

Draft Negative Declaration/Application Summary Report World Oil Tank Installation Project Port of Long Beach

Prepared for:

Port of Long Beach
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October 2020



DRAFT NEGATIVE DECLARATION

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

and

APPLICATION SUMMARY REPORT

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

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

ISSUED FOR PUBLIC REVIEW: OCTOBER 7, 2020 – NOVEMBER 5, 2020

BY: DIRECTOR OF ENVIRONMENTAL PLANNING:



APPLICATION SUMMARY REPORT ADOPTED ON: _____

BY: CITY OF LONG BEACH BOARD OF HARBOR COMMISSIONERS

Application No. 19-066

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Acronyms and Abbreviations

AB	Assembly Bill
AQMP	Air Quality Management Plan
bbf	barrel
BMP	best management practice
CAAP	Clean Air Action Plan
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Division of Occupational Safety and Health
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCA	California Coastal Act
CCC	California Coastal Commission
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CGS	California Geological Survey
cm	centimeter
CO	carbon monoxide
CO ₂ e	carbon dioxide equivalent
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DOC	California Department of Conservation
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
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
I	Interstate
IP	Port-Related Industrial District
IS	Initial Study
JWPCP	Joint Water Pollution Control Plant
LACSD	Los Angeles County Sanitation District
LARWQCB	Los Angeles Regional Water Quality Control Board
LBFD	Long Beach Fire Department
LBMC	Long Beach Municipal Code

LBPB	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
Lmax	maximum noise level
Lmin	minimum noise level
LST	Localized Significance Threshold
µg	microgram
m ³	cubic meter
MBTA	Migratory Bird Treaty Act
mils	one-thousandth of an inch
MND	Mitigated Negative Declaration
MP	Port Manufacturing
MRZ	Mineral Resource Zone
MT	metric tons
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
OEHA	Office of Environmental Health Hazard Assessment
PM ₁₀	particulate matter 10 microns or less in diameter
PM _{2.5}	particulate matter 2.5 microns or less in diameter
PMP	Port Master Plan
POLB/Port	Port of Long Beach
PPV	peak particle velocity
RAP	rammed aggregate pier
RAST	Risk Assessment Standalone Tool
RCRA	Resource Conservation and Recovery Act
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
sec	second
SO _x	sulfur oxide
SR	State Route
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TSDF	treatment, storage, and disposal facilities
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VMT	vehicle miles travelled
VOC	volatile organic compound
WRD	Water Replenishment District of Southern California
X/Q	Chi/Q

Introduction to the Draft Negative Declaration and Application Summary Report

The proposed World Oil Tank Installation Project (proposed project) involves the construction and operation of two new 25,000-barrel (bbl) petroleum storage tanks at the Ribost Terminal. The new storage tanks would be connected to existing utilities, such as electrical lines and petroleum pipelines. The proposed project is located at the Port of Long Beach (POLB) within property privately-owned by Ribost Terminal LLC at 1405 Pier C Street, Long Beach, California. The Ribost Terminal is approximately 261,000 square feet (6 acres) and contains seven existing petroleum tanks. Of these seven tanks, two tanks have a capacity of approximately 43,000 bbl each, two have a capacity of approximately 67,000 bbl each, and three have a capacity of approximately 94,000 bbl each, for a total storage capacity of 502,000 bbl. While the proposed project would provide additional storage capacity of petroleum products for refining and distribution, the increased crude oil storage would ultimately provide for more efficient terminal operations by making more existing tanks available for lease by third-party vendors.

Following a preliminary review of the proposed project, POLB determined that it is subject to the guidelines and regulations of the California Environmental Quality Act (CEQA). The POLB has prepared a Draft Initial Study/Negative Declaration (IS/ND) and Application Summary Report for the proposed project and has circulated it for public review and comment from October 7, 2020 through November 5, 2020.

The Draft IS/ND concluded that the proposed project would not result in any significant effects on the environment and that no mitigation measures are required. Pursuant to CEQA Section 21091, State CEQA Guidelines 15105, California Coastal Act, and certified Port Master Plan, the public review period will include and invite Responsible Agencies, Trustee Agencies, interested agencies, organizations, and members of the public to submit written comments providing recommendations or clarifications for the proposed project. The public will have a 30-day review period to provide written comments on the proposed project. POLB will incorporate comments from the public and responses to comments in the Final IS/ND after the 30-day review period.

1. Introduction

1.1 Proposed Project Overview

Ribost Terminal LLC, DBA World Oil Terminals (World Oil) filed an Application for a Harbor Development Permit with the Port of Long Beach (POLB) on August 14, 2019, to construct and operate the World Oil Tank Installation Project (proposed project).

World Oil is proposing to construct and operate two new 25,000-barrel (bbl) petroleum storage tanks at the Ribost Terminal. The new storage tanks would be connected to existing utilities, such as electrical lines and petroleum pipelines. The proposed project is located at the POLB within existing property privately-owned by Ribost Terminal LLC at 1405 Pier C Street, Long Beach, California. The Ribost Terminal is approximately 261,000 square feet (6 acres) and contains seven existing petroleum tanks. Of these seven tanks, two tanks have a capacity of approximately 43,000 bbl each, two have a capacity of approximately 67,000 bbl each, and three have a capacity of approximately 94,000 bbl each, for a total storage capacity of 502,000 bbl. While the proposed project would provide additional storage capacity of petroleum products for refining and distribution, the increased crude oil storage would ultimately provide for more efficient terminal operations by making more existing tanks available for lease by third-party vendors.

1.2 Environmental Analysis

1.2.1 CEQA Process

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

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

The environmental documentation, which is ultimately approved and/or certified by the City in accordance with CEQA, is intended as an informational document undertaken to provide an environmental basis for subsequent discretionary actions upon the project. The resulting documentation is not, however, a policy document and its approval and/or certification neither presupposes nor mandates any actions on the part of those agencies from whom permits and other discretionary approvals would be required.

1.2.2 CEQA Lead Agency

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

1.2.3 Initial Study

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

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

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

The IS has been organized into the following sections:

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

2. Project Description

Ribost Terminal LLC, DBA World Oil Terminals (World Oil or applicant) proposes to construct the World Oil Tank Installation Project (proposed project), which would include the construction and operation of two new 25,000-barrel (bbl) petroleum storage tanks. The proposed project is located within the existing World Oil Terminal at the Port of Long Beach (POLB or Port), in Long Beach, California, which is privately-owned by Ribost Terminal LLC. Construction of these two new tanks would include new tank foundations and pipeline connections to existing facility infrastructure, such as the truck loading racks. The proposed project would provide additional storage capacity to increase the efficiency of terminal operations. The new tanks would supplant the terminal's existing tanks that provide crude oil to the World Oil Refinery in South Gate through the truck loading racks. The existing tanks would then be removed from dedicated refinery service and become available for lease to third-party vendors.

2.1 Project Title

World Oil Tank Installation Project

2.2 Lead Agency Name and Address

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

2.3 Lead Agency Contact Person and Phone Number

Jennifer Blanchard
Environmental Specialist Associate
(562) 283-7100

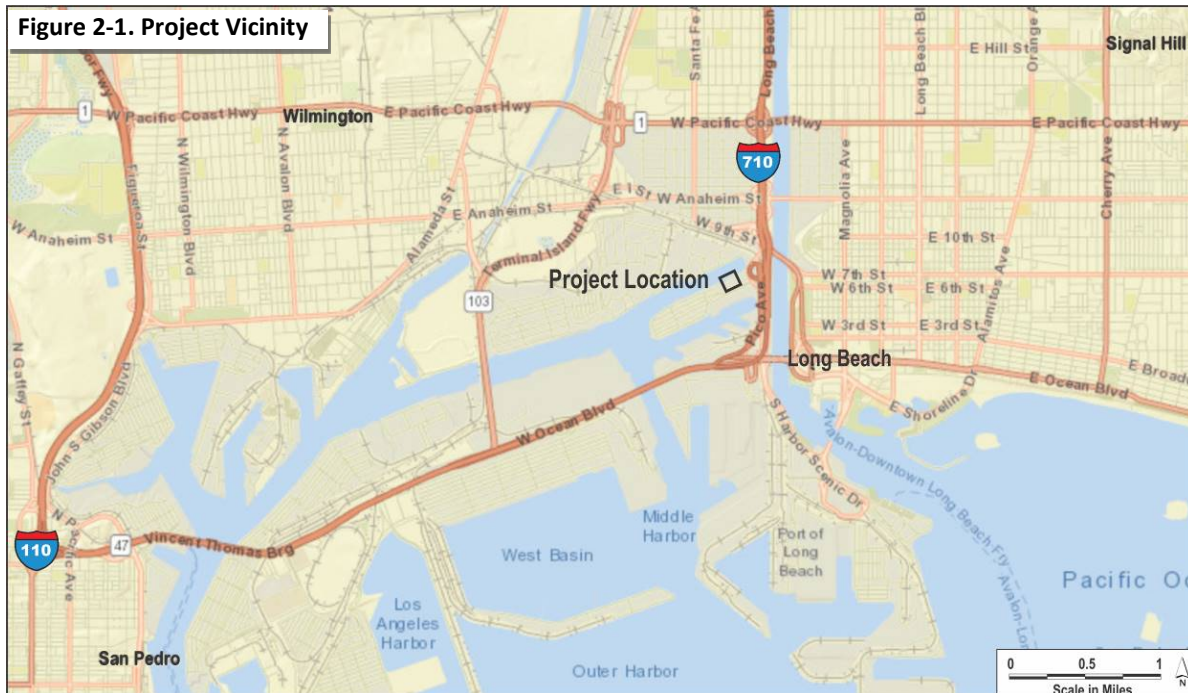
2.4 Project Location

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

2.5 Project Applicant's Name and Address

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

Figure 2-1. Project Vicinity



2.6 General Plan Designation

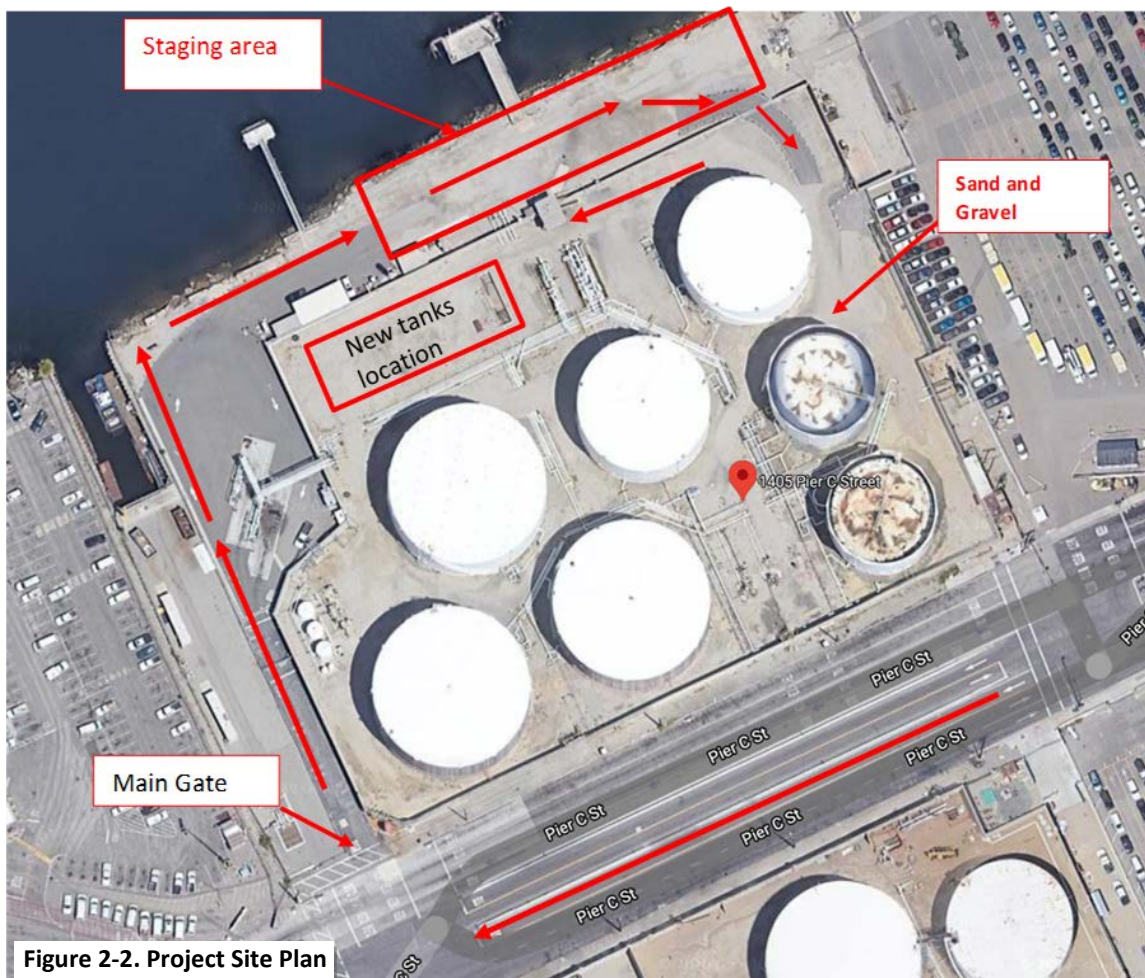
The City of Long Beach General Plan Land Use Element, adopted in 2019, designates the POLB as a Regional-Serving Facility “PlaceType,” which is defined as a flexible zoning type including “facilities, businesses and operations that not only serve the City of Long Beach, but also the region and parts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

