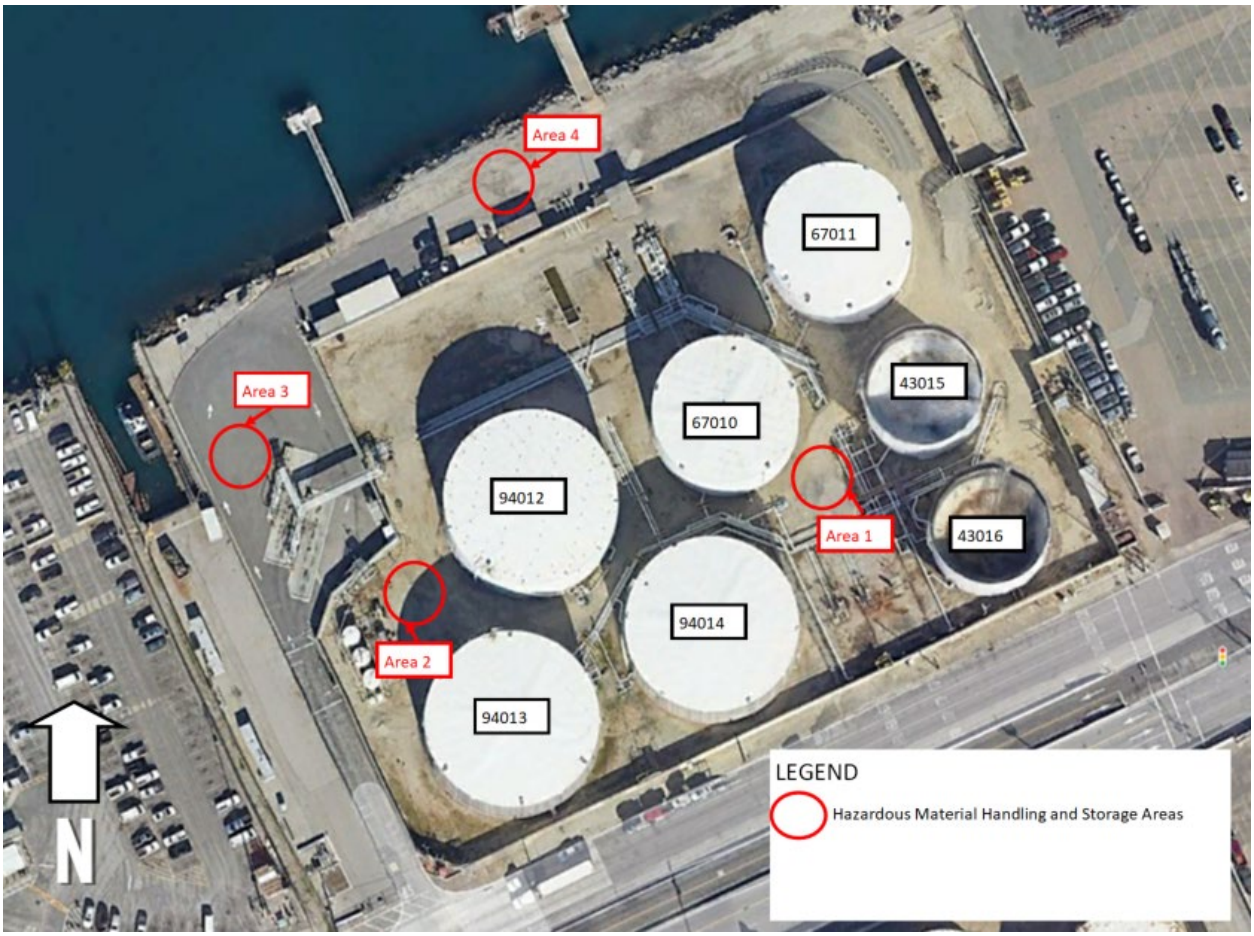
From 2017 through 2022, materials stored in the seven tanks has varied. Table 3.4-1 provides materials stored in the seven existing tanks from 2017 through 2022.

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 work-place 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, Aboveground 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. 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 signification 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 4-11-03[1]) 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.

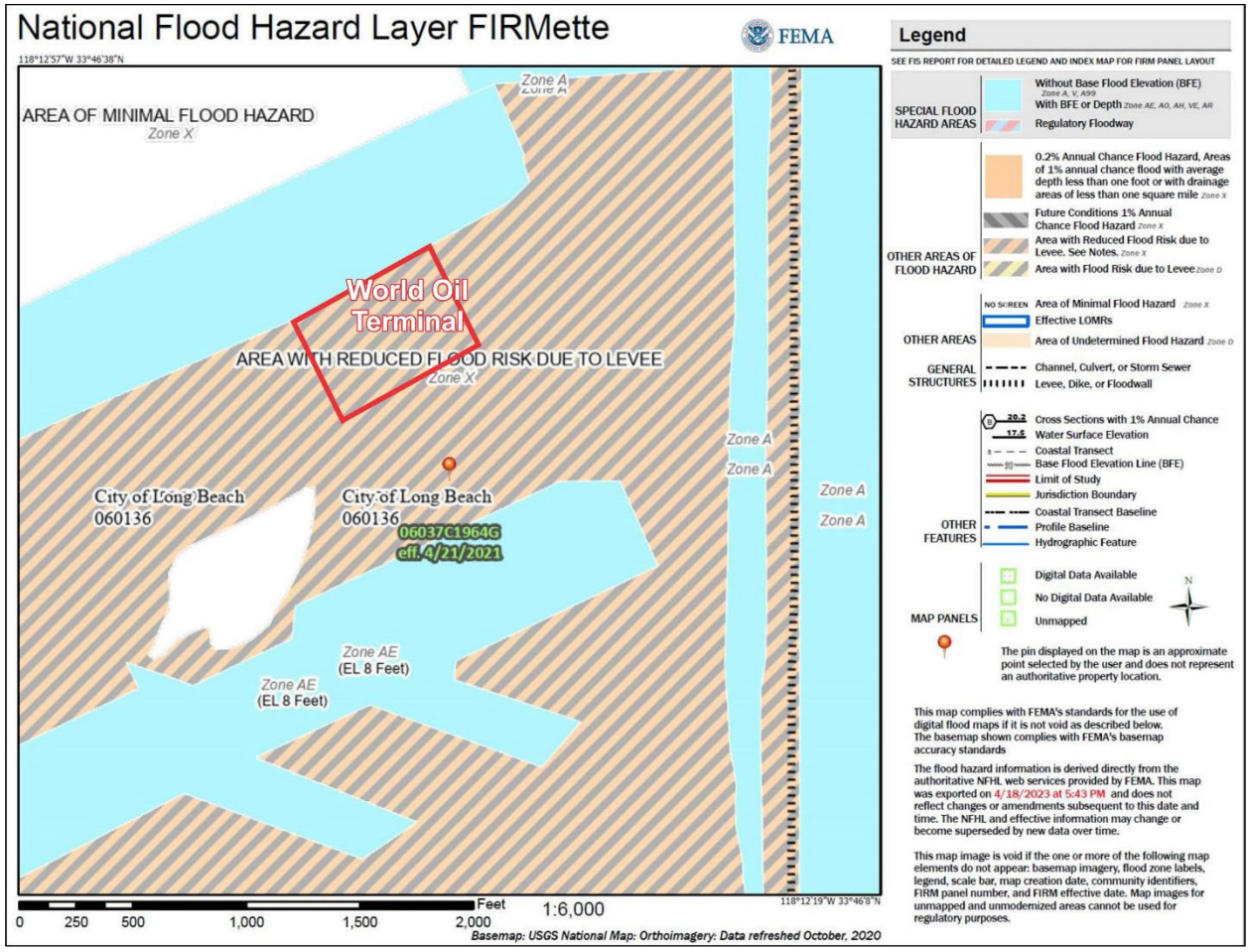
Compliance with the TMDL for metals, bioaccumulative compounds, and PAHs is based on achieving the load and waste load allocations and/or demonstrating attainment of the SQOs. Compliance requires the elimination of toxic pollutants being loaded into Dominguez Channel and the harbors, and cleanup of contaminated 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.