2.7 Zoning

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

2.8 Surrounding Land Uses and Setting

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



2.9 Project Overview

The World Oil Terminal is approximately 261,000 square feet (6 acres) and contains seven existing petroleum tanks (see Figure 2-3). Of these seven tanks, two tanks have a capacity of approximately 43,000 bbl each, two have a capacity of approximately 67,000 bbl each, and three have a capacity of approximately 94,000 bbl each, for a total storage capacity of 502,000 bbl. Three tanks contain crude oil and serve the World Oil Refinery in South Gate through the terminal truck loading rack. The remaining four tanks are leased to Marathon Petroleum and Glencore and store fuel oil received and shipped via pipeline. The existing tanks are surrounded by an approximately 8-foot wide, 6-foot deep containment wall with 50-foot deep



Figure 2-3. Existing Tanks

foundations. The containment wall was designed to hold the largest tanks capacity plus a 100-year storm event. The new tanks would be located within the containment wall.

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

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

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

2.9.1 Project Objectives

The objectives of the proposed project are:

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

2.10 Project Construction

Prior to tank installation, the project site would be prepared according to the recommendations provided in the Albus-Keefe & Associates geotechnical update reports from 2018 (Albus-Keefe & Associates, Inc., 2018). Figure 2-4 shows the existing area where the tanks would be installed. All earthwork and grading would be performed in compliance with applicable requirements of California Division of Occupational Safety and Health (Cal/OSHA) and specifications of POLB's Grading Codes.



Figure 2-4. Project Site – View Looking West

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

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

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



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

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

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

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

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

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

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

Table 2-1. Construction Schedule and Personnel

Project Alternative/Construc tion Phase	Work Activity (subphase)	Start Date	End Date	No. Workdays	Shifts ¹	Workers Per Day
Phase 1	Excavation/Foundation	1/2/2021	5/8/2021	91	1/10	8
Phase 2	Tank Erection/Painting	4/25/2021	10/27/2021	134	1/10	8

¹Five-day work weeks

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

Table 2-2. Construction Equipment

Project Activity	Equipment Type	Estimated Number	Schedule (# of Days Equipment Operates)
Excavation	Bobcat	2	43
	Crane	1	43
	Skip Loader	1	43
	Flat Bed Truck	1	1
	Dump Truck	1	43
	Excavator	1	43
Foundation	Pile Driver	1	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 entrance to the World Oil Terminal property. The entrance is gated to provide security during project construction and operations. During the day shift, the operator, supervisor, and terminal manager are present on-site. During the night shift, one operator is present on-site. The unpaved area north of the control building would serve as an approximately 6,940-square-foot (770 square-yards) staging area for construction vehicles (see Figure 2-6).



Figure 2-6. Staging Area

2.11 Operations and Maintenance

Overall terminal operations include shipping and receiving of crude oil and fuel oils through pipeline and/or truck loading racks to and from onsite tanks, some of which are leased to third-party vendors.

These operations would remain similar once the proposed project is implemented. Once the two petroleum tanks are installed, anticipated operations would involve storage of crude oil and leasing of the existing tanks to third-party vendors. 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 trips to and from the terminal to the offsite World Oil Refinery located in South Gate, California. These operations would remain similar once the proposed project is implemented. Periodically, crude oil may be returned to the tanks by daily truck trips for refinery crude balancing. Table 2-3 displays the existing monthly and daily average loading rack truck count and barrels transported.

Table 2-3. Existing Loading Rack Truck Traffic

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

The newly leased tanks would primarily ship and receive fuel oils through either the two inbound and outbound Marathon Petroleum pipelines serving the Marathon Petroleum Carson Refinery and/or Marathon Petroleum pipeline and terminal assets; or the Glencore bidirectional pipeline serving the Glencore Long Beach Marine Terminal and Glencore Carson Marine Terminal. A third pipeline, RT-1, is owned and operated by World Oil and is a receive-only pipeline that would deliver crude oil to the new tanks. The proposed project would not debottleneck the facility to allow for greater actual crude oil throughput beyond the permitted limits through the pipelines, tanks, or loading racks. After proposed project implementation, the newly leased tanks may also ship product through the truck loading racks and would result in a 10 percent increase in operational truck traffic to accommodate vendors not connected to the pipeline. Table 2-4 displays the projected future monthly and daily average loading rack truck count and barrels transported.

Table 2-4. Proposed New Loading Rack Truck Traffic

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

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

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

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

2.12 Other Permits and Approvals

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

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

Agency	Jurisdiction	Requirements
Federal / State Agencies		
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	Limit air emissions from new tanks
Los Angeles Regional Water Quality Control Board	Tank hydrotest water	Discharge to Long Beach Harbor
Los Angeles County Sanitary District	Wastewater treatment	Wastewater discharge limits
City of Long Beach Planning and Building Permit	Construction	Tank construction building codes

3. Environmental Determination

3.1 Environmental Factors Potentially Affected

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

- | | | |
|--|---|---|
| ☐ 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 |

3.2 Environmental Determination

On the basis of this initial evaluation:

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

Matthew Arms, Director of Environmental Planning
Port of Long Beach

Date

4. Environmental Setting and Environmental Impacts

4.1 Aesthetics

AESTHETICS

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

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
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.

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

Mitigation Measures: No mitigation is required.

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

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

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

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

Mitigation Measures: No mitigation is required.

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

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

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

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

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

Mitigation Measures: No mitigation is required.

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

LESS THAN SIGNIFICANT IMPACT. The project site and surroundings are predominantly characterized by industrial uses that currently use nighttime lighting. Existing lighting on-site consist of tall pole lights scattered around the site and smaller lights at the truck loading racks that provide lighting for nighttime operations. In addition, there is a large amount of nighttime lighting associated with the highly industrialized POLB, which has activities occurring 24 hours a day, seven days a week. The surrounding urbanized sites adjacent to the terminal and along Pier C Street all contain various sources of light and

glare. Tall pole lights exist throughout the vicinity, which provide nighttime illumination. The main source of daytime glare comes from the Matson Auto and Oversized Cargo Yard, due to sunlight reflecting off of densely parked vehicles. The proposed project would not exacerbate nighttime or daytime glare because it does not propose any nighttime illumination or materials that cause daytime glare.

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

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

Mitigation Measures: No mitigation is required.

4.2 Agriculture and Forestry Resources

AGRICULTURE AND FORESTRY RESOURCES

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

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
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 4.2(b), the project site is not located within lands zoned for forest land or timberland. As such, the proposed project would not cause rezoning of forest land, timberland, or timberland zoned Timberland Production. No impact would occur.

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

4.3 Air Quality

AIR QUALITY

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

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
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?

Discussion

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

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

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

The proposed project includes the installation of two new floating roof crude oil storage tanks but does not increase the permitted crude oil throughput for the crude oil loading racks or tanker truck transportation requirements for crude oil. The tanks are required to obtain SCAQMD permits and comply with all SCAQMD regulations.

The proposed project is also expected to cause a 10 percent increase in the use of the loading racks over baseline to deliver fuel oil products from the two existing crude oil tanks that would be repurposed to leased fuel oil storage after the new crude oil tanks are installed and operating. This increase is equal to

a maximum of three additional truck loading events per day. This increase in trucking would be performed in compliance with all state and local regulations, the truck loading would be performed in compliance with the existing SCAQMD loading rack permits, and it would be performed with trucks meeting the Ports Clean Trucks Program requirements. Therefore, this increase in fuel oil trucking would not conflict with the AQMP.

The proposed project's operation would increase the number of petroleum storage tanks at the site and increase the total fugitive volatile organic compound (VOC) emissions from the tanks. This emissions increase has been addressed in the two SCAQMD permits to construct granted for the two tanks (SCAQMD, 2020a; SCAQMD, 2020b). The SCAQMD reviewed the design and operation specifications for the new tanks, along with the proposed emissions offset plan, to ensure that the tanks would comply with all SCAQMD rules and regulations and SCAQMD approved permits to construct for the two tanks. This includes the requirement that the new tanks have Best Available Control Technology, which for these tanks are a floating roof with a mechanic shoe seal, and that the project offset the new tanks VOC emissions at a ratio of 1.2 to 1 using approved emissions reduction credits.

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

Mitigation Measures: No mitigation is required.

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

Discussion

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

Construction

The proposed project's construction emissions have been estimated using the SCAQMD-approved California Emissions Estimator Model (CalEEMod Version 2016.3.2). The construction equipment, vehicle trip, and tank coating assumptions have been determined through coordination with the project applicant and are provided in Appendix A.

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

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

	VOC	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}
On-road	0.1	1.7	1.9	0.01	0.1	0.0
Off-road	1.1	21.5	30.3	0.05	1.3	1.2
Architectural Coatings	35.3	--	--	--	--	--
Fugitive Dust	--	--	--	--	0.5	0.1
Total Emissions	36.5	23.2	32.3	0.06	1.8	1.3
Significance Threshold	75	550	100	150	150	55
Exceeds Threshold?	NO	NO	NO	NO	NO	NO

Source: Appendix A; SCAQMD, 2019a.

Acronyms: VOC – volatile organic compounds, CO – carbon monoxide, NO_x – nitrogen oxides, SO_x – sulfur oxides, PM₁₀ – particulate matter 10 microns or less in diameter, PM 2.5 – particulate matter 2.5 microns or less in diameter.

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

Mitigation Measures: No mitigation is required.

Operation

The proposed project would not increase site staffing or the crude oil throughput for the facility, but it has the potential to increase fuel oil throughput at the loading racks which would increase fugitive VOC emissions, increase use of and emissions from the thermal oxidizer loading rack vapor control device, and increase on-road truck emissions. This increase has been estimated at a 10 percent increase in daily loading rack use that corresponds to an increase in three truck loading visits, at 15 miles per round trip, per day. Additionally, the two new tanks would create additional fugitive VOC emissions from tank operations. The new tank VOC emissions were estimated by the Applicant using the U.S. Environmental Protection Agency (USEPA) TANKS program and have been approved by the SCAQMD during their tank permitting process (SCAQMD, 2019b). The permits to operate the tanks would be approved after the tanks are constructed and inspected by SCAQMD.