Figure 3.5-1. FEMA Flood Insurance Rate Map



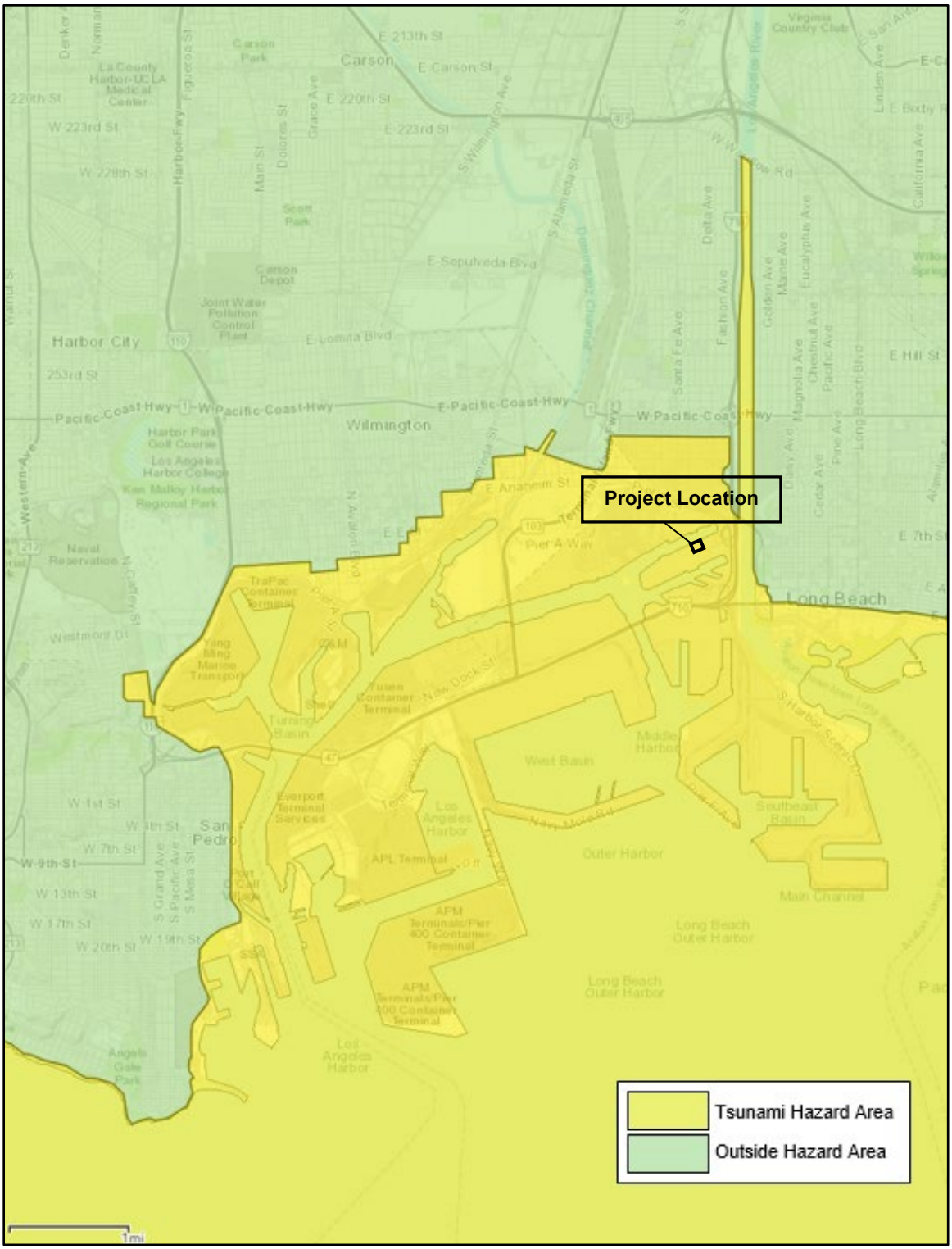
Source: FEMA, 2021.

Tsunamis

A tsunami is a series of waves in a waterbody caused by the displacement of a large volume of water, such as by an earthquake, volcanic eruption, or landslide (Uslu et al., 2010). Historically, large tsunamis have not been common in the Project area or vicinity, and few incidents have been recorded. A 2007 flood model assessment evaluated several tsunami scenarios (Moffatt and Nichol, 2007). At the POLB, the maximum water levels did not exceed deck elevations in berths. According to the California Geological Survey's *Tsunami Inundation Map for Emergency Planning, Long Beach Quadrangle*, the Project site is located within a tsunami inundation area (CGS, 2009). Due to the Project's location adjacent to the ocean, the Project site is vulnerable to tsunamis generated off the coast of California. The California Geological Survey Tsunami Hazard Area Map for the County of Los Angeles shows that the POLB is within the tsunami hazard area (see Figure 3.5-2) (State of California, 2021). A Most recently, the Hunga Tonga eruption on January 15, 2022 resulted in a tsunami that caused surges that reached up to 2.5 feet above

predicted tide levels throughout the day along the California coast (NOAA, 2022). The Tonga tsunami was the first to flood on land in California since 1964. No measurable effects were seen in the Project area.

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
	Upper limit of "likely range" (~17% probability SLR exceeds…)	*1-in-200 chance (0.5% probability SLR exceeds…)*	*Single scenario (no associated probability)*
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)
2. Stormwater management program
3. Planning and land development program
4. Regional stormwater mitigation program
5. Construction program
6. Public agency activities program
7. Illicit connection/illicit discharge elimination program
8. Geographic characterization
9. Education/public information program
10. Annual reporting

Specifically, the MRP includes the following stormwater-related elements:

1. Stormwater monitoring
2. Mass emissions monitoring
3. Cooperative TMDL monitoring in the Los Angeles River and Los Cerritos Channel
4. BMPs effectiveness tracking for new development/re-developments
5. Multi-species aquatic toxicity testing
6. Toxicity identification and reduction evaluations
7. Annual assessment and reporting

The City of Long Beach must comply with specified receiving water limitations; discharge prohibitions; stormwater management, monitoring, and reporting; and special and standard provisions. As a part of the permit-required planning and land development program, the usage of Low Impact Development (LID) design principles and BMPs is required to improve or otherwise minimize adverse impacts to stormwater quality and hydrology.

Water Quality Control Plan, Los Angeles Region (Basin Plan)

The Basin Plan is designed to preserve and enhance water quality and to protect beneficial uses of regional waters (inland surface waters, groundwater, and coastal waters such as bays and estuaries) (LARWQCB, 2019). The Basin Plan designates beneficial uses of surface water and groundwater, such as contact recreation or municipal drinking water supply. The Basin Plan also establishes water quality objectives, which are defined as "the allowable limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area."

The Basin Plan specifies water quality objectives for a number of constituents/characteristics that could be affected by proposed projects or alternatives. These constituents include bioaccumulation, bio-stimulatory substances, chemical constituents, dissolved oxygen, oil and grease, pesticides, acidity (pH), PCBs, suspended solids, toxicity, and turbidity. With the exceptions of dissolved oxygen and pH, water quality objectives for most of these constituents are expressed as narrative rather than numerical limits. For example, the Basin Plan defines limits for chemical contaminants in terms of bioaccumulation, chemical constituents, pesticides, PCBs, and toxicity as follows:

- Toxic pollutants shall not be present at levels that bioaccumulate in aquatic life to levels that are harmful to aquatic life or human health.
- Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
- No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.
- All waters shall be maintained free of toxic substances in concentrations that are toxic to or produce detrimental physiological responses in human, plant, animal, or aquatic life.
- There shall be no chronic toxicity in ambient waters outside mixing zones.

The Basin Plan also specifies water quality objectives for other constituents, including ammonia, bacteria, total chlorine residual, and radioactive substances. These are not evaluated in this EIR because the proposed Project and its alternatives do not include any discharges or activities that would affect the water quality objectives for these parameters. A Basin Plan amendment 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 stormwater 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
- Flood
- Windstorm
- Tsunami
- Public Health
- Technological and Human-Caused Hazards
- Drought

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-yer 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 ground-water 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 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 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 50 years aligning with the 2080 timeframe discussed above. 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 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.

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 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. 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 within this timeframe: Toyota Facility Improvements Project, Piers G and J Terminal Redevelopment Project, Berth 163-164 [Nustar-Valero] Marine Oil Terminal Wharf Improvements Project, and Berths 167-169 (Shell) Marine Oil Terminal Wharf Improvements Project.

Projects and activities that are on hold, or where the construction schedules are anticipated to begin after completion of construction of the proposed Project, are for the purpose of this analysis, not considered to contribute to cumulative hydrology and water quality impacts.

Thus, the scenario for determining cumulative construction impacts considers the Toyota Facility Improvements Project, Piers G and J Terminal Redevelopment Project, Berth 163-164 [Nustar-Valero] Marine Oil Terminal Wharf Improvements Project, and Berths 167-169 (Shell) Marine Oil Terminal Wharf Improvements Project in conjunction with the proposed Project.

3.5.7.4. Impacts and Mitigation Measures

The proposed Project would not directly contribute to cumulative impacts to hydrology, water quality, and sea-level rise because it would have no or negligible increase in impacts compared to existing conditions, and because it is within a contained site protected by an existing containment wall. Although risks associated with coastal disaster are projected to increase over time with sea-level rise, the proposed Project is protected by the existing containment wall and air-driven pumps, which are expected to be fully protective to scenarios including an extreme sea-level rise scenario combined with a 100-year storm event. Therefore, the proposed Project's impacts to hydrology, water quality, and sea-level rise would not be cumulatively considerable in combination with other past, present, and foreseeable future projects.

3.5.8. Mitigation Monitoring Program

Because no mitigation measures would be required for this impact area, no mitigation monitoring 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

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

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 amount 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.

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. 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 have any significant impacts that could 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 55-1 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: 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

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.	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		
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. 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.	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.	There would be no construction as part of Alternative 1 and therefore no impacts. Impacts would not increase from existing conditions. The containment wall and air-driven pumps are sufficiently protective; impacts are less than significant.

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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.

CHAPTER 6. ORGANIZATIONS AND PERSONS CONSULTED

No organizations and/or persons were consulted in the preparation of this EIR, beyond those references identified in Chapter 8.

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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

Port of
LONG BEACH
THE PORT OF CHOICE

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

Port of
LONG BEACH
THE PORT OF CHOICE

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: _____ **Date:** 1/30/2023

Matthew Arms
Director of Environmental Planning

Port of LONG BEACH
THE PORT OF CHOICE

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: _____ **Fecha:** 1/30/2023

Matthew Arms
Director de Planificación Ambiental

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, 7 th 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=m1783 0079adecae1c72eca528d6dd0311 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

Advertising Order Confirmation

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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 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=m1783
0079adecae1c72eca528d6dd0311
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

Port of LONG BEACH
THE GREEN PORT

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.

Port of LONG BEACH
THE GREEN PORT

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.

World Oil Tank Installation Project

Harbor Development Permit Application #19-066

Jennifer Blanchard
Environmental Specialist

Public Comments

Comentarios Públicos

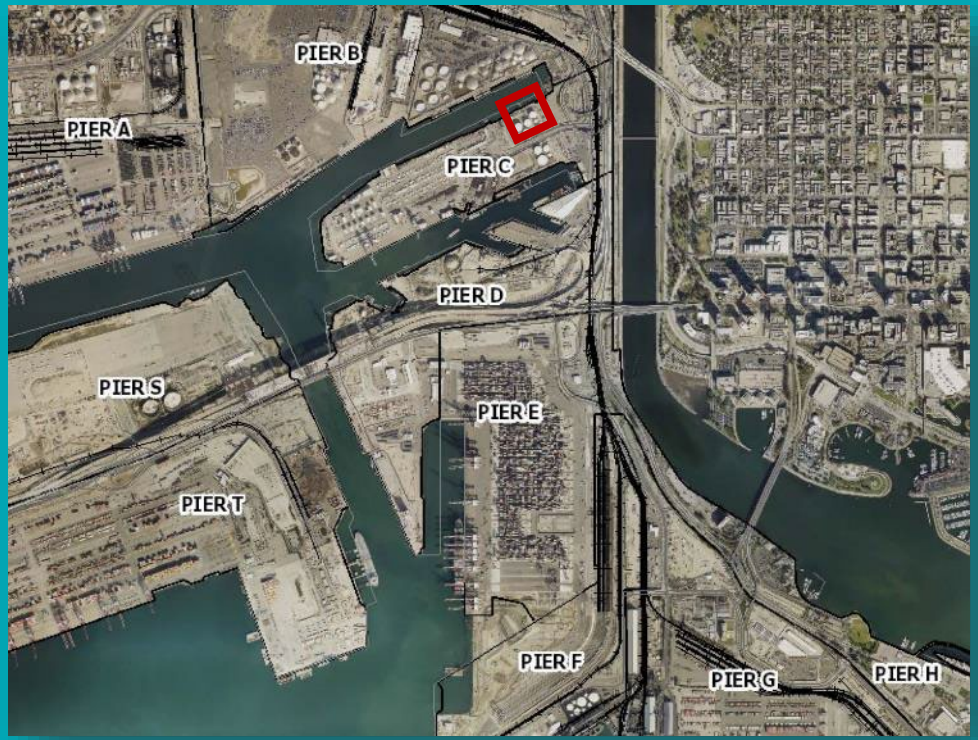
- If you would like to provide comment please submit a Speaker Card