The SCAQMD-approved maximum daily VOC potential to emit for these two tanks was estimated to be 9.7 pounds per day, which is well below the SCAQMD daily operation emissions significance threshold of 55 pounds per day. The facility's existing potential to emit is above the SCAQMD New Source Review Rule VOC offset threshold of 4 tons per year; therefore, the new tank emissions were required to be offset. These offsets were procured from the SCAQMD emissions reduction credit bank. The quantity of offsets required is 1.2 times the permitted potential to emit or 12 pounds per day after rounding. SCAQMD has approved the transfer of 12 pounds per day of VOC credits for this proposed project.

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

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

	VOC	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}
On-road	0.02	0.09	0.60	0.00	0.04	0.01
Tank Fugitive VOC ¹	9.70	--	--	--	--	--
Loading Racks/Vapor Control	0.09	0.16	0.20	0.00	0.01	0.01
Total Emissions	9.81	0.25	0.81	0.00	0.06	0.03
Significance Threshold	75	550	100	150	150	55
Exceeds Threshold?	NO	NO	NO	NO	NO	NO

Source: Appendix A; SCAQMD, 2019a; SCAQMD, 2019b.

1-These emissions have been offset at a 1.2:1 ratio (12 pounds per day of VOC emissions reduction credits), so that the offset emissions total would be minus 2.19 pound per day.

Mitigation Measures: No mitigation is required.

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

Discussion

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

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

Construction

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

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

	NO _x	CO	PM ₁₀	PM _{2.5}
Total Emissions	32.3	23.2	1.8	1.3
Localized Significance Threshold	142	7,558	158	55
Exceeds Threshold?	NO	NO	NO	NO

Source: Appendix A; SCAQMD, 2009.

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

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

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

thresholds. Therefore, construction emissions would not expose sensitive receptors to substantial pollutant concentrations, and construction impacts would be less than significant.

Operation

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

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

	NO _x	CO	PM ₁₀	PM _{2.5}
Total Emissions	0.20	0.16	0.01	0.01
Localized Significance Threshold	142	7,558	38	23
Exceeds Threshold?	NO	NO	NO	NO

Source: Appendix A; SCAQMD, 2009.

There are no SCAQMD LST thresholds for VOC emissions, and the VOC emissions for the proposed project are below the SCAQMD daily emissions threshold of 55 pounds per day as noted above in Section 4.3(b). Therefore, the non-speciated VOC emissions increase from the proposed project's operation have less than significant emissions. Furthermore, SCAQMD performed a cancer health risk assessment for the new tanks, using a conservative assumption for the TACs emissions rates by assuming TAC fractions from gasoline rather than crude oil, and found that health risks were well below the cancer health risk significance threshold of 10×10^{-6} for the maximum exposed sensitive receptors (1.85×10^{-7}). The increase in loading rack emissions, from fuel oil vapors, would have negligible TAC emissions and the trucking emissions occur over a large area and would not create substantial localized health impacts. The combined construction and operation emissions health risks would be well below the SCAQMD health risk CEQA significance thresholds. Therefore, operation emissions would not expose sensitive receptors to substantial pollutant concentrations, and operation impacts would be less than significant.

Mitigation Measures: No mitigation is required.

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

LESS THAN SIGNIFICANT IMPACT. During construction there would be a short-term increase in air pollutants primarily due to the combustion of diesel fuel from construction equipment and from tank interior and exterior coating. There is potential for some individuals to find diesel combustion emissions or the coating VOC emissions as objectionable odors. However, given the quantity of odorous emissions and the distance between project emission sources and the nearest sensitive residential receptors (i.e., approximately 800 meters), adequate dispersion of these emissions to below objectionable odor levels would be anticipated. Furthermore, the project site is located within the Port where existing industrial operations at nearby container terminals include freight and goods movement activities (i.e., use of diesel trucks and diesel cargo-handling equipment) which generate similar odors. Therefore, impacts from construction would be less than significant.

During proposed project operation there would be an increase in fugitive VOC emissions from the two new tanks, and the loading racks; and an increase in the exhaust emissions from the loading rack vapor control thermal oxidizer and the increase in tanker truck trips. The thermal oxidizer exhaust would not

have substantial odors and the truck emissions odors would be minor and would be dispersed over a long transportation route, so these emissions sources would not have the potential to adversely affect a substantial number of people. The crude oil fugitive VOC emissions and increased loading rack fuel oil fugitive VOC emissions include a mixture of odorous substances and the smell of crude and fuel oils are something most Southern Californians have experienced and recognize due to the extensive oil production, refining, and fuel storage and marketing facilities in Southern California. Regardless, there is the potential for individuals to find such odors as objectionable. However, given the distance between project emission sources and the nearest sensitive receptors (i.e., approximately 800 meters), adequate dispersion of these odorous emissions to below objectionable levels would be anticipated. Therefore, impacts from operation would be less than significant.

Mitigation Measures: No mitigation is required.

4.4 Biological Resources

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

Special-Status Plants

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

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

Special-Status Wildlife

Some of the wildlife detected on or near the site included gulls (*Larus* spp.), rock pigeon (*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 and is not expected to occur due to the lack of suitable habitat. Therefore, impacts to wildlife would be less than significant.

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

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

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

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

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

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

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

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

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

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

4.5 Cultural Resources

CULTURAL RESOURCES

Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☐	☒
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). Aspen obtained a record search and literature information from the South Central Coastal Information Center (SCCIC) on April 1, 2020, which did not show the presence of any eligible or listed historic properties within the project area (see Appendix B). Since there are no significant historical resources located within the project area, the proposed project would not cause a substantial adverse change in the significance of a historical resource.

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

4.6 Energy

ENERGY

Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
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. The proposed project would consume energy in the form of on-road vehicle and off-road equipment fuels, diesel and gasoline, during construction. The proposed project is designed to be constructed as efficiently as possible and would reuse or recycle construction waste to the extent feasible and according to state and City of Long Beach Municipal Code requirements (see Section 4.19, Utilities and Service Systems), such as the reuse of excavated soil and concrete waste spoils.

The proposed project would not increase the facility operations and maintenance personnel requirements, would not substantially increase on-site electricity use, and would only increase transportation fuel consumption from trucking by an estimated 10 percent due to the anticipated increase in fuel oil transport related to the proposed project's increase in available leased tank storage. The proposed project does not increase World Oil's crude oil throughput transported by crude oil tanker trucks. This additional trucking would be completed using newer more fuel-efficient trucks that comply with the Port's Clean Truck Program. The proposed project would also cause a small increase in the use of natural gas used by the loading rack vapor control thermal oxidizer, which is an emissions control device mandated for use by SCAQMD. Therefore, the proposed project would not include the wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation.

Mitigation Measures: No mitigation is required.

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

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

The proposed project would not increase crude oil trucking or notably increase current on-site energy use. The proposed project would increase total fuel oil storage capacity and is expected to create a small 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. Additionally, the proposed project does not include the

construction/installation of any new energy consumption sources, such as fuel pipeline pumps, that would be subject to State of California efficiency regulations (CCR Title 20). Indirectly, on-road vehicles used during construction and operation would have to meet the ongoing federal and state fuel efficiency requirements. Therefore, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Mitigation Measures: No mitigation is required.

4.7 Geology and Soils

GEOLOGY AND SOILS

Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
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).

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 in the final project design ensures that impacts from ground shaking would be less than significant.

Mitigation Measures: No mitigation is required.

iii) Seismic-related ground failure, including liquefaction?

LESS THAN SIGNIFICANT IMPACT. Liquefaction is the phenomenon in which saturated granular sediments temporarily lose their shear strength during periods of earthquake-induced strong ground shaking. The susceptibility of a site to liquefaction is a function of the depth, density, and water content of the granular

sediments, and the magnitude and frequency of earthquakes in the surrounding region. Saturated, unconsolidated silts, sands, and silty sands within 50 feet of the ground surface are most susceptible to liquefaction. Liquefaction-related phenomena include lateral spreading, ground oscillation, flow failures, loss of bearing strength, subsidence, and buoyancy effects. In addition, densification of the soil resulting in vertical settlement of the ground can also occur. This phenomenon can result in damage to infrastructure, including foundations. The project area is mapped as being in a liquefaction hazard area on the CGS Seismic Hazard Map (CGS, 1999b). Liquefaction analyses conducted as part of the geotechnical investigation for the proposed project by Albus-Keefe & Associates in September 2018 indicates that various layers below a depth of 5 feet are potentially liquefiable (Albus-Keefe, 2018). The geotechnical investigation report states that ground improvements should be considered to help mitigate the effects of liquefaction (Albus-Keefe, 2018). The final project design would 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 seismic related ground failure, including liquefaction, would be less than significant.

Mitigation Measures: No mitigation is required.

iv) Landslides?

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

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

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

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

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

Mitigation Measures: No mitigation is required.

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

NO IMPACT. The Sanitation Districts of Los Angeles County (LACSD) maintains and operates the municipal wastewater collection system in the project area and would continue to serve the proposed project.

LACSD would continue to provide wastewater services to the project site upon project completion. The proposed project does not involve the installation of a septic tank or alternative wastewater disposal system; therefore, no impact would occur.

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

4.8 Greenhouse Gas Emissions

GREENHOUSE GAS EMISSIONS

Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
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

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

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

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

The proposed project would allow the two existing World Oil crude oil tanks that would be replaced by this project, to serve as leased remote fuel oil product storage for other pipeline-connected facilities (Marathon Petroleum Carson Refinery and/or Marathon Petroleum Terminal assets, and the Glencore Long Beach Marine Terminal and Glencore Carson Marine Terminal). Other tanks at the Ribost Terminal are currently used in this manner. World Oil has estimated that the total loading rack use increase to be 10 percent above baseline use due to the proposed project additional leased fuel oil storage. This increased leased storage also involves the pumping of fuel oils to and from these storage tanks through existing pipelines. There would be a minor amount of increased indirect GHG emissions from the electricity used to power the pipeline pumps, but the amount of these increased emissions cannot be estimated as the future use of these two existing tanks is not known. Additionally, the GHG footprint for electricity use will decrease over time as the renewable energy fraction of supplied electricity increases.

The fugitive methane GHG emissions from crude oil storage and loading are negligible due to the partially processed crude oil containing only trace amounts of methane and would not increase from existing conditions given that the proposed project would not cause an increase in World Oil's crude oil throughput. Therefore, there would be no operating GHG emissions increase from the proposed project's new tanks fugitive emissions.

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

LESS THAN SIGNIFICANT IMPACT. Table 4.8-1 provides a summary of the proposed project's estimated carbon dioxide equivalent (CO₂e) GHG emissions, including the annual amortized construction emissions in metric tons (MT). The direct proposed project construction GHG emissions are amortized over the project life of 30 years for comparison with the GHG emissions significance threshold within Table 4.8-1. This project life assumption is the default assumption recommended by SCAQMD, which may be conservatively short for this project. The project applicant noted that storage tank life is variable but can often exceed 50 years.

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

Table 4.8-1. Summary of Project Greenhouse Gas Emission Estimates	
Emissions Type	CO₂e
Total Construction Emissions	270.5 MT
30-Year Amortized Construction Emissions	9.0 MT/Year
Increase in Annual Operating Emissions	62.8 MT/Year ⁸
Total Annual Emissions	71.8 MT/Year
Significance Criteria	10,000 MT/Year

Source: Appendix A; SCAQMD, 2019a.

Mitigation Measures: No mitigation is required.

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

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

Table 4.8-2. 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 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 .
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).