  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

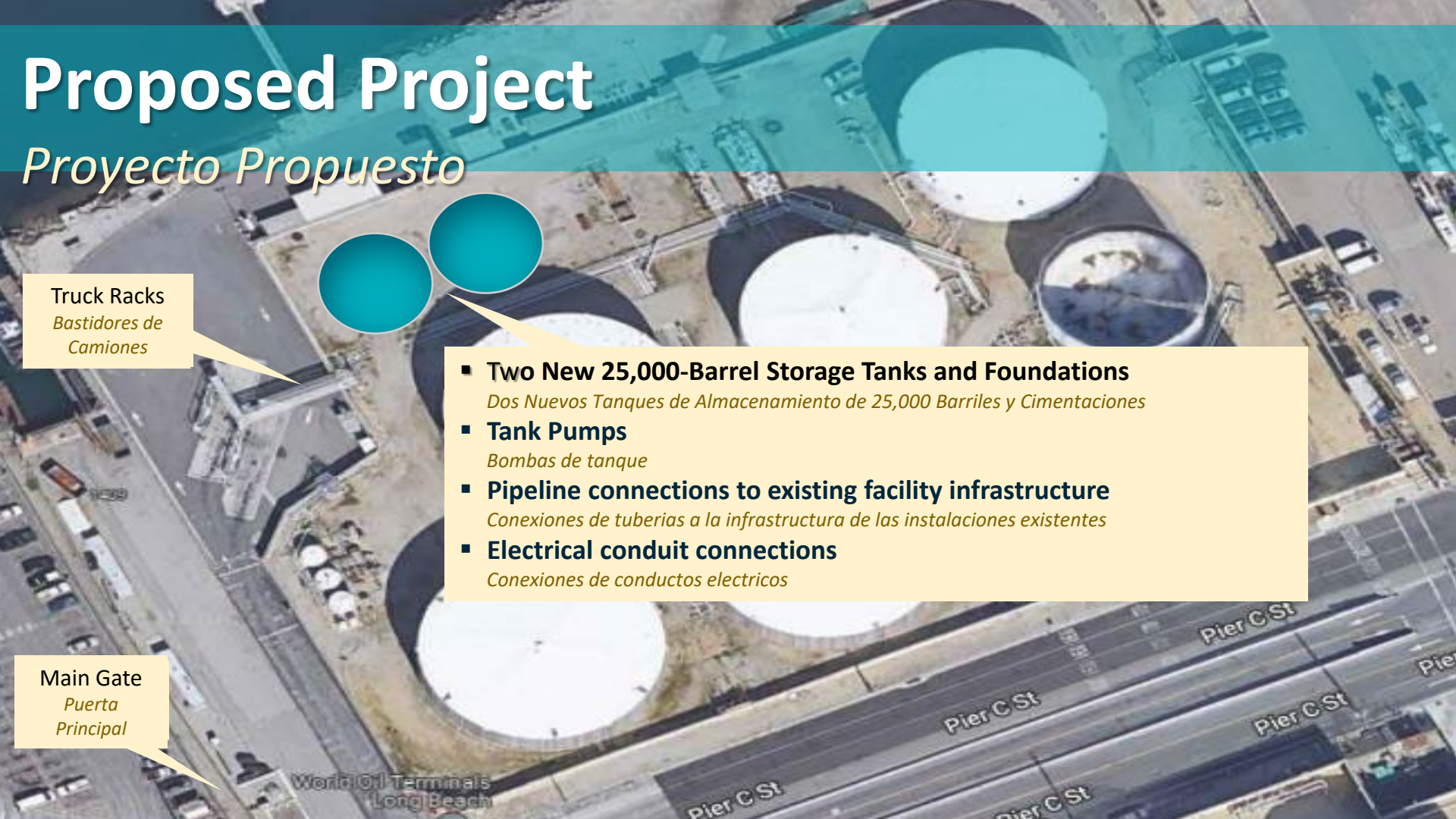
Localización del Proyecto



World Oil Tank Installation Project

Proposed Project

Proyecto Propuesto



- **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 tuberias a la infrastructura de las instalaciones existentes
- **Electrical conduit connections**
  Conexiones de conductos electricos

Project Objectives

Objetivos del Proyecto

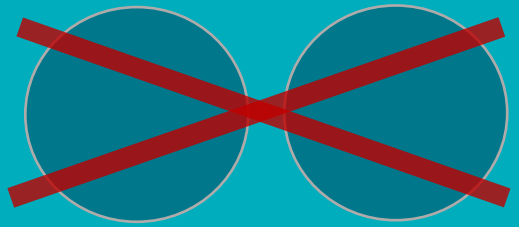
The two new 25,000-Barrel storage tanks would:

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
  Realinear 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.

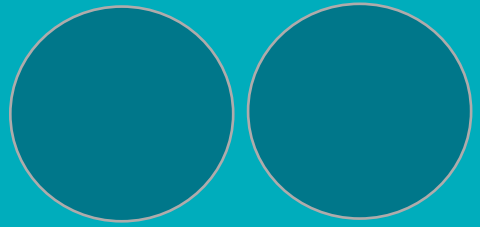
Project Alternatives

Alternativas de Proyecto



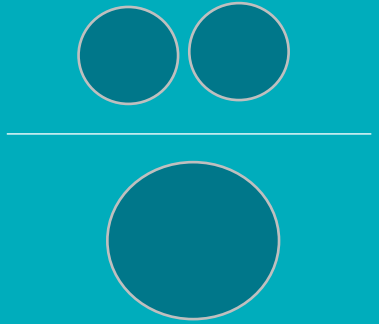
No Project

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 rieso para la salud

Geology & Soils
Geología y suelos

Greenhouse Gas Emissions *Gases de invernadero*

Hazards & Hazardous Materials
Peligros y materiales peligrosos

Hydrology & Water Quality *Hidrologia y calidad del agua*

Aesthetics
Estética
Agriculture & Forestry Resources
Recursos Agrícolas y Forestales
Bio**logical Resources**
Recursos Biologicos
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 Systemas de Servicio
Wildfire
Incendio Forestal

The CEQA Process

El Proceso de CEQA

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 traves 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

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.

Send comments to:

Enviar commentarios 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

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

STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

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

February 1, 2023

Jennifer Blanchard
Port of Long Beach
415 W. Ocean Blvd.
Long Beach, CA 90802

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:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. 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:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. 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:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. 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.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. 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)).

f. 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:

a. 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.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. 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

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 ½-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

The Chamber
Long Beach Area Chamber of Commerce

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,

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

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
>
> Port of LONG BEACH THE GREEN PORT
>
>
> **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

FUTUREPORTS

PO Box 15624
Long Beach CA 90815
office: 310.982.1323
email: info@futureports.org
www.futureports.org

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.

FUTUREPORTS

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

SOUTH BAY ASSOCIATION OF
CHAMBERS of COMMERCE

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.

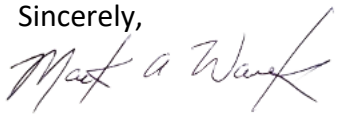
The project would install and operate two additional, new 25,000-barrel petroleum storage tanks to increase World Oil's oil storage capacity, thereby improving the Terminal's efficiency. Besides storage and efficiency benefits, the project will contribute to employment by maintaining existing jobs at 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,



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.

In conclusion, the Ribost Terminal Project represents a significant step forward for World Oil Recycling and its employees. It will contribute to a cleaner and more sustainable future and secure the jobs and livelihoods of those who have dedicated their careers to the company. As a united front, we urge our leaders to support this project and allow us to continue our long legacy of serving our community and the environment. With your support, we can turn our vision for a greener future into a reality.

Please print it legibly.

Print Name: Heriberto Cabrera	Signature:	Phone: (562) 413-2037
Zip Code: 90805	Email: ecabrera@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:	
Print Name:	Signature:	Phone
Zip Code:	Email:	

Include your email to stay up to date. We will never sell your contact information.

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.

In conclusion, the Ribost Terminal Project represents a significant step forward for World Oil Recycling and its employees. It will contribute to a cleaner and more sustainable future and secure the jobs and livelihoods of those who have dedicated their careers to the company. As a united front, we urge our leaders to support this project and allow us to continue our long legacy of serving our community and the environment. With your support, we can turn our vision for a greener future into a reality.