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

Source: CARB, 2017.

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

Mitigation Measures: No mitigation is required.

4.9 Hazards and Hazardous Materials

HAZARDS AND HAZARDOUS MATERIALS

Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
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?

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

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

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

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

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

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

Following construction, the operation of the new tanks would be in accordance with the existing facility SWPPP. During operation, it is estimated that approximately 1,500 bbls of sludge would be generated from cleaning a tank every 10 years. Sludge tank bottoms are transported offsite as hazardous waste and received by permitted treatment, storage, and disposal facilities. Additionally, tank dewatering generates approximately 300 gallons of water from each tank per day as estimated from current wastewater discharge flow meter readings for the existing tanks. Water generated during tank dewatering for the new tanks would be initially treated at the onsite wastewater treatment plant and then discharged into the sanitary sewer in compliance with the facility's Los Angeles County Sanitation District (LACSD) permit.

Implementation of a Construction SWPPP and the existing facility SWPPP for operations would reduce the potential impact from spills of hazardous materials to soil, groundwater, and to Channel 2 to less than significant.

Mitigation Measures: No mitigation is required.

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

LESS THAN SIGNIFICANT. Spills of hazardous materials could occur due to improper handling and/or storage practices during construction or operation activities could potentially cause soil or groundwater

contamination, or contamination of the adjacent Channel 2. Implementation of a Construction SWPPP and the existing facility SWPPP would reduce the potential impact from spills of hazardous materials to soil and groundwater and to Channel 2 to less than significant.

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

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

NO IMPACT. The proposed project is contained entirely within the POLB, and is serviced by the Long Beach Fire Department, the Long Beach Police Department, and the Port Harbor Patrol for fire protection, police protection, and emergency services. The proposed project is not expected to substantially affect traffic circulation (see Section 4.17, Transportation) or increase demand on existing emergency response services during construction (see Section 4.15, Public Services). All construction activities would take place outside of main public roadways and thoroughfares and would not result in temporary blockage or closure of local access routes within the POLB. The proposed project would not impair or interfere with emergency response or evacuation plans. No impact would occur.

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

4.10 Hydrology and Water Quality

HYDROLOGY AND WATER QUALITY

Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
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.

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

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

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

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

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

Mitigation Measures: No mitigation is required.

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

NO IMPACT. Temporary dewatering during construction would generate small volumes of effectively seawater and would not substantially deplete fresh groundwater supplies or interfere with existing groundwater recharge. The project site is not currently used for groundwater recharge. Additionally, the proposed project would not affect any fresh groundwater supplies, drinking water supplies, or aquifers. No impact would occur.

Mitigation Measures: No mitigation is required.

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

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

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

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

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

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

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

LESS THAN SIGNIFICANT IMPACT. As discussed in Section 4.10(c)(i) and 4.10 (c)(ii), proposed construction and operation would not substantially alter the drainage pattern of the project site. The pervious gravel surface of the project site would remain after completion of construction activities and would prevent flooding. The on-site drainage patterns would remain similar to existing conditions, and impacts would be less than significant.

Mitigation Measures: No mitigation is required.

(iv) impede or redirect flood flows?

LESS THAN SIGNIFICANT IMPACT. According to the Federal Emergency Management Flood Insurance Rate Maps for the project area, the entire project site is located within Special Flood Hazard Area Zone AE, which presents a one percent annual chance of flooding (i.e., 100-year flood zone) (FEMA, 2008). The tank storage area is surrounded by approximately 8-foot wide, 6-foot deep containment walls that are supported by 180 50-foot deep foundations that extend underground. The containment walls are designed to withstand a 100-year storm event. The two proposed tanks would be installed within these containment walls, which would provide the same level of protection against floods as they do under existing conditions. The project site does not have a flood control system in place; however, air driven pumps may be used to divert water over the containment wall during a flood event. Therefore, although the proposed project would place structures within a 100-year flood hazard area, the proposed tanks would not alter the existing drainage pattern on-site and flood flows would not be impeded or redirected because they would be installed within the existing containment walls. As such, impacts would be less than significant.

Mitigation Measures: No mitigation is required.

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

LESS THAN SIGNIFICANT IMPACT. As stated above in Section 4.10(c)(iv), the project site is located within the 100-year flood hazard area. The proposed tanks would be constructed and installed within existing containment walls that are designed to withstand a 100-year storm event. The containment walls would continue to offer the same level of adequate protection for the proposed tanks as they do for the existing tanks. As stated above, a flood control system is not in place at the project site; however, air driven pumps may be used to divert water over the containment wall during a flood event. Impacts would be less than significant in regard to flood hazards.

A tsunami is a large wave produced by an undersea disturbance such as an earthquake or landslide. The project site is adjacent to Channel 2 of the Cerritos Channel to the north. According to the California Geological Survey's *Tsunami Inundation Map for Emergency Planning, Long Beach Quadrangle*, the project site is located within a tsunami inundation area (CGS, 2009). Due to the project's location adjacent to the ocean, the project site is vulnerable to tsunamis generated off the coast of California. A Tsunami Hazard Assessment was conducted in 2007 by Moffat and Nicol to assess the potential local sources of tsunamis and their potential impacts to the Ports of Long Beach and Los Angeles. This study evaluated several tsunami scenarios and concluded that impacts from a tsunami would be equal to or more severe than those from a seiche (Moffat and Nichol, 2007). The tsunami maximum water levels did not exceed deck elevations in berths in the POLB including Pier C (Moffatt and Nichol, 2007). The report determined that a large and locally generated tsunami would not likely occur more than once every 10,000 years, resulting in limited inundation (Moffatt & Nichol, 2007). The new tanks would be on stable foundations and would not be subject to substantial damage from inundation. The proposed project would not change any land uses, and project operations would be similar to existing operations. The existing containment walls, behind which the new tanks would be placed, would provide the same level of protection to the tanks in the event of a tsunami. Thus, construction and installation of the new tanks would not exacerbate existing potential for inundation by tsunami beyond existing conditions nor would it risk release of pollutants should inundation occur. Impacts in this regard would be less than significant.

A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, or lake. The project site is adjacent to Channel 2, which is semi-enclosed to the east. As discussed previously, the proposed tanks would be constructed within protective containment walls. During a seiche event, the containment walls would provide the same level of protection to the new tanks as they do for the existing tanks. Additionally, measures to minimize impacts from seiches or tsunamis are currently in place at the POLB. Project construction would not increase the risk of a release of pollutants due to project inundation; therefore, impacts would be less than significant.

Mitigation Measures: No mitigation is required.

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

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

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

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

Mitigation Measures: No mitigation is required.

4.11 Land Use and Planning

LAND USE PLANNING

Would the project:

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

Mitigation Measures: No mitigation is required.

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

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

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

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

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

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

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

Mitigation Measures: No mitigation is required.

4.12 Mineral Resources

MINERAL RESOURCES

Would the project:

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

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

4.13 Noise

NOISE

Would the project result in:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
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

Existing Conditions

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

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

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

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

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

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

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

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

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

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

Noise Sensitive Areas. For the purposes of noise impact analysis, the area of influence includes sensitive noise receptors closest to the project site. These include two schools, Edison Elementary School (approximately 0.5 mile or 2,830 feet east of the project site/staging area) and Cesar Chavez Elementary School (approximately 0.6 mile or 3,250 feet east of the project site/staging area), and the closest resident on Chester Place (approximately 0.5 mile or 2,610 feet east of project site/staging area).

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

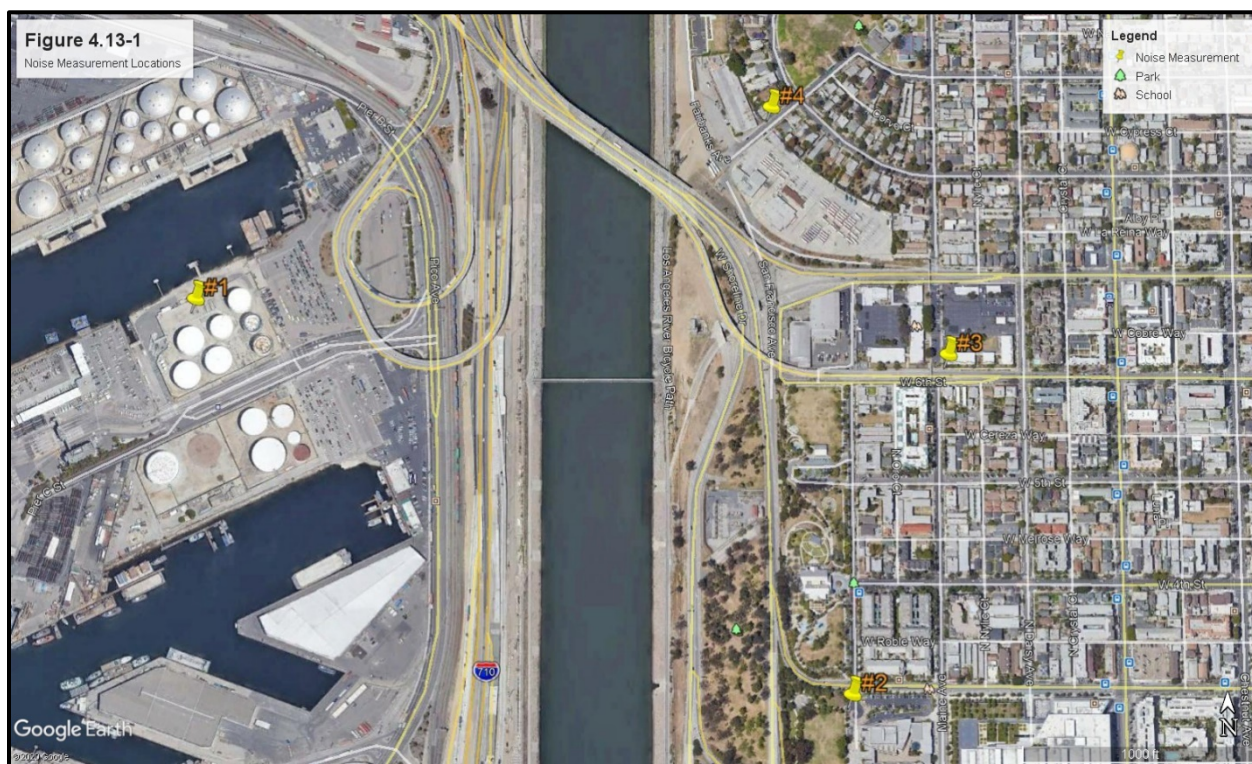
Table 4.13-1. Ambient Noise Levels Representative of the Project Area

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

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

Notes:

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



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

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

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

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

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

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

Receiving Land Use District	Time Period	Noise Level (dBA) ^{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.		
Notes:		
1 – Districts Three and Four limits are intended primarily for use at their boundaries rather than for noise control within those districts.		
2 – In the event that alleged offensive noise contains a steady audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering or riveting or contains music or speech conveying informational content, the standard limits set forth shall be reduced by 5 decibels.		

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

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

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

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

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

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

Equipment List	Equivalent Federal Highway Administration Classification	Acoustical Use Factor (Percent)	Measured Lmax (at 50 feet)
Air Compressor	Compressor (air)	40	78
Bobcat	Backhoe	40	78
Concrete	Concrete Mixer Truck	40	79
Crane	Crane	16	81
Dump Truck	Dump Truck	50	80
Excavator	Excavator	40	81
Flat Bed Truck, Dump Truck	Flat Bed Truck	40	84 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. Notes: 1 – Due to the limited number of actual data samples, the Spec. 721.560 Lmax at 50 feet is used. 2 – Piles to be vibro piles or rammed aggregate piers (RAPs), which would utilize a down-hole vibrator suspended from a crane or specialty rig, or may involve a hydraulic break hammer and rammer, or mounted impact hammer (hoe ram). The latter is assumed for this analysis.			

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

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

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

Mitigation Measures: No mitigation is required.

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

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

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

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

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

4.14 Population and Housing

POPULATION AND HOUSING

Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
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. A project could induce population growth in an area, either directly (e.g., by proposing new homes and/or business) or indirectly (e.g., through extension of roads or other infrastructure). No residential uses, major businesses, offices, or infrastructure expansions would be developed as part of the proposed project. Therefore, the proposed project would not induce unplanned direct population growth in the area and no impact would occur.

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

4.15 Public Services

PUBLIC SERVICES

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

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

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

Mitigation Measures: No mitigation is required.

b) Police Protection?

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

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

Mitigation Measures: No mitigation is required.

c) Schools?

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

Mitigation Measures: No mitigation is required.

d) Parks?

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

Mitigation Measures: No mitigation is required.

e) Other Public Facilities?

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

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

Mitigation Measures: No mitigation is required.

4.16 Recreation

RECREATION

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
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. As discussed in Section 4.14(a), the proposed project would not substantially induce population growth in the area, and therefore, would not cause an increase in the use of existing parks or recreational facilities. Approximately eight workers would work on-site during construction, which is expected to occur over a 10-month period. This minimal quantity of workers would likely come from the local labor force and no additional employees would be hired for project operations that could potentially introduce permanent residents to the City of Long Beach. Therefore, construction and operation of the proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities. No impact on existing parks or recreational facilities would occur.

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

4.17 Transportation

TRANSPORTATION

Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
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. The proposed project would result in temporary vehicle trips during construction. Construction worker trips would occur in the morning and early evening hours. Truck trips associated with materials and equipment deliveries to the project site would likely be distributed throughout the workday, with more frequent trips in the early stages of construction when the site is prepared, foundations are poured, and the tank components are delivered. Given the temporary period of construction (10 months), trips would be for a limited time along roadways accessing the project site. Temporary construction trips are assumed to come from the local area or from the greater Los Angeles County area. While construction-related trips would utilize regional freeways (likely converging onto the I-710 freeway) to access Ocean Boulevard/Pico Avenue and the site, these temporary trips would not be in numbers that could substantially diminish the performance of the circulation system. As shown in Appendix A, construction would generate a maximum of 116 daily total trips (64 worker commute trips, 44 haul related trips, and 8 vendor/delivery trips). It is assumed that haul and vendor trips would be spread throughout the day. Therefore, worst-case temporary peak hour trips (between 7:00 a.m. and 9:00 a.m. and between 4:00 p.m. and 6:00 p.m.) would be 32. These peak hour trips would result from construction worker commutes to and from the project site. Please note, these represent peak daily trips during construction. Average daily trips during construction would be less. All construction-related trips would only occur temporarily during construction. While these trips would occur on regional and local roadways that connect to the project site, they would be temporary and the project would not impact any City of Long Beach or Los Angeles County program, plan, ordinance, or policy related to transit, bicycle, or pedestrian facilities in the vicinity of the site or along local roadways (not including programs or plans that pertain to vehicle miles travelled, which is addressed under checklist question 4.17(b)). There would be a less-than-significant impact to such facilities.

Baseline maximum truck count at the loading rack is 28 per day. As discussed in Section 2.11, Operations and Maintenance, once constructed, maximum truck trips would increase by 10 percent. This would result in a project increase of three truck trips per day (a new maximum of 31 trucks per day at the loading rack). An increase of three trips per day associated with the proposed project would not conflict with any

program pertaining to performance of the circulation system and less than significant impacts would occur.

Mitigation Measures: No mitigation is required.

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

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

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

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

Mitigation Measures: No mitigation is required.

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

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

and requirements of such permits, which would ensure no hazards to motorists or others utilizing the public roadway system occur. Impacts would be less than significant.

Mitigation Measures: No mitigation is required.

d. Would the project result in inadequate emergency access?

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

Mitigation Measures: No mitigation is required.

4.18 Tribal Cultural Resources

TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code §21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
(i) listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code §5020.1(k), or	☐	☐	☐	☒
(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. As discussed in Section 4.5, Cultural Resources, there is no potential to discover an unknown tribal cultural resource within the project site as part of the proposed project's construction, since the site is previously disturbed and underlain by hydraulic and imported fill (Albus-Keefe, 2018). The record search and literature information obtained from South Central Coastal Information Center did not indicate the presence of any eligible or listed historic resources within the project area (see Appendix B – Confidential). Since there are no significant historical resources located within the project area, and ground disturbance is planned within hydraulic and imported fills only, the proposed project would not have an impact on tribal cultural resources.

Mitigation Measures: No mitigation is required.

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

Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

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

Mitigation Measures: No mitigation is required.

4.19 Utilities and Service Systems

UTILITIES AND SERVICE SYSTEMS

Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
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. During construction, a small amount of water may be used during excavation for tank foundations to maintain optimum moisture content of soil layers for compaction. This water use would be temporary and occur over a short duration (approximately three months). Additionally, as discussed in Section 4.19(a), approximately 50,000 bbl of water sourced from the LBWD would be used for the NPDES permitted hydrotest. This activity would only occur once during construction to test the tanks for leaks and structural integrity.

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

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

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

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

Mitigation Measures: No mitigation is required.

4.20 Wildfire

WILDFIRE

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

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
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 would occur.

Mitigation Measures: No mitigation is required.

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

NO IMPACT. Refer to Section 4.20(a).

Mitigation Measures: No mitigation is required.

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

NO IMPACT. Refer to Section 4.20(a).

Mitigation Measures: No mitigation is required.

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

NO IMPACT. Refer to Section 4.20(a).

Mitigation Measures: No mitigation is required.

4.21 Mandatory Findings of Significance

MANDATORY FINDINGS OF SIGNIFICANCE				
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
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 4.4, Biological Resources, the proposed project would not substantially adversely impact candidate, sensitive, or special-status species. The project site is completely developed and does not contain suitable habitat for wildlife species. No special-status wildlife or plant species occur within the project site, and thus, would not be impacted by project construction or operation activities. Several non-native grasses and herbaceous weedy species, as well as common bird species were observed on-site during the site visit conducted on March 3, 2020. To comply with the federal MBTA, the Applicant will be required to follow the requirements of the MBTA as specified in Special Condition BIO-1 (see Section 4.4[a]). Compliance with the Special Condition BIO-1 would protect any nesting migratory bird on-site during construction. No sensitive riparian habitats or protected wetlands are located within or near the project site; as such, the proposed project would not impact sensitive habitat for fish or wildlife. Project construction would be confined to the project site and would not affect the movement of or restrict the range of any native resident or migratory fish or wildlife species.

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

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

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

LESS THAN SIGNIFICANT IMPACT. The proposed project involves the construction and installation of two new storage tanks to the existing World Oil Terminal. Although the proposed project has impacts that were determined to be less than significant that may incrementally affect other resources, they are not considered cumulatively considerable due to the relatively nominal level and area of impact, highly developed industrial surroundings, and temporary nature of the proposed project. Generally, contributions to air quality and greenhouse gas emissions impacts are cumulative due to the regional and global nature of air pollution and climate change, respectively. As discussed in Section 4.3, Air Quality, and Section 4.8, Greenhouse Gas Emissions, the proposed project’s impacts would be less than significant with regards to these environmental factors. The proposed project, as well as all other current projects in the region, would comply with applicable SCAQMD standards, recommendations, and regulations, which are designed to limit air quality impacts within its jurisdiction, as well as State laws. As such, all potential cumulative impacts regarding air quality and greenhouse gas emissions would be limited and minimized. The construction activities are minor and would be completed within approximately 10 months. Operational activities would not substantially change. As such, the proposed project’s cumulative impacts are considered less than significant.

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

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

5. Application Summary Report

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

5.1 California Coastal Act Consistency Analysis

In accordance with the CCA, the Coastal Zone includes all areas within 3 miles seaward and approximately 1,000 yards inland, depending upon the level of existing inland development. Chapter 8 of the CCA governs California ports, including the POLB, and recognizes these ports as primary economic and coastal resources that are essential elements of the national maritime industry (Section 30701[a]). The following is a discussion of applicable CCA sections and appropriate project-related information.

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

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

(a) Minimize substantial adverse environmental impacts.

(b) Minimize potential traffic conflicts between vessels.

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

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

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

(a) Minimize substantial adverse environmental impacts.

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

(b) Minimize potential traffic conflicts between vessels.

No vessel trips are associated with operations of the World Oil Terminal. The proposed project would expand storage capacity at the World Oil Terminal but would not increase current or future vessel traffic within the Port. Construction materials would be transported via regional and local roadways and no vessel transport would occur. During operations, World Oil Terminal would not require an increase in staff. Third-party vendors who import/export petroleum from the project site would generally utilize existing pipelines. Existing operations of the truck loading racks are also anticipated to increase 10 percent, but no marine transport would be needed. As such, operational activities would have no effect on marine transport. The proposed project would be consistent with CCA Section 30708(b).

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

The proposed project would be developed at an existing petroleum bulk station and terminal, which would serve to expand storage capacity and improve the efficiency of terminal operations. As the proposed project would improve existing Port operations, it would be consistent with CCA Section 30708(c).

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

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

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

None of the proposed project activities would affect rail service. The proposed project would increase multicompany use of the World Oil Terminal by enabling third-party vendors to import/export petroleum from the project site via existing pipelines and truck loading racks. The proposed project would be consistent with CCA Section 30708(e).

5.2 Consistency with the Port Master Plan

5.2.1 Overview

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

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

5.2.2 Port Goals

Among the Port-wide development and expansion goals cited in the PMP, the proposed project would support the following:

Goal 2: Encourage maximum use of facilities

The proposed project would serve to maximize uses at the World Oil Terminal by expanding storage capacity and improving the efficiency of terminal operations. Furthermore, the proposed project would be consistent with the objectives of Port Goal 2 to rehabilitate under-utilized terminal facilities and to improve the efficiency of cargo handling facilities.

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

The proposed project would be constructed at an existing petroleum bulk station and terminal. By expanding the capacity of this terminal, the proposed project would be consistent with the objectives of Port Goal 5 to intensify existing development and to redevelop existing land within the Harbor District.

5.2.3 Plan Elements

The PMP provides guidance and direction for policy and business decisions affecting the future growth and development of the POLB. The six plan elements of the certified PMP include Public Access, Visual Quality, and Recreation/Tourist; Navigation; Environmental; Transportation/Circulation; Intermodal Rail Facilities; and Oil Production and Operations. Each plan element outlines specific planning goals and issues and provides a list of recommendations and/or an implementation program. The proposed PMP Amendment #20 would add two additional plan elements: Climate Change Adaptation and Terminal Operations (POLB, 2019).

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

Environmental Element

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

■ **Goal 1:** Minimize pollutant levels from existing and future sources.

■ **Air Quality Recommendations:**

- Limit idling of construction equipment and vehicles.
- Implement a watering program to minimize fugitive dust.
- Use low sulfur fuel.

As discussed in Initial Study Section 4.3 (Air Quality), the proposed project would be required to comply with applicable Clean Air Action Plan construction best management practices and South Coast Air Quality Management District Rule 403 (Fugitive Dust) control measures. These requirements would minimize daily construction emissions, which would ensure that emissions remain below significance thresholds.

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

Transportation/Circulation Element

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

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

The proposed construction of two petroleum storage tanks at the existing World Oil Terminal would not require the realignment of existing internal access roads, and the main public entrance to World Oil Terminal on Pico Avenue would be unaffected by the proposed project. Furthermore, the proposed project does not include the modifications to any public roadways or driveways. Temporary construction-related vehicle trips over the 10-month construction period would not be in numbers that could substantially diminish the performance of the circulation system. Project operation would result in a 10 percent increase in use of the truck loading racks, resulting in an estimated increase of three daily truck trips. These additional trips are sufficiently limited such that they would have negligible effects on transportation within the POLB. The proposed project would not conflict with the planning goals or implementation recommendations of the Transportation/Circulation Element.