Please print it legibly.

Print Name: BILLY MALAGAMALI	Signature:	Phone 310-628-4244
Zip Code: 90745	Email: BMALAGAMALI@WORLDOILCORP.COM	
Print Name: Jeff Baxter	Signature:	Phone 7348461669
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Print Name:	Signature:	Phone
Zip Code:	Email:	
Print Name:	Signature:	Phone
Zip Code:	Email:	

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Please print it legibly.

Print Name: Christina Rubottom	Signature: C Rubottom	Phone 310/918-3624
Zip Code: 90731	Email: Christina.steffen@gmail.com	
Print Name: Thomas Heinz Dilenschneider	Signature: TMD	Phone 310-293-8834
Zip Code: 90755	Email: tmdilenschneider@worldoilcorp.com	
Print Name: DAN DAUER	Signature: Dan Dauer	Phone 3109622869
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Print Name: Mike Rike	Signature:	Phone 310 892 5584
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Print Name: John Hundley	Signature: JHundley	Phone 562 900 8809
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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	
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Print Name:	Signature:	Phone
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Please print it legibly.

Print Name: Pedro Espitia	Signature: [signature]	Phone 562-505-4183
Zip Code: 90806	Email: Pespitia@hotmail.com	
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Zip Code:	Email:	
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Please print it legibly.

Print Name: Ryan Fernandez	Signature:	Phone 310-863-5513
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Print Name:	Signature:	Phone
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Print Name:	Signature:	Phone
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Print Name:	Signature:	Phone
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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 Soto	Signature:	Phone 337) 280-8584
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Print Name: Jessie Lopez	Signature: Jessie Lopez	Phone (209)277-0657
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Please print it legibly.

Print Name: Sue Garwick	Signature: Sue Garwick	Phone 562-307-6313
Zip Code: 90802	Email: SGarwick@worldoil.corp.com	
Print Name:	Signature:	Phone
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Print Name:	Signature:	Phone
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Zip Code:	Email:	
Print Name:	Signature:	Phone
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Please print it legibly.

Print Name: Hogg III, Junior	Signature: Hogg III Jr.	Phone 310-466-3079
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:	
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

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

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

EARTHJUSTICE

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
Shana Emile, Senior Associate Attorney
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(213) 766-1070 & (206) 531-0759
oespino-padron@earthjustice.org
semile@earthjustice.org

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-privies 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

CC: Jennifer Blanchard Port of Long Beach Lead/Public Agency , 415 W. Ocean Blvd., Long Beach, CA 90802 ceqa@polb.com jennifer.blanchard@polb.com 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-privies 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

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 operation***s*** 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 and 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 replace, 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.

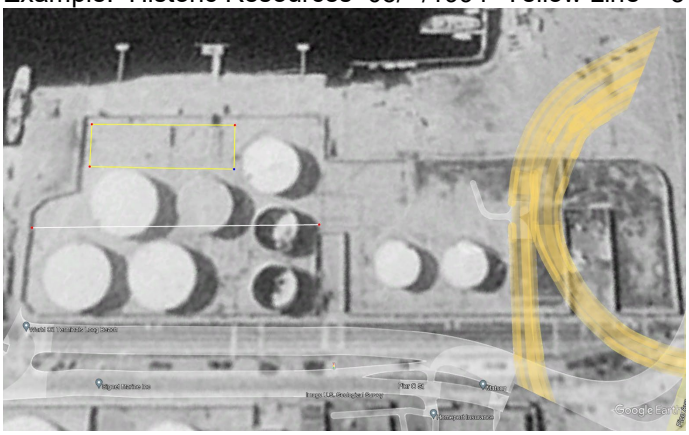
Provide documentation as to "not change" for the construction area north of the existing containment wall.

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+Magitude 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 **<u>final project design</u>** ***[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 wells 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, elsewise 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

Contents

Tables

Figures

Appendices

Acronyms and Abbreviations

AB	Assembly Bill
AQMP	Air Quality Management Plan
BACT	Best Available Control Technology
bbl	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
CNDDB	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.

Figure 1. Existing Tanks

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 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.