Terminal Operations Element (Proposed)

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

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

5.2.4 District Goals

The certified PMP identifies the following goal for the Northeast Harbor Planning District:

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

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

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

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

The proposed project has been designed to avoid substantial adverse effects on the environment, and any short-term construction impacts would be less than significant. No adverse impacts to the

environment would occur during operation. The proposed project would be consistent with the proposed goals from PMP Amendment #20.

5.3 Special Conditions

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

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

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

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

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

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

6. Report Preparation

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

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Appendix A

Air Quality Emissions

World Oil Tanks Installation - Los Angeles-South Coast County, Summer

World Oil Tanks Installation

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	2.00	User Defined Unit	0.30	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	11			Operational Year	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Two Tank Construction Project

Land Use - Tank Area Assumed to be 180' by 80'

Construction Phase - Applicant dates for first two tasks, added a finishing task with tank painting and mechanical/piping interconnection.

Off-road Equipment - Added a man lift to the CalEEMod default for this phase.

Off-road Equipment - Applicant equipment list plus the addition of an excavator and grader for grading purposes. Used CalEEMod default for hp, except where applicant estimate was greater

Off-road Equipment - Added welders to the equipment list for tank erection, using CalEEMod default horsepower.

Off-road Equipment - Applicants equipment HP corrected using CalEEMod defaults, Bore/drill rig category used for pile driver.

Trips and VMT - From applicant, with addition for architectural coating workers and fuel/sanitary, etc. vendor trips. Used CalEEMod trip distance defaults, except for site preparation phase haul trips which was adjusted to applicant assumptions.

Grading - Conservative assumptions, including no backloading, on bulk material import/export.

Architectural Coating - Coating VOC emissions, due to variable paint types and coating thickness assumptions, are calculated separately.

Construction Off-road Equipment Mitigation - Assumes SCAQMD Rule 403 compliant watering during excavation/foundation phases where there is exposed areas and bulk material handling.

World Oil Tanks Installation - Los Angeles-South Coast County, Summer

2.0 Emissions Summary**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.1789	32.2635	23.2204	0.0605	0.5040	1.2945	1.7985	0.1341	1.2015	1.3356	0.0000	5,865.659 1	5,865.659 1	1.5574	0.0000	5,904.592 7
Maximum	3.1789	32.2635	23.2204	0.0605	0.5040	1.2945	1.7985	0.1341	1.2015	1.3356	0.0000	5,865.659 1	5,865.659 1	1.5574	0.0000	5,904.592 7

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.1789	32.2635	23.2204	0.0605	0.4993	1.2945	1.7938	0.1336	1.2015	1.3351	0.0000	5,865.659 1	5,865.659 1	1.5574	0.0000	5,904.592 7
Maximum	3.1789	32.2635	23.2204	0.0605	0.4993	1.2945	1.7938	0.1336	1.2015	1.3351	0.0000	5,865.659 1	5,865.659 1	1.5574	0.0000	5,904.592 7

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.93	0.00	0.26	0.42	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00

World Oil Tanks Installation - Los Angeles-South Coast County, Summer

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/4/2021	5/10/2021	5	91	Excavation
2	Tank Construction	Building Construction	4/26/2021	10/28/2021	5	134	Tank Erection
3	Architectural Coating	Architectural Coating	10/18/2021	11/18/2021	5	24	Tank painting and piping/mechanical

Acres of Grading (Site Preparation Phase): 0.5; Acres of Grading (Grading Phase): 0; Acres of Paving: 0; Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Bore/Drill Rigs	1	7.00	350	0.50
Site Preparation	Cranes	2	7.00	231	0.29
Site Preparation	Excavators	1	7.00	158	0.38
Site Preparation	Graders	1	7.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Tank Construction	Aerial Lifts	1	3.00	63	0.31
Tank Construction	Cranes	2	3.00	231	0.29
Tank Construction	Welders	2	7.00	46	0.45
Architectural Coating	Aerial Lifts	1	6.00	63	0.31
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	8	16.00	2.00	278.00	14.70	6.90	40.00	LD_Mix	HDT_Mix	HHDT
Tank Construction	5	16.00	2.00	48.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	8.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

World Oil Tanks Installation - Los Angeles-South Coast County, Summer

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.6700e-003	0.0000	7.6700e-003	9.1000e-004	0.0000	9.1000e-004			0.0000			0.0000
Off-Road	2.1271	23.8277	16.5528	0.0417		1.0039	1.0039		0.9236	0.9236		4,035.6111	4,035.6111	1.3052		4,068.2410
Total	2.1271	23.8277	16.5528	0.0417	7.6700e-003	1.0039	1.0116	9.1000e-004	0.9236	0.9245		4,035.6111	4,035.6111	1.3052		4,068.2410

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0461	1.3542	0.3493	4.4400e-003	0.1068	4.9200e-003	0.1117	0.0293	4.7100e-003	0.0340		482.2464	482.2464	0.0303		483.0050
Vendor	6.0800e-003	0.1942	0.0508	5.1000e-004	0.0128	4.0000e-004	0.0132	3.6900e-003	3.8000e-004	4.0700e-003		54.9761	54.9761	3.2400e-003		55.0571
Worker	0.0686	0.0471	0.6444	1.8300e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		182.2032	182.2032	5.3700e-003		182.3374
Total	0.1208	1.5956	1.0445	6.7800e-003	0.2984	6.7700e-003	0.3052	0.0804	6.4200e-003	0.0868		719.4257	719.4257	0.0390		720.3995

World Oil Tanks Installation - Los Angeles-South Coast County, Summer

3.2 Site Preparation - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9900e-003	0.0000	2.9900e-003	3.5000e-004	0.0000	3.5000e-004			0.0000			0.0000
Off-Road	2.1271	23.8277	16.5528	0.0417		1.0039	1.0039		0.9236	0.9236	0.0000	4,035.6111	4,035.6111	1.3052		4,068.2410
Total	2.1271	23.8277	16.5528	0.0417	2.9900e-003	1.0039	1.0069	3.5000e-004	0.9236	0.9239	0.0000	4,035.6111	4,035.6111	1.3052		4,068.2410

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0461	1.3542	0.3493	4.4400e-003	0.1068	4.9200e-003	0.1117	0.0293	4.7100e-003	0.0340		482.2464	482.2464	0.0303		483.0050
Vendor	6.0800e-003	0.1942	0.0508	5.1000e-004	0.0128	4.0000e-004	0.0132	3.6900e-003	3.8000e-004	4.0700e-003		54.9761	54.9761	3.2400e-003		55.0571
Worker	0.0686	0.0471	0.6444	1.8300e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		182.2032	182.2032	5.3700e-003		182.3374
Total	0.1208	1.5956	1.0445	6.7800e-003	0.2984	6.7700e-003	0.3052	0.0804	6.4200e-003	0.0868		719.4257	719.4257	0.0390		720.3995

World Oil Tanks Installation - Los Angeles-South Coast County, Summer

3.3 Tank Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8534	6.5028	4.9054	9.4300e-003		0.2817	0.2817		0.2695	0.2695		843.1225	843.1225	0.2025		848.1858
Total	0.8534	6.5028	4.9054	9.4300e-003		0.2817	0.2817		0.2695	0.2695		843.1225	843.1225	0.2025		848.1858

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.9900e-003	0.0961	0.0225	2.8000e-004	6.2600e-003	2.9000e-004	6.5600e-003	1.7200e-003	2.8000e-004	2.0000e-003		30.3205	30.3205	2.0600e-003		30.3719
Vendor	6.0800e-003	0.1942	0.0508	5.1000e-004	0.0128	4.0000e-004	0.0132	3.6900e-003	3.8000e-004	4.0700e-003		54.9761	54.9761	3.2400e-003		55.0571
Worker	0.0686	0.0471	0.6444	1.8300e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		182.2032	182.2032	5.3700e-003		182.3374
Total	0.0777	0.3374	0.7177	2.6200e-003	0.1979	2.1400e-003	0.2001	0.0528	1.9900e-003	0.0548		267.4998	267.4998	0.0107		267.7664

World Oil Tanks Installation - Los Angeles-South Coast County, Summer

3.3 Tank Construction - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8534	6.5028	4.9054	9.4300e-003		0.2817	0.2817		0.2695	0.2695	0.0000	843.1225	843.1225	0.2025		848.1858
Total	0.8534	6.5028	4.9054	9.4300e-003		0.2817	0.2817		0.2695	0.2695	0.0000	843.1225	843.1225	0.2025		848.1858

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.9900e-003	0.0961	0.0225	2.8000e-004	6.2600e-003	2.9000e-004	6.5600e-003	1.7200e-003	2.8000e-004	2.0000e-003		30.3205	30.3205	2.0600e-003		30.3719
Vendor	6.0800e-003	0.1942	0.0508	5.1000e-004	0.0128	4.0000e-004	0.0132	3.6900e-003	3.8000e-004	4.0700e-003		54.9761	54.9761	3.2400e-003		55.0571
Worker	0.0686	0.0471	0.6444	1.8300e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		182.2032	182.2032	5.3700e-003		182.3374
Total	0.0777	0.3374	0.7177	2.6200e-003	0.1979	2.1400e-003	0.2001	0.0528	1.9900e-003	0.0548		267.4998	267.4998	0.0107		267.7664

World Oil Tanks Installation - Los Angeles-South Coast County, Summer

3.4 Architectural Coating - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2470	1.9773	2.6381	4.2300e-003		0.1027	0.1027		0.1020	0.1020		403.4129	403.4129	0.0588		404.8820
Total	0.2470	1.9773	2.6381	4.2300e-003		0.1027	0.1027		0.1020	0.1020		403.4129	403.4129	0.0588		404.8820

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.0800e-003	0.1942	0.0508	5.1000e-004	0.0128	4.0000e-004	0.0132	3.6900e-003	3.8000e-004	4.0700e-003		54.9761	54.9761	3.2400e-003		55.0571
Worker	0.0343	0.0236	0.3222	9.1000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		91.1016	91.1016	2.6800e-003		91.1687
Total	0.0404	0.2178	0.3730	1.4200e-003	0.1022	1.1200e-003	0.1033	0.0274	1.0500e-003	0.0285		146.0777	146.0777	5.9200e-003		146.2258

World Oil Tanks Installation - Los Angeles-South Coast County, Summer

3.4 Architectural Coating - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2470	1.9773	2.6381	4.2300e-003		0.1027	0.1027		0.1020	0.1020	0.0000	403.4129	403.4129	0.0588		404.8820
Total	0.2470	1.9773	2.6381	4.2300e-003		0.1027	0.1027		0.1020	0.1020	0.0000	403.4129	403.4129	0.0588		404.8820

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.0800e-003	0.1942	0.0508	5.1000e-004	0.0128	4.0000e-004	0.0132	3.6900e-003	3.8000e-004	4.0700e-003		54.9761	54.9761	3.2400e-003		55.0571
Worker	0.0343	0.0236	0.3222	9.1000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		91.1016	91.1016	2.6800e-003		91.1687
Total	0.0404	0.2178	0.3730	1.4200e-003	0.1022	1.1200e-003	0.1033	0.0274	1.0500e-003	0.0285		146.0777	146.0777	5.9200e-003		146.2258