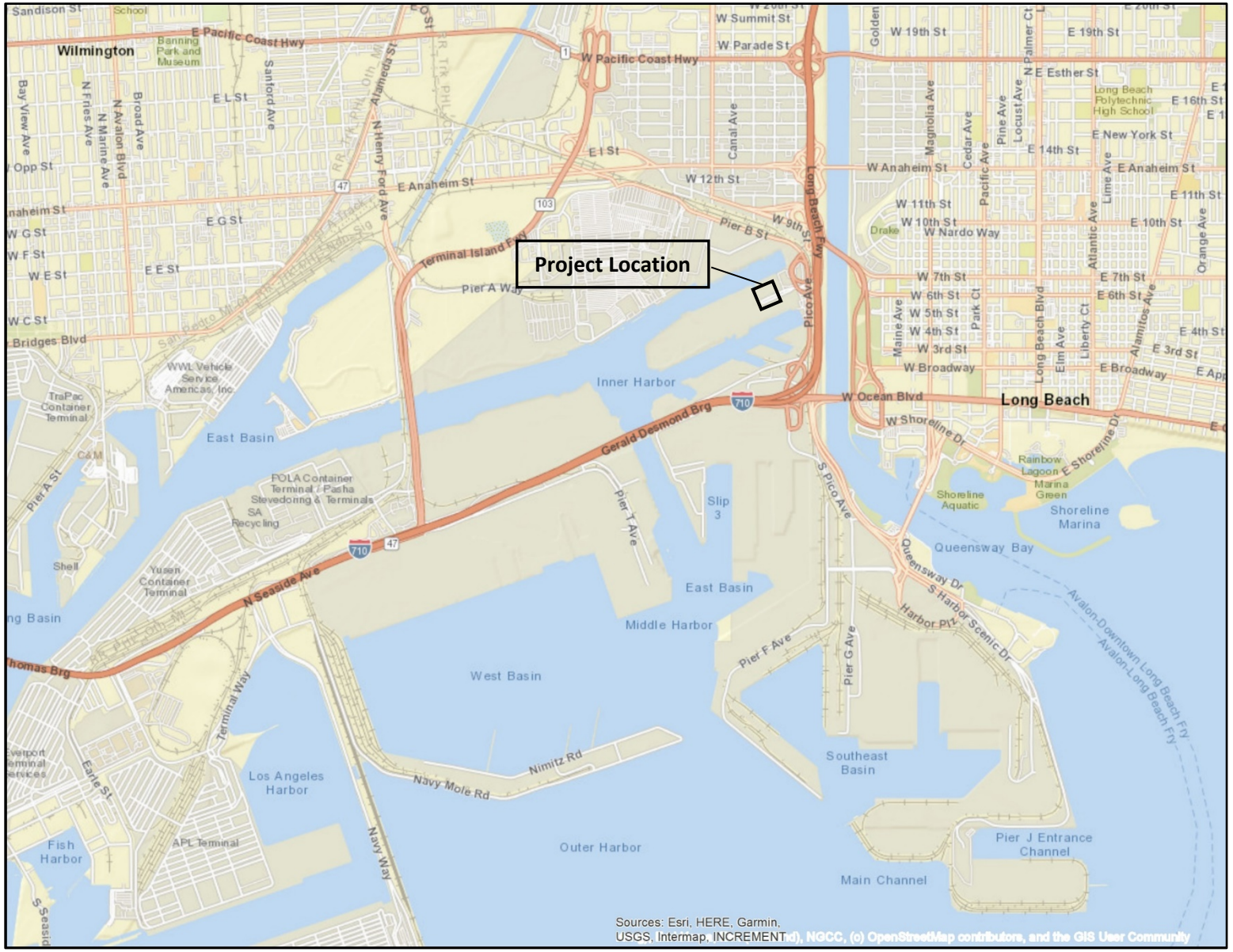


Figure 2. Project Vicinity – World Oil Terminal Tank Installation Project

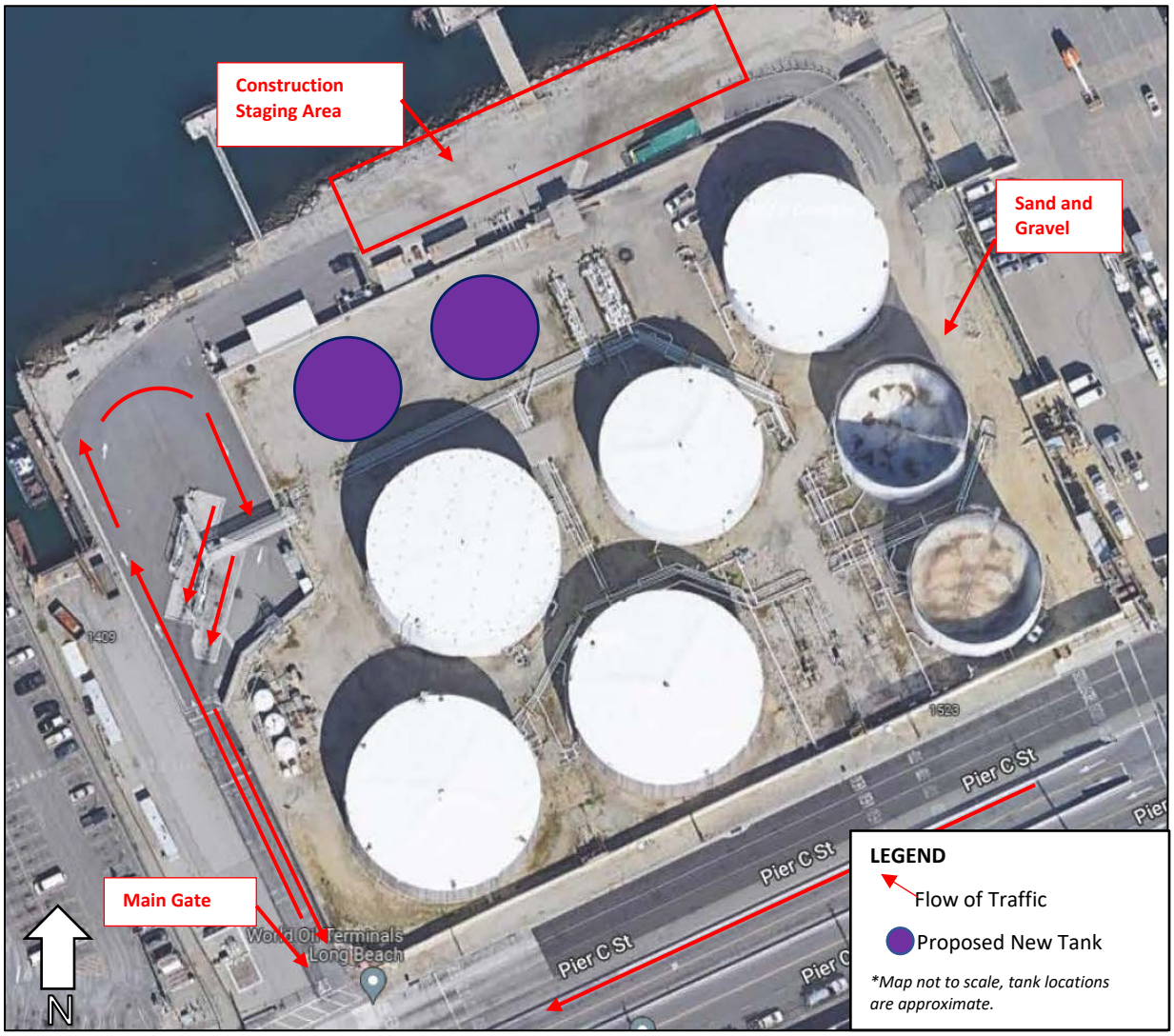


Figure 3. Project Site Plan – World Oil Tank Installation Project

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)	Shifts[1]	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

[1]Five-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).

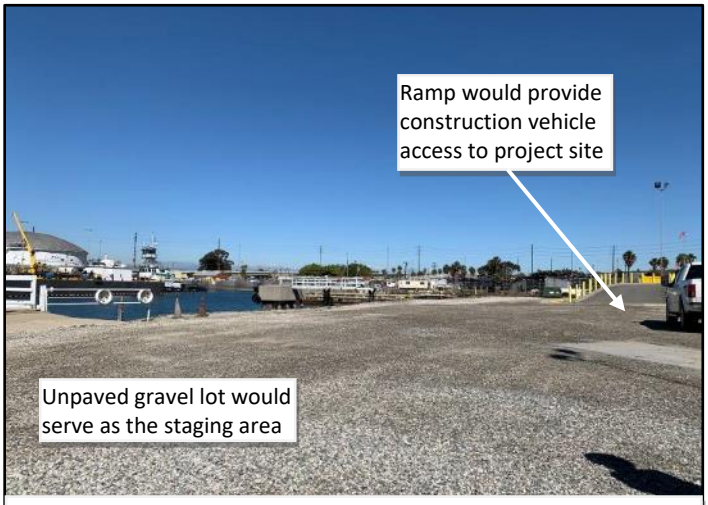


Figure 6. Staging Area

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

Word 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.

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

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?	☐	☐	☐	☒
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☐	☐	☒
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?	☐	☐	☒	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

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?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
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))?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Significance criteria established by CEQA Guidelines, Appendix G.

Discussion

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

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

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

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

NO IMPACT. As discussed in Section 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?	☐	☐	☒	☐
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?	☒	☐	☐	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☒	☐	☐	☐

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 H_2S 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 H_2S emissions associated with crude oil, and the truck loading rack fuel oil would include a mixture of substances with distinct odors; H_2S 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 H_2S.

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?	☐	☐	☒	☐
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
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?	☐	☐	☐	☒

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 (*Columbia 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, polices, regulations or by the CDFW or the USFWS (USFWS, 2019a; 2019b). Eelgrass beds (*Zostera marina*), a special aquatic site (vegetated shallows) pursuant to the Clean Water Act and a Habitat Area of Particular Concern (HAPC), a subset of Essential Fish Habitat (EFH), are located in the Inner Harbor/Back Channel, approximately 1 mile from the Project area, and in the Cerritos Channel, approximately 1.5 miles from the Project area (MBC and Merkel & Associates, 2016). Kelp beds (*Laminariales* ssp.), another marine HAPC, are also present within the various harbors and basins at the POLB and Port of Los Angeles. The nearest kelp bed is approximately 2.5 miles south of the Project area in West Basin (MBC and Merkel & Associates, 2016). 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?	☐	☐	☐	☒
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☐	☒

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?	☐	☐	☒	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

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.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?*	☐	☐	☒	☐
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?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

*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?	☒	☐	☐	☐
b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

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?	☒	☐	☐	☐
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?	☒	☐	☐	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
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?	☐	☐	☒	☐
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?	☐	☐	☐	☒
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