World Oil Tanks Installation

Los Angeles-South Coast County, Winter

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.1956	32.3049	23.1325	0.0602	0.5040	1.2945	1.7985	0.1341	1.2016	1.3357	0.0000	5,836.354 3	5,836.354 3	1.5578	0.0000	5,875.299 7
Maximum	3.1956	32.3049	23.1325	0.0602	0.5040	1.2945	1.7985	0.1341	1.2016	1.3357	0.0000	5,836.354 3	5,836.354 3	1.5578	0.0000	5,875.299 7

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.1956	32.3049	23.1325	0.0602	0.4993	1.2945	1.7938	0.1336	1.2016	1.3351	0.0000	5,836.354 3	5,836.354 3	1.5578	0.0000	5,875.299 7
Maximum	3.1956	32.3049	23.1325	0.0602	0.4993	1.2945	1.7938	0.1336	1.2016	1.3351	0.0000	5,836.354 3	5,836.354 3	1.5578	0.0000	5,875.299 7

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.93	0.00	0.26	0.42	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00

World Oil Tanks Installation - Los Angeles-South Coast County, Winter

3.2 Site Preparation - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.6700e-003	0.0000	7.6700e-003	9.1000e-004	0.0000	9.1000e-004			0.0000			0.0000
Off-Road	2.1271	23.8277	16.5528	0.0417		1.0039	1.0039		0.9236	0.9236		4,035.6111	4,035.6111	1.3052		4,068.2410
Total	2.1271	23.8277	16.5528	0.0417	7.6700e-003	1.0039	1.0116	9.1000e-004	0.9236	0.9245		4,035.6111	4,035.6111	1.3052		4,068.2410

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0467	1.3852	0.3597	4.4000e-003	0.1068	4.9600e-003	0.1117	0.0293	4.7400e-003	0.0340		477.7669	477.7669	0.0310		478.5408
Vendor	6.3800e-003	0.1938	0.0562	5.0000e-004	0.0128	4.1000e-004	0.0132	3.6900e-003	3.9000e-004	4.0800e-003		53.4691	53.4691	3.4500e-003		53.5554
Worker	0.0763	0.0522	0.5892	1.7200e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		171.5602	171.5602	5.0500e-003		171.6864
Total	0.1294	1.6312	1.0051	6.6200e-003	0.2984	6.8200e-003	0.3052	0.0804	6.4600e-003	0.0869		702.7962	702.7962	0.0395		703.7825

World Oil Tanks Installation - Los Angeles-South Coast County, Winter

3.2 Site Preparation - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9900e-003	0.0000	2.9900e-003	3.5000e-004	0.0000	3.5000e-004			0.0000			0.0000
Off-Road	2.1271	23.8277	16.5528	0.0417		1.0039	1.0039		0.9236	0.9236	0.0000	4,035.6111	4,035.6111	1.3052		4,068.2410
Total	2.1271	23.8277	16.5528	0.0417	2.9900e-003	1.0039	1.0069	3.5000e-004	0.9236	0.9239	0.0000	4,035.6111	4,035.6111	1.3052		4,068.2410

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0467	1.3852	0.3597	4.4000e-003	0.1068	4.9600e-003	0.1117	0.0293	4.7400e-003	0.0340		477.7669	477.7669	0.0310		478.5408
Vendor	6.3800e-003	0.1938	0.0562	5.0000e-004	0.0128	4.1000e-004	0.0132	3.6900e-003	3.9000e-004	4.0800e-003		53.4691	53.4691	3.4500e-003		53.5554
Worker	0.0763	0.0522	0.5892	1.7200e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		171.5602	171.5602	5.0500e-003		171.6864
Total	0.1294	1.6312	1.0051	6.6200e-003	0.2984	6.8200e-003	0.3052	0.0804	6.4600e-003	0.0869		702.7962	702.7962	0.0395		703.7825

World Oil Tanks Installation - Los Angeles-South Coast County, Winter

3.3 Tank Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8534	6.5028	4.9054	9.4300e-003		0.2817	0.2817		0.2695	0.2695		843.1225	843.1225	0.2025		848.1858
Total	0.8534	6.5028	4.9054	9.4300e-003		0.2817	0.2817		0.2695	0.2695		843.1225	843.1225	0.2025		848.1858

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.0600e-003	0.0973	0.0239	2.7000e-004	6.2600e-003	3.0000e-004	6.5600e-003	1.7200e-003	2.9000e-004	2.0000e-003		29.7952	29.7952	2.1300e-003		29.8485
Vendor	6.3800e-003	0.1938	0.0562	5.0000e-004	0.0128	4.1000e-004	0.0132	3.6900e-003	3.9000e-004	4.0800e-003		53.4691	53.4691	3.4500e-003		53.5554
Worker	0.0763	0.0522	0.5892	1.7200e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		171.5602	171.5602	5.0500e-003		171.6864
Total	0.0857	0.3432	0.6693	2.4900e-003	0.1979	2.1600e-003	0.2001	0.0528	2.0100e-003	0.0548		254.8245	254.8245	0.0106		255.0903

World Oil Tanks Installation - Los Angeles-South Coast County, Winter

3.3 Tank Construction - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8534	6.5028	4.9054	9.4300e-003		0.2817	0.2817		0.2695	0.2695	0.0000	843.1225	843.1225	0.2025		848.1858
Total	0.8534	6.5028	4.9054	9.4300e-003		0.2817	0.2817		0.2695	0.2695	0.0000	843.1225	843.1225	0.2025		848.1858

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.0600e-003	0.0973	0.0239	2.7000e-004	6.2600e-003	3.0000e-004	6.5600e-003	1.7200e-003	2.9000e-004	2.0000e-003		29.7952	29.7952	2.1300e-003		29.8485
Vendor	6.3800e-003	0.1938	0.0562	5.0000e-004	0.0128	4.1000e-004	0.0132	3.6900e-003	3.9000e-004	4.0800e-003		53.4691	53.4691	3.4500e-003		53.5554
Worker	0.0763	0.0522	0.5892	1.7200e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488		171.5602	171.5602	5.0500e-003		171.6864
Total	0.0857	0.3432	0.6693	2.4900e-003	0.1979	2.1600e-003	0.2001	0.0528	2.0100e-003	0.0548		254.8245	254.8245	0.0106		255.0903

World Oil Tanks Installation - Los Angeles-South Coast County, Winter

3.4 Architectural Coating - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2470	1.9773	2.6381	4.2300e-003		0.1027	0.1027		0.1020	0.1020		403.4129	403.4129	0.0588		404.8820
Total	0.2470	1.9773	2.6381	4.2300e-003		0.1027	0.1027		0.1020	0.1020		403.4129	403.4129	0.0588		404.8820

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.3800e-003	0.1938	0.0562	5.0000e-004	0.0128	4.1000e-004	0.0132	3.6900e-003	3.9000e-004	4.0800e-003		53.4691	53.4691	3.4500e-003		53.5554
Worker	0.0382	0.0261	0.2946	8.6000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		85.7801	85.7801	2.5200e-003		85.8432
Total	0.0445	0.2199	0.3508	1.3600e-003	0.1022	1.1300e-003	0.1034	0.0274	1.0600e-003	0.0285		139.2492	139.2492	5.9700e-003		139.3986

World Oil Tanks Installation - Los Angeles-South Coast County, Winter

3.4 Architectural Coating - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2470	1.9773	2.6381	4.2300e-003		0.1027	0.1027		0.1020	0.1020	0.0000	403.4129	403.4129	0.0588		404.8820
Total	0.2470	1.9773	2.6381	4.2300e-003		0.1027	0.1027		0.1020	0.1020	0.0000	403.4129	403.4129	0.0588		404.8820

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.3800e-003	0.1938	0.0562	5.0000e-004	0.0128	4.1000e-004	0.0132	3.6900e-003	3.9000e-004	4.0800e-003		53.4691	53.4691	3.4500e-003		53.5554
Worker	0.0382	0.0261	0.2946	8.6000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		85.7801	85.7801	2.5200e-003		85.8432
Total	0.0445	0.2199	0.3508	1.3600e-003	0.1022	1.1300e-003	0.1034	0.0274	1.0600e-003	0.0285		139.2492	139.2492	5.9700e-003		139.3986

World Oil Tanks Installation

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2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1682	1.6454	1.2095	3.0700e-003	0.0279	0.0663	0.0941	7.4400e-003	0.0617	0.0692	0.0000	268.7605	268.7605	0.0691	0.0000	270.4890
Maximum	0.1682	1.6454	1.2095	3.0700e-003	0.0279	0.0663	0.0941	7.4400e-003	0.0617	0.0692	0.0000	268.7605	268.7605	0.0691	0.0000	270.4890

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1682	1.6454	1.2095	3.0700e-003	0.0277	0.0663	0.0939	7.4100e-003	0.0617	0.0692	0.0000	268.7602	268.7602	0.0691	0.0000	270.4888
Maximum	0.1682	1.6454	1.2095	3.0700e-003	0.0277	0.0663	0.0939	7.4100e-003	0.0617	0.0692	0.0000	268.7602	268.7602	0.0691	0.0000	270.4888

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.75	0.00	0.23	0.40	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-4-2021	4-3-2021	0.8908	0.8908
2	4-4-2021	7-3-2021	0.5572	0.5572
3	7-4-2021	9-30-2021	0.2470	0.2470
		Highest	0.8908	0.8908

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3.2 Site Preparation - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.5000e-004	0.0000	3.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0968	1.0842	0.7532	1.9000e-003		0.0457	0.0457		0.0420	0.0420	0.0000	166.5775	166.5775	0.0539	0.0000	167.9244
Total	0.0968	1.0842	0.7532	1.9000e-003	3.5000e-004	0.0457	0.0460	4.0000e-005	0.0420	0.0421	0.0000	166.5775	166.5775	0.0539	0.0000	167.9244

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1100e-003	0.0642	0.0161	2.0000e-004	4.7700e-003	2.2000e-004	5.0000e-003	1.3100e-003	2.1000e-004	1.5300e-003	0.0000	19.8280	19.8280	1.2600e-003	0.0000	19.8596
Vendor	2.8000e-004	8.9800e-003	2.4300e-003	2.0000e-005	5.7000e-004	2.0000e-005	5.9000e-004	1.7000e-004	2.0000e-005	1.8000e-004	0.0000	2.2431	2.2431	1.4000e-004	0.0000	2.2466
Worker	3.1300e-003	2.4400e-003	0.0275	8.0000e-005	7.9800e-003	7.0000e-005	8.0400e-003	2.1200e-003	6.0000e-005	2.1800e-003	0.0000	7.1993	7.1993	2.1000e-004	0.0000	7.2046
Total	5.5200e-003	0.0756	0.0460	3.0000e-004	0.0133	3.1000e-004	0.0136	3.6000e-003	2.9000e-004	3.8900e-003	0.0000	29.2704	29.2704	1.6100e-003	0.0000	29.3107

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3.2 Site Preparation - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4000e-004	0.0000	1.4000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0968	1.0842	0.7532	1.9000e-003		0.0457	0.0457		0.0420	0.0420	0.0000	166.5773	166.5773	0.0539	0.0000	167.9242
Total	0.0968	1.0842	0.7532	1.9000e-003	1.4000e-004	0.0457	0.0458	2.0000e-005	0.0420	0.0420	0.0000	166.5773	166.5773	0.0539	0.0000	167.9242

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1100e-003	0.0642	0.0161	2.0000e-004	4.7700e-003	2.2000e-004	5.0000e-003	1.3100e-003	2.1000e-004	1.5300e-003	0.0000	19.8280	19.8280	1.2600e-003	0.0000	19.8596
Vendor	2.8000e-004	8.9800e-003	2.4300e-003	2.0000e-005	5.7000e-004	2.0000e-005	5.9000e-004	1.7000e-004	2.0000e-005	1.8000e-004	0.0000	2.2431	2.2431	1.4000e-004	0.0000	2.2466
Worker	3.1300e-003	2.4400e-003	0.0275	8.0000e-005	7.9800e-003	7.0000e-005	8.0400e-003	2.1200e-003	6.0000e-005	2.1800e-003	0.0000	7.1993	7.1993	2.1000e-004	0.0000	7.2046
Total	5.5200e-003	0.0756	0.0460	3.0000e-004	0.0133	3.1000e-004	0.0136	3.6000e-003	2.9000e-004	3.8900e-003	0.0000	29.2704	29.2704	1.6100e-003	0.0000	29.3107

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3.3 Tank Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0572	0.4357	0.3287	6.3000e-004		0.0189	0.0189		0.0181	0.0181	0.0000	51.2462	51.2462	0.0123	0.0000	51.5539
Total	0.0572	0.4357	0.3287	6.3000e-004		0.0189	0.0189		0.0181	0.0181	0.0000	51.2462	51.2462	0.0123	0.0000	51.5539

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	6.6400e-003	1.5500e-003	2.0000e-005	4.1000e-004	2.0000e-005	4.3000e-004	1.1000e-004	2.0000e-005	1.3000e-004	0.0000	1.8295	1.8295	1.3000e-004	0.0000	1.8327
Vendor	4.2000e-004	0.0132	3.5900e-003	3.0000e-005	8.4000e-004	3.0000e-005	8.7000e-004	2.4000e-004	3.0000e-005	2.7000e-004	0.0000	3.3031	3.3031	2.0000e-004	0.0000	3.3081
Worker	4.6100e-003	3.5900e-003	0.0405	1.2000e-004	0.0118	1.0000e-004	0.0118	3.1200e-003	9.0000e-005	3.2100e-003	0.0000	10.6012	10.6012	3.1000e-004	0.0000	10.6090
Total	5.2300e-003	0.0235	0.0457	1.7000e-004	0.0130	1.5000e-004	0.0131	3.4700e-003	1.4000e-004	3.6100e-003	0.0000	15.7338	15.7338	6.4000e-004	0.0000	15.7498

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3.3 Tank Construction - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0572	0.4357	0.3287	6.3000e-004		0.0189	0.0189		0.0181	0.0181	0.0000	51.2461	51.2461	0.0123	0.0000	51.5538
Total	0.0572	0.4357	0.3287	6.3000e-004		0.0189	0.0189		0.0181	0.0181	0.0000	51.2461	51.2461	0.0123	0.0000	51.5538

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	6.6400e-003	1.5500e-003	2.0000e-005	4.1000e-004	2.0000e-005	4.3000e-004	1.1000e-004	2.0000e-005	1.3000e-004	0.0000	1.8295	1.8295	1.3000e-004	0.0000	1.8327
Vendor	4.2000e-004	0.0132	3.5900e-003	3.0000e-005	8.4000e-004	3.0000e-005	8.7000e-004	2.4000e-004	3.0000e-005	2.7000e-004	0.0000	3.3031	3.3031	2.0000e-004	0.0000	3.3081
Worker	4.6100e-003	3.5900e-003	0.0405	1.2000e-004	0.0118	1.0000e-004	0.0118	3.1200e-003	9.0000e-005	3.2100e-003	0.0000	10.6012	10.6012	3.1000e-004	0.0000	10.6090
Total	5.2300e-003	0.0235	0.0457	1.7000e-004	0.0130	1.5000e-004	0.0131	3.4700e-003	1.4000e-004	3.6100e-003	0.0000	15.7338	15.7338	6.4000e-004	0.0000	15.7498

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3.4 Architectural Coating - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9600e-003	0.0237	0.0317	5.0000e-005		1.2300e-003	1.2300e-003		1.2200e-003	1.2200e-003	0.0000	4.3916	4.3916	6.4000e-004	0.0000	4.4076
Total	2.9600e-003	0.0237	0.0317	5.0000e-005		1.2300e-003	1.2300e-003		1.2200e-003	1.2200e-003	0.0000	4.3916	4.3916	6.4000e-004	0.0000	4.4076

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	2.3700e-003	6.4000e-004	1.0000e-005	1.5000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	0.5916	0.5916	4.0000e-005	0.0000	0.5925
Worker	4.1000e-004	3.2000e-004	3.6300e-003	1.0000e-005	1.0500e-003	1.0000e-005	1.0600e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.9494	0.9494	3.0000e-005	0.0000	0.9501
Total	4.8000e-004	2.6900e-003	4.2700e-003	2.0000e-005	1.2000e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.4000e-004	0.0000	1.5410	1.5410	7.0000e-005	0.0000	1.5426

World Oil Tanks Installation - Los Angeles-South Coast County, Annual

3.4 Architectural Coating - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9600e-003	0.0237	0.0317	5.0000e-005		1.2300e-003	1.2300e-003		1.2200e-003	1.2200e-003	0.0000	4.3916	4.3916	6.4000e-004	0.0000	4.4076
Total	2.9600e-003	0.0237	0.0317	5.0000e-005		1.2300e-003	1.2300e-003		1.2200e-003	1.2200e-003	0.0000	4.3916	4.3916	6.4000e-004	0.0000	4.4076

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	2.3700e-003	6.4000e-004	1.0000e-005	1.5000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	0.5916	0.5916	4.0000e-005	0.0000	0.5925
Worker	4.1000e-004	3.2000e-004	3.6300e-003	1.0000e-005	1.0500e-003	1.0000e-005	1.0600e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.9494	0.9494	3.0000e-005	0.0000	0.9501
Total	4.8000e-004	2.6900e-003	4.2700e-003	2.0000e-005	1.2000e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.4000e-004	0.0000	1.5410	1.5410	7.0000e-005	0.0000	1.5426

World Oil Tank Installation Project

Construction - Architectural Coating VOC Emissions

Assumptions:

- 1) The coating types and VOC contents, coating thicknesses, area coated, coating volumes, thinners used, and work schedules are provided by the applicant
- 2) The interior of the tank is coated on the floor and up the sides 48 inches (4 feet)
- 3) The floating roof is not coated onsite.
- 4) The entire tank exterior, except the floating roof, is coated.
- 5) Each coating type is applied sequentially, so total schedule for coating task is 24 days.

VOC Emissions Estimate

Exterior Coating	Product	Sq.Ft./Tank	Thickness	Gallons	Lb/Gal	Total Lb's	X 2 Tanks	Days	Avg/Lb/Day
Field Primer	Sherwin Williams 646-100 (3-5 mils)	2000	3-5 Mils	10	0.83	8.3	16.6	4.0	4.2
Intermediate Coat	Sherwin Williams 646-100(4-6 mils)	13800	4-6 Mils	80	0.83	66.4	132.8	8.0	16.6
Finish Coat	Sherloxane 800 (no thinner required)	13800	4 mils	40	0.77	30.8	61.6	8.0	7.7
Total (lbs)							211.0	20.0	

Interior Coating	Product	Sq.Ft./Tank	Thickness	Gallons	Lb/Gal	Total Lb's	X 2 Tanks	Days	Avg/Lb/Day
Coating	Duraplate UHS	4200	20-30 mils	85	0.83	70.6	141.1	4.0	35.3

Exempt Solvents Emissions Estimate

Exterior Coating Solvents	Gals	Components	By Weight	Density Lb/Gal	Emissions Lbs
R7K111 Thinner (for SW 646-100)	10	Acetone	40%	8.8	35.0
		p-Chlorobenzotrifluoride	60%	8.8	52.5

Interior Coating Solvents	Gals	Components	By Weight	Density Lb/Gal	Emissions Lbs
Cleaning Solvent	20	Acetone	100%	6.5	130.9

World Oil Tank Installation Project

Operations Criteria Air Pollutant Emissions Summary

Proposed Project Emissions Increase	Daily Emissions lbs/day					
	NOx	PM10	PM2.5	ROG	CO	SOx
Onroad Emissions	0.60	0.04	0.01	0.02	0.09	0.00
New Tanks Fugitive Emissions ¹	--	--	--	9.70	--	--
Loading Rack/Vapor Control	0.20	0.01	0.01	0.09	0.16	0.00
Total	0.81	0.06	0.03	9.81	0.25	0.00

1 - New tank emissions from SCAQMD permit engineering analysis.

Operations GHG Emissions Summary

Proposed Project Emissions Increase	CO2e MT
Onroad Emissions	30.2
Loading Rack/Vapor Control	32.5
Total	62.8

Annualized Emissions Increase	CO2e MT
Construction Emissions From CalEEMod	270.5
Amortized Construction Emissions (30-years)	9.0
Incremental Operations Emissions Increase	62.8
Total Increase	71.8

World Oil Tank Installation Project

Operation - On-Road Emissions Increase

Assumptions

- 1) Emissions factors developed from CARB EMFAC2017 output. Paved road dust included using AP-42 and CalEEMod input defaults.
- 2) Heavy Duty Truck is the diesel fueled HHDT vehicle type meeting POLA/POLB's Clean Trucks Program designated as T7 POLA in EMFAC2017.
- 3) The additional truck round trips caused by the project is 3 trips per day, a 10 percent increase from baseline per World Oil.
- 4) The distance for each additional round trip is 15 miles per World Oil.
- 5) There are no additional passenger or delivery class vehicle trips above baseline for the proposed Project.

	Emissions Factors lbs/mile						
	NOx	PM10	PM2.5	ROG	CO	SOx	CO2e
Heavy Duty Truck	1.34E-02	9.66E-04	3.26E-04	4.83E-04	2.05E-03	3.68E-05	4.06

	Vehicle Type	Daily VMT	Daily Emissions - Lbs						GHG MTCO2e/Yr
			NOx	PM10	PM2.5	ROG	CO	SOx	
Incremental Increase	Heavy Truck	45	0.605	0.043	0.015	0.022	0.092	0.002	30.2

World Oil Tank Installation Project

Operation - Loading Rack/Vapor Control Emissions

Assumptions

- 1) Emissions are a 10 percent increase from 2019 baseline for loading rack thermal oxidizer use and fugitive ROG
- 2) Baseline emissions are from the 2019 emissions inventory submitted to SCAQMD.
- 3) Annual thermal oxidizer natural gas fuel use is 6.0 million standard cubic feet (assume 1,020 Btu/scf to convert to MMBtu).
- 4) CO₂e emissions factor for natural gas is from the Climate Registry is 53.17 Kg CO₂e/MMBtu (includes CH₄ and N₂O).
- 5) To adjust annual emissions, operations are 7 days per week year-round.

Thermal Oxidizer Emissions

	Daily Emissions - Lbs						GHG MTCO ₂ e/Yr
	NO _x	PM ₁₀	PM _{2.5}	ROG	CO	SO _x	
2019 Baseline Annual	745.920	45.000	45.000	42.000	573.190	3.600	325
Project Increase Annual	74.59	4.50	4.50	4.20	57.32	0.36	32.54
Daily Increase	0.20	0.01	0.01	0.01	0.16	0.00	

Fuel Oil Loading Rack Fugitive Emissions

	ROG
2019 Baseline Annual	277.540
Project Increase Annual	27.75
Daily Increase	0.08

Appendix B (Confidential)

Cultural Resources Records Search Report

Appendix C

Noise Calculations

APPENDIX C. World Oil Tank Installation Project Noise Calculations

Project equipment per Application Item 21. Assume maximum of 3 pieces of equipment; worst-case vibro pier installation using mounted impact hammer/hoe ram.

Construction Equipment	Lmax Ref dBA @ 50 ft	Useage Per Hour (%)	Along Levee quantity	Distance to Resident feet	Equip Leq(h) dBA
Foundation Installation	90	20	1	2610	48.7
Pile Driver (vibro pier mounted impact hammer/hoe ram)	81	16	1	2610	38.7
Crane	78	40	1	2610	39.7
Bobcat (backhoe)					
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.