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?	☐	☐	☒	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
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:	☐	☐	☒	☐
(i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
(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	☐	☐	☒	☐
(iv) impede or redirect flood flows?	☐	☐	☒	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☒	☐	☐	☐
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

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?	☐	☐	☒	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
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?	☐	☐	☐	☒

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)?	☐	☐	☐	☒
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

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?	☐	☐	☒	☐
b. Police protection?	☐	☐	☐	☒
c. Schools?	☐	☐	☐	☒
d. Parks?	☐	☐	☐	☒
e. Other public facilities?	☐	☐	☐	☒

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 of 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

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?	☐	☐	☒	☐
b. Conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)?	☐	☐	☒	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d. Result in inadequate emergency access?	☐	☐	☒	☐

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	☐	☐	☐	☒
(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.	☐	☐	☐	☒

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?	☐	☐	☒	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

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?	☐	☐	☒	☐
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.)	☒	☐	☐	☐
c. Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

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

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3.2 Project Management and Document Production

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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 report	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	Pollutant Description	2021 Annual Emissions
95636	1,2,4TRIMEBENZE	0.277
91576	2-Methyl naphthalene [PAH, POM]	0.092
75070	Acetaldehyde	0.026
107028	Acrolein	0.015
191242	B[GHI] PERYLENE	0.009
7782505	Chlorine	0.002
218019	Chrysene	0.098
7440508	Copper	0.000
100414	ETHYL BENZENE	4.424
110543	HEXANE	0.257
108383	M-XYLENE	0.024
1634044	ME T-BUTYLETHER	0.010
7439965	Manganese	0.000
67561	Methanol	0.003
78933	Methyl ethyl ketone	0.000
85018	PHENANTHRENE	0.126
100425	Styrene	0.000
108883	Toluene	6.463
1330207	Xylenes	13.667
95476	o-Xylene	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 oill
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 oill
560143	G34229	43016 - 43k bbl	1,437.25	1,907.21	617.99	Crude oill
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

Proposed Project Emissions Increase	Daily Emissions (lb/day)									
	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										
Daily, Summer (Max)	2.29	21.2	26	0.05	0.83	1.07	1.84	0.76	0.25	1.01
Daily, Winter (Max)	1.88	16.8	22.9	0.04	0.66	1.08	1.73	0.6	0.26	0.85
Maximum	**2.29**	**21.20**	**26.00**	**0.05**	**0.83**	**1.08**	**1.84**	**0.76**	**0.26**	**1.01**

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	CO2e
	(ton/year)	(ton/year)	(ton/year)	(ton/year)	(ton/year)	(ton/year)	(ton/year)	(ton/year)	(ton/year)	(ton/year)	(MT/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	394
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**	**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)	VOC Tot (ton)
35.3	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

Proposed Project Emissions Increase	Daily Emissions (lb/day) ROG	NOx	CO	SO2	PM10 Exhaust	PM10 Dust	PM10 Total	PM2.5 Exhaust	PM2.5 Dust	PM2.5 Total
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	SO2	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

Operations GHG Emissions Increase	CO2e (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	CO2e (MT)	CO2e (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	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)
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	NOx	CO	SO2	PM10 Exhaust	PM10 Dust	PM10 Total	PM2.5 Exhaust	PM2.5 Dust	PM2.5 Total	CO2e
	(ton/year)	(ton/year)	(ton/year)	(ton/year)	(ton/year)	(ton/year)	(ton/year)	(ton/year)	(ton/year)	(ton/year)	(MT/year)
Coatings, Consumer Products, Area Sources	0.11	< 0.005	1.20E-01	< 0.005	< 0.005		< 0.005	< 0.005		< 0.005	4.40E-01
Energy, Electricity Use											11.3
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	195
Total	**0.11**	**0.24**	**0.20**	**0.00**	**0.00**	**0.05**	**0.06**	**0.00**	**0.01**	**0.02**	**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)		

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 equlires control to 5,000 ppmv per Rule 1149

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*

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

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

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 (ES6, 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 (ES6, 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 (ES7; ES8; ES13)

		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	CH4	N2O
53.06	0.001	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	
		ppm	µg/m^3
H_2S	34	0.03	42
Benzene	78.11	1.5	4,782
Toluene	92.14	7.6	28,582
Ethylbenzene	106.17	0.6	2,600
Xylene	106.16	0.73	3,163
Napthalene	128.17	0.038	199

Screening Level 1-hr Concentrations

For Receptor @ onsite 9.1 m

	Project (lb/hr)	1-hr Chi/Q	Project Impact (ppb)	Project Impact (µg/m^3)
Sulfur, as H_2S	0.0135	413	4.018	5.58
VOC, total	0.45	413	---	185.85

For Commercial Receptor @ 90 meters

	1-hr Chi/Q	Project Impact (ppb)	Project Impact (µg/m^3)
Sulfur, as H_2S	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_2S	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)				MEIW (POLB parcel boundary west of Project site)		
Construction, DPM		Cancer Risk		Chronic HI		Cancer Risk		Chronic HI
Total, Construction-Phase		1.16E-06		0.0013		4.11E-07		0.0308

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	Acute HI	Chronic HI		Cancer Risk	Acute HI	Chronic HI
Tank 1 + fugitives, speciated TAC		1.50E-07	0.000791	0.000693		2.32E-07	0.0162	0.013
Tank 2 + fugitives, speciated TAC		1.50E-07	0.000791	0.000693		2.32E-07	0.0162	0.013
Total, Operations		3.00E-07	0.0016	0.0014		4.64E-07	0.0324	0.0260
Sum, Construction + Operation		**1.46E-06**	**0.0016**	**0.0027**		**8.75E-07**	**0.0324**	**0.0568**

ATTACHMENT 2
SCAQMD Draft Engineering Evaluation (6-09-2021)

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND PERMITTING DIVISION Engineering Evaluation (DRAFT)	PAGES 13	PAGE 1
	APPL NO 627086-7	DATE 6-09-2021
	PROCESSED BY LD02	CHECKED BY

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.

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 NOVs, 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

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

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	

	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.

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 H2S	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):

MICRres = 1.50E-7
MICRcomm = 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)

Sulfur, as H2S	3% wt	0.00675 lb/hr

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 H_2S (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

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 $\mu g/m^3$ to ppm is converted as follows:

Concentration in ppm = (Concentration in $\mu g/m^3$)(0.02369)/MW of H2S,
where the MW H2S = 34 lb/lbm

Receptor Type	Distance from Source [meters]	Concentration [$\mu g/m^3$] @1 lb/hr	Concentration [$\mu g/m^3$] @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 OEHHA 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>	OEHHA 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

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.

(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

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.

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.

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

Table of Contents

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	—	—	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Threshol	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	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	—	< 0.005	—	2.67	2.67	< 0.005	< 0.005	—	2.68
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	0.19	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	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
Area	0.02	0.11	< 0.005	0.12	< 0.005	< 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	—	0.00	—	11.3	11.3	< 0.005	< 0.005	—	11.3
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	0.03	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

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

Demolitio	—	—	—	—	—	—	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	32.7	< 0.005	< 0.005	—	32.8
Demolitio n	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.41	5.41	< 0.005	< 0.005	—	5.43
Demolitio n	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.13	0.14	1.62	0.00	0.00	0.33	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	< 0.005	0.02	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	0.01	0.15	0.16	0.01	0.04	0.05	—	556	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	0.01	0.00	< 0.005	< 0.005	—	13.2	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	3.38	< 0.005	< 0.005	< 0.005	3.53

Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	21.3	21.3	< 0.005	< 0.005	0.02	22.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.18	2.18	< 0.005	< 0.005	< 0.005	2.21
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.56	0.56	< 0.005	< 0.005	< 0.005	0.58
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.53	3.53	< 0.005	< 0.005	< 0.005	3.71

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	—	0.11	0.10	—	0.10	—	678	678	0.03	0.01	—	681
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.47	0.61	< 0.005	0.02	—	0.02	0.02	—	0.02	—	112	112	< 0.005	< 0.005	—	113
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.13	1.95	0.00	0.00	0.33	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	< 0.005	0.02	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	0.01	0.15	0.16	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	0.00	0.33	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	< 0.005	0.02	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	0.01	0.15	0.16	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	0.15	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	0.03	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	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	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	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	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

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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.49	0.61	< 0.005	0.02	—	0.02	0.02	—	0.02	—	90.4	90.4	< 0.005	< 0.005	—	90.7
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.0	15.0	< 0.005	< 0.005	—	15.0
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.49	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	89.8	89.8	< 0.005	< 0.005	0.36	91.3
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.0	44.0	< 0.005	0.01	0.12	46.0
Hauling	0.02	< 0.005	0.34	0.13	< 0.005	0.01	0.07	0.08	< 0.005	0.02	0.02	—	281	281	0.02	0.05	0.65	296
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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	0.01	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	0.01	< 0.005	45.9
Hauling	0.02	< 0.005	0.36	0.13	< 0.005	0.01	0.07	0.08	< 0.005	0.02	0.02	—	281	281	0.02	0.05	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	0.02	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	0.01	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	0.01	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	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	0.88
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	0.01	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

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	0.39	0.33	3.30	2.95	0.01	0.13	—	0.13	0.12	—	0.12	—	815	815	0.03	0.01	—	818
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	0.07	0.06	0.60	0.54	< 0.005	0.02	—	0.02	0.02	—	0.02	—	135	135	0.01	< 0.005	—	135
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.13	1.95	0.00	0.00	0.33	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	< 0.005	0.02	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	0.01	0.15	0.16	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	0.00	0.33	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	< 0.005	0.02	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	0.01	0.15	0.16	0.01	0.04	0.05	—	556	556	0.03	0.09	0.03	583
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.61	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	123	123	0.01	< 0.005	0.22	125
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.6	31.6	< 0.005	< 0.005	0.04	33.0
Hauling	0.01	< 0.005	0.24	0.08	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	199	199	0.01	0.03	0.20	209
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	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	< 0.005	< 0.005	< 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	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.60	3.60	< 0.005	< 0.005	—	3.61
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	0.03	0.41	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	84.5	84.5	< 0.005	< 0.005	0.01	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	0.01	< 0.005	45.9
Hauling	0.02	< 0.005	0.36	0.13	< 0.005	0.01	0.07	0.08	< 0.005	0.02	0.02	—	281	281	0.02	0.05	0.02	295
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.41	5.41	< 0.005	< 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	—	2.78	2.78	< 0.005	< 0.005	< 0.005	2.90
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	17.7	17.7	< 0.005	< 0.005	0.02	18.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.90	0.90	< 0.005	< 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	—	0.46	0.46	< 0.005	< 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	—	2.94	2.94	< 0.005	< 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.02	0.02	< 0.005	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.44	0.44	< 0.005	< 0.005	—	0.44
Total	0.02	0.11	< 0.005	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.44	0.44	< 0.005	< 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	—	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

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

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	—	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

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)

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
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00

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)

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. 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 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. 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

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Heavy Industry	10.9	10.9	10.9	3,975	327	327	327	119,246

User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

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

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

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

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

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 ¾ 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

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 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.

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.

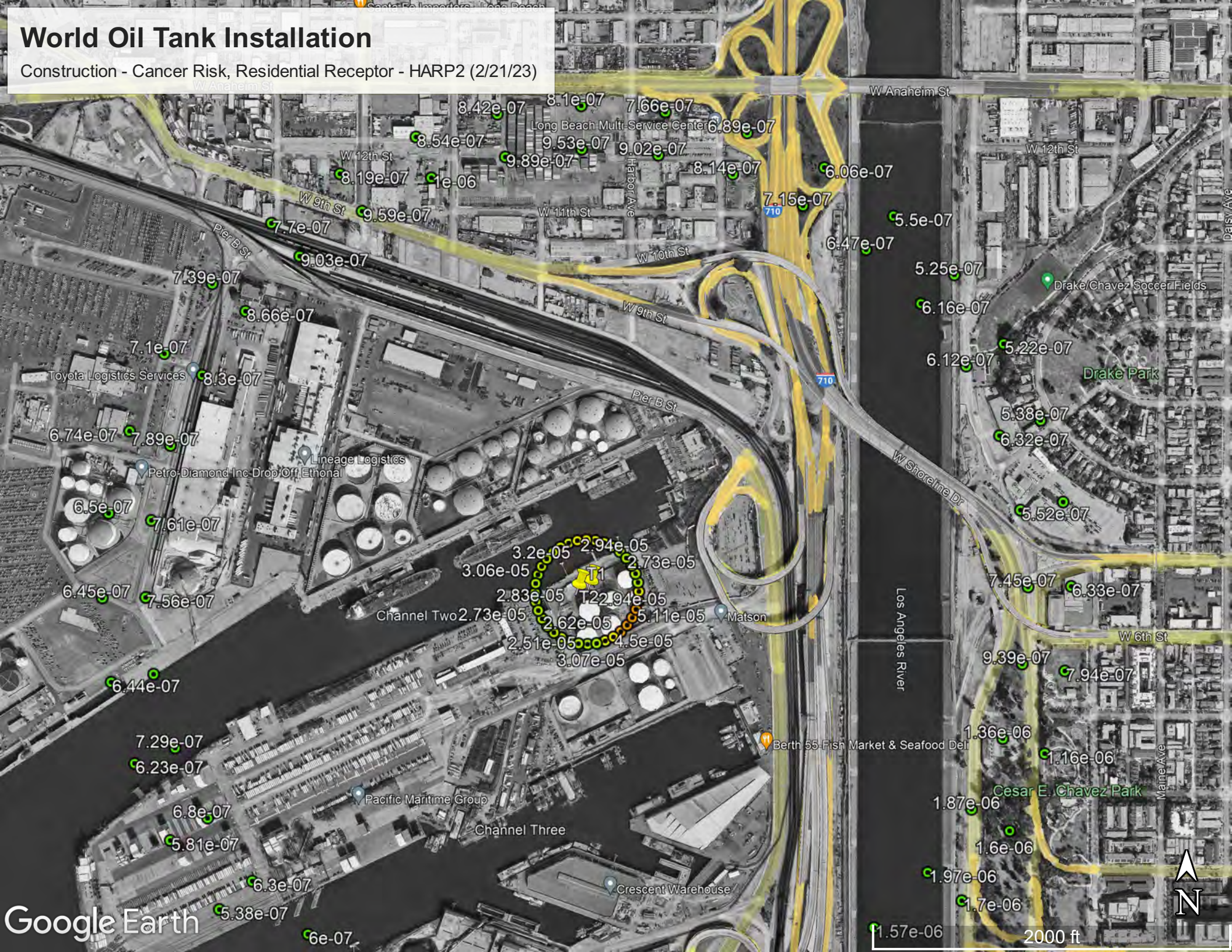
8. User Changes to Default Data

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)

World Oil Tank Installation

Construction - Chronic HI - HARP2 (2/21/23